

## UNIT PRICE CONTRACT FOR CONSTRUCTION

**THIS CONTRACT FOR CONSTRUCTION** (“**Contract**”) is made and entered into as of the date stated on the City’s signature page below (the “**Effective Date**”) by and between the **CITY AND COUNTY OF DENVER**, a municipal corporation of the State of Colorado acting on behalf of its Department of Aviation (the “**City**”), and **CHATO’S CONCRETE, LLC**, a Colorado limited liability company (“**Contractor**”) (collectively the “**Parties**”).

### W I T N E S S E T H

**WHEREAS**, the City, for at least three (3) consecutive days, advertised that proposals would be received for furnishing all labor, tools, supplies, equipment, materials and everything necessary and required for the construction and installation of the work under Invitation for Bid No. 202366978-00, Gun Club On-Ramp to Peña Boulevard at Denver International Airport (“**DEN**”); and

**WHEREAS**, a proposal in response to said advertisement have been received by the Chief Executive Officer of DEN (the “**CEO**”), who has recommended that a contract for the work be made and entered into with Contractor, which was the lowest, responsive, qualified bidder; and

**WHEREAS**, Contractor is qualified, willing, and able to perform the work in accordance with its proposal and the Contract Documents defined below;

**NOW, THEREFORE**, for and in consideration of the compensation to be paid by the City to Contractor and the other terms and conditions of this Contract, the Parties agree as follows:

#### 1. CONTRACT DOCUMENTS:

It is agreed by the Parties that the instruments, drawings, and documents described below and whether attached to and bound with this Contract or not (the “**Contract Documents**”), are incorporated into the Contract by this reference, and are as fully a part of this Contract as if they were set out here verbatim and in full:

- Contract
- Notice to Proceed
- Form of Final Receipt
- Building Information Modeling (“**BIM**”) if applicable
- Change Directives
- Change Orders
- Exhibit A Federal Appendices
- Exhibit B Equal Employment Opportunity Provisions
- Exhibit C Insurance Requirements
- Exhibit D Prevailing Wage Schedules
- Exhibit E Special Conditions

- Exhibit F Standard Specifications for Construction General Contract Conditions (2011 Edition) (the “Yellow Book”) (“General Conditions”) (Table of Contents attached as Exhibit F)
- Exhibit G Performance Bond
- Exhibit H Payment Bond
- Exhibit I Technical Specifications
- Exhibit J Contract Drawings
- Exhibit K Invitation for Bids and Contractor’s Response to Invitation for Bids

In the event of an irreconcilable conflict between a provision of Section 1 through 31 of this Contract document and any other provisions of the Contract Documents such that it is impossible to give effect to both, the order of precedence to determine which document shall control to resolve such conflict is as follows, in descending order:

1. Exhibit A Federal Appendices
2. Contract
3. Change Directives
4. Change Orders
5. Exhibit B Equal Employment Opportunity Provisions
6. Exhibit E Special Conditions
7. Exhibit F Standard Specifications for Construction General Contract Conditions (2011 Edition) (the “**Yellow Book**”) (“**General Conditions**”) (Table of Contents attached as Exhibit F)
8. Exhibit C Insurance Requirements
9. Exhibit D Prevailing Wage Schedules
10. Exhibit I Technical Specifications
11. Exhibit J Contract Drawings
12. Exhibit K Invitation for Bids and Contractor’s Response to Invitation for Bids
13. Exhibit G Performance Bond
14. Exhibit H Payment Bond
15. Notice to Proceed
16. Form of Final Receipt
17. Building Information Modeling (“**BIM**”) if applicable

The remaining order of precedence is established in General Conditions Title 4.

## 2. SCOPE OF WORK:

Contractor shall furnish all labor and tools, supplies, equipment, superintendence, materials, and everything necessary for and required to do, perform, and complete all of the work described, drawn, set forth, shown, and included in the Contract Documents (the “**Work**”).

## 3. TERM OF CONTRACT:

The Senior Vice President of Aviation – DEN Design, Engineering, and Construction

(“**DENCON**”) Division (the “**SVP-DENCON**”) will issue a written notice to proceed to Contractor (the “**Notice to Proceed**”), and Contractor shall begin performing the Work required under this Contract within ten (10) days of such Notice to Proceed (the “**Commencement Date**”). Contractor shall fully complete the Work in its entirety within 341 consecutive calendar days from the date of the Notice to Proceed (“**Contract Time**”). Contractor is not authorized to commence work prior to its receipt of the Notice to Proceed.

#### 4. **TERMS OF PAYMENT:**

The City agrees to pay Contractor for the performance and completion of all of the Work – as required by the Contract Documents – as a Unit Price Contract, and Contractor agrees to accept as its full and only compensation therefor, a total amount of **Five Million Four Hundred Twenty Thousand One Hundred Seventy-Nine Dollars and Ninety Cents (\$5,420,179.90)** (the “**Maximum Contract Amount**”), based on actual measured units of construction and the unit prices provided in Contractor’s Response to Invitation for Bids. In the event unit measured quantities vary from the bid quantities at the completion of this project, the Parties shall reconcile the Maximum Contract Amount via Change Order(s). In no event shall the City’s liability exceed the Maximum Contract Amount, as adjusted by duly authorized Change Orders in accordance with this Contract. The Parties specifically agree that any performance by Contractor hereunder shall not subject the City to any cost, charge, or fee not specified above.

#### 5. **VERIFIED STATEMENT OF CLAIMS:**

Colorado Revised Statutes § 38-26-107 (“**C.R.S.**”) requires that, in the event any person or company files a verified statement of amounts due and unpaid in connection with a claim for labor and materials supplied on this project, the City shall withhold from payments to Contractor sufficient funds to insure the payment of any such claims. Should the City be made a party to any lawsuit to enforce such unpaid claims or any lawsuit arising out of or relating to such withheld funds, Contractor agrees to pay to the City its costs and a reasonable attorney’s fee incurred in any such lawsuit. Because the City Attorney Staff does not bill the City for legal services on an hourly basis, Contractor agrees a reasonable fee shall be computed at the rate of two hundred dollars and no cents (\$200.00) per hour of City Attorney time.

#### 6. **DISPUTES:**

All disputes arising under or related to this Contract shall be resolved by administrative hearing under the procedures described in **Exhibit F**, as modified by **Exhibit E**, if any, and the Denver Revised Municipal Code § 5-17 (“**D.R.M.C.**”) and all related rules and procedures, including but not limited to DEN Rule 250. The determination resulting from said administrative hearing shall be final, subject only to Contractor's right to appeal the determination under Colorado Rule of Civil Procedure, Rule 106.

#### 7. **DEFENSE AND INDEMNIFICATION:**

**A.** To the fullest extent permitted by law, Contractor hereby agrees to defend, indemnify, reimburse and hold harmless City, its appointed and elected officials, agents and

employees for, from and against all liabilities, claims, judgments, suits or demands for damages to persons or property arising out of, resulting from, or related to the work performed under this Contract that are due to the negligence or fault of the Contractor or the Contractor's agents, representatives, subcontractors, or suppliers ("**Claims**"). This indemnity shall be interpreted in the broadest possible manner consistent with the applicable law to indemnify the City.

**B.** Contractor's duty to defend and indemnify City shall arise at the time written notice of the Claim is first provided to City regardless of whether suit has been filed and even if Contractor is not named as a Defendant.

**C.** Contractor will defend any and all Claims which may be brought or threatened against City and will pay on behalf of City any expenses incurred by reason of such Claims including, but not limited to, court costs and attorney fees incurred in defending and investigating such Claims or seeking to enforce this indemnity obligation, including but not limited to time expended by the City Attorney Staff, whose costs shall be computed at the rate specified in Section 5. Such payments on behalf of City shall be in addition to any other legal remedies available to City and shall not be considered City's exclusive remedy.

**D.** Insurance coverage requirements specified in this Contract shall in no way lessen or limit the liability of the Contractor under the terms of this indemnification obligation. The Contractor shall obtain, at its own expense, any additional insurance that it deems necessary for the City's protection.

**E.** This defense and indemnification obligation shall survive the expiration or termination of this Contract.

#### **8. WAIVER OF C.R.S. § 13-20-801, *et seq.*:**

Notwithstanding any other provision of this Contract, Contractor specifically waives all of the provisions of C.R.S. §§ 13-20-801 *et seq.* as they may relate to Contractor's performance under this Contract.

#### **9. LIQUIDATED DAMAGES:**

If Contractor fails to achieve Substantial Completion of the Work within the Contract Time or fails to substantially complete the Work described in the Scope of Work within the time set forth in the Special Conditions, the City will suffer substantial damages, which damages would be difficult to accurately determine. The Parties hereto have considered the possible elements of damages and have agreed that the amount of liquidated damages for Contractor's failure to substantially complete the work within the Contract Time or to substantially complete the work described in Milestone Areas within the time set forth in the Special Conditions shall be as provided in the Special Conditions. If Contractor shall fail to pay such liquidated damages promptly upon demand therefor, the Surety on its Performance Bond and Payment Bond shall pay such damages. Also, the City may withhold all, or any part of, such liquidated damages from any payment due to Contractor. Additional provisions relating to liquidated damages are set forth in the Construction Contract General Conditions and Special Conditions.



## 10. INSURANCE REQUIREMENTS:

**A.** Contractor shall obtain and keep in force all of the minimum insurance coverage forms and amounts set forth in *Exhibit C* (“**Insurance Requirements**”) during the entire Term of this Agreement, including any extensions of the Agreement or other extended period stipulations stated in *Exhibit C*. All certificates of insurance must be received and accepted by the City before any airport access or work commences.

**B.** Contractor shall ensure and document that all subcontractors performing services or providing goods hereunder procure and maintain insurance coverage that is appropriate to the primary business risks for their respective scopes of performance. At minimum, such insurance must conform to all applicable requirements of DEN Rules and Regulations Part 230 and all other applicable laws and regulations.

**C.** The City in no way warrants or represents the minimum limits contained herein are sufficient to protect Contractor from liabilities arising out of the performance of the terms and conditions of this Contract by Contractor, its agents, representatives, employees, or subcontractors. Contractor shall assess its own risks and maintain higher limits and/or broader coverage as it deems appropriate and/or prudent. Contractor is not relieved of any liability or other obligations assumed or undertaken pursuant to this Contract by reason of its failure to obtain or maintain insurance in sufficient amounts, duration, or types.

**D.** In no event shall the City be liable for any of the following: (i) business interruption or other consequential damages sustained by Contractor; (ii) damage, theft, or destruction of Contractor's inventory, or property of any kind; or (iii) damage, theft, or destruction of an automobile, whether or not insured.

**E.** The Parties understand and agree that the City, its elected and appointed officials, employees, agents and volunteers are relying on, and do not waive or intend to waive by any provisions of this Contract, the monetary limitations and any other rights, immunities and protections provided by the Colorado Governmental Immunity Act, C.R.S. §§ 24-10-101, *et seq.*, or otherwise available to the City, its elected and appointed officials, employees, agents and volunteers.

## 11. CONTRACT BINDING:

It is agreed that this Contract shall be binding on and inure to the benefit of the Parties hereto, their heirs, executors, administrators, assigns, and successors.

## 12. SEVERABILITY:

If any part, portion, or provision of this Contract shall be found or declared null, void, or unenforceable for any reason whatsoever by any court of competent jurisdiction or any governmental agency having authority thereover, only such part, portion, or provision shall be affected thereby and all other parts, portions, and provisions of this Contract shall remain in full force and effect.

**13. ASSIGNMENT:**

Contractor shall not assign, pledge or transfer its duties, obligations, and rights under this Contract, in whole or in part, without first obtaining the written consent of the CEO or their authorized representative. Any attempt by Contractor to assign or transfer its rights hereunder without such prior written consent shall, at the option of the CEO or their authorized representative, automatically terminate this Contract and all rights of Contractor hereunder.

**14. APPROPRIATIONS:**

Payment will be in accordance with the provisions of the Contract Documents, including Title 9 of the General Conditions, and will be made solely and exclusively from funds appropriated or otherwise lawfully made available for the purposes of this Contract from the Airport System Fund. The City has no obligation to make payments from any other fund or source or to make additional appropriations or allocations to such fund to satisfy such costs or other obligations.

**15. APPROVALS:**

In the event this Contract calls for the payment by the City of Five Million Dollars and no cents (\$5,000,000.00) or more, approval by the Denver City Council, acting by Resolution in accordance with Section 3.2.6 of the Charter of the City and County of Denver, is and shall be an express condition precedent to the lawful and binding execution and performance of this Contract.

**16. JOINT VENTURE:**

If Contractor is a Joint Venture, the partners to the Joint Venture shall be jointly and severally liable to the City for the performance of all duties and obligations of Contractor which are set forth in the Contract.

**17. NO DISCRIMINATION IN EMPLOYMENT:**

In connection with the performance of work under the Agreement, the Contractor may not refuse to hire, discharge, promote, demote, or discriminate in matters of compensation against any person otherwise qualified, solely because of race, color, religion, national origin, ethnicity, citizenship, immigration status, gender, age, sexual orientation, gender identity, gender expression, marital status, source of income, military status, protective hairstyle, or disability. The Contractor shall insert the foregoing provision in all subcontracts.

**18. COORDINATION OF SERVICES:**

Contractor agrees to perform its work under this Contract in accordance with the operational requirements of DEN, and all work and movement of personnel or equipment on areas included within the DEN site shall be subject to the regulations and restrictions established by the City or its authorized agents.

## 19. COMPLIANCE WITH ALL LAWS AND REGULATIONS:

**A.** Contractor and its subcontractor(s) shall perform all work under this Contract in compliance with all existing and future applicable laws, rules, regulations, and codes of the United States and the State of Colorado and with the City Charter, ordinances, Executive Orders, and rules and regulations of the City.

**B.** Contractor shall perform all work in compliance with Executive Order 123 regarding Sustainability as may be directed by the City, including the requirement that all new City buildings and major renovations will be certified to the applicable LEED Gold Certification, with the goal of achieving LEED Platinum where economically feasible. Contractor also shall comply with all applicable DEN design and construction standards, including the DEN Design Standards Manuals, which are incorporated herein by reference. Current versions can be found at: <https://business.flydenver.com/bizops/bizRequirements.asp>.

## 20. PREVAILING WAGE REQUIREMENTS:

**A.** Contractor shall comply with, and agrees to be bound by, all requirements, conditions and determinations of the City regarding the Payment of Prevailing Wages Ordinance, D.R.M.C. §§20-76 through 20-79, as exemplified in **Exhibit D**, including, but not limited to, the requirement that every covered worker working on a City-owned or leased building or on City-owned land shall be paid no less than the prevailing wages and fringe benefits in effect on the date the bid or request for proposal was advertised. In the event a request for bids, or a request for proposal, was not advertised, Contractor shall pay every covered worker no less than the prevailing wages and fringe benefits in effect on the date funds for the Contract were encumbered.

Date bid or proposal issuance was advertised March 20, 2023.

**B.** Prevailing wage and fringe rates will adjust on the yearly anniversary of the actual date of bid or proposal issuance, if applicable, or the date of the written encumbrance if no bid/proposal issuance date is applicable. Unless expressly provided for in this Contract, Contractor will receive no additional compensation for increases in prevailing wages or fringe rates.

**C.** Contractor shall provide the Auditor of the City and County of Denver with a list of all subcontractors providing any services under the Contract.

**D.** Contractor shall provide the Auditor with electronically-certified payroll records for all covered workers employed under the Contract in a manner specified by the Auditor.

**E.** Contractor shall prominently post at the work site the current prevailing wage and fringe rates. The posting must inform workers that any complaints regarding the payment of prevailing wages or fringe benefits may be submitted to the Denver Auditor by calling 720-913-5000 or emailing [auditor@denvergov.org](mailto:auditor@denvergov.org).

**F.** If Contractor fails to pay workers as required by the Prevailing Wage Ordinance, Contractor will not be paid until documentation of payment satisfactory to the Auditor has been

provided. The Auditor may enforce the Prevailing Wage Ordinance in a manner provided by law, including the Prevailing Wage Ordinance. The City also may, by written notice, suspend or terminate work if Contractor fails to pay required wages and fringe rates.

## **21. CITY PROMPT PAYMENT:**

**A.** The City will make monthly progress payments to the Contractor for all services performed under this Contract based upon the Contractor's monthly invoices or shall make payments as otherwise provided in this Contract. The City's Prompt Payment Ordinance, D.R.M.C. §§ 20-107 to 20-118, applies to invoicing and payment under this Contract.

**B.** Final Payment to the Contractor shall not be made until after the Project is accepted, and all certificates of completion, record drawings and reproducible copies, and other deliverables are delivered to the City, and the Contract is otherwise fully performed by the Contractor. The City may, at the discretion of the SVP, withhold reasonable amounts from billing and the entirety of the final payment until all such requirements are performed to the satisfaction of the SVP.

## **22. OWNERSHIP AND DELIVERABLES:**

Upon payment to Contractor, all records, data, deliverables, and any other work product prepared by Contractor or any custom development work performed by Contractor for the purpose of performing this Contract on or before the day of the payment, whether a periodic or final payment, shall become the sole property of the City. Upon request by the City, or based on any schedule agreed to by Contractor and the City, Contractor shall provide the City with copies of the data/files that have been uploaded to any database maintained by or on behalf of Contractor or otherwise saved or maintained by Contractor as part of the services provided to the City under this Contract. All such data/files shall be provided to the City electronically in a format agreed to by the Parties. Contractor also agrees to allow the City to review any of the procedures Contractor uses in performing any work or other obligations under this Contract, and to make available for inspection any and all notes, documents, materials, and devices used in the preparation for or performance of any of the scope of work, for up to six (6) years after termination of this Contract. Upon written request from the City, Contractor shall deliver any information requested pursuant to this Section within ten (10) business days in the event a schedule or otherwise agreed-upon timeframe does not exist.

## **23. COLORADO OPEN RECORDS ACT:**

**A.** Contractor acknowledges that the City is subject to the provisions of the Colorado Open Records Act ("**CORA**"), C.R.S. §§ 24-72-201 *et seq.*, and Contractor agrees that it will fully cooperate with the City in the event of a request or lawsuit arising under such act for the disclosure of any materials or information which Contractor asserts is confidential or otherwise exempt from disclosure. Any other provision of this Contract notwithstanding, all materials, records, and information provided by Contractor to the City shall be considered confidential by the City only to the extent provided in CORA, and Contractor agrees that any disclosure of information by the City consistent with the provisions of CORA shall result in no liability of the City.

**B.** In the event of a request to the City for disclosure of such information, time and circumstances permitting, the City will make a good faith effort to advise Contractor of such request in order to give Contractor the opportunity to object to the disclosure of any material Contractor may consider confidential, proprietary, or otherwise exempt from disclosure. In the event Contractor objects to disclosure, the City, in its sole and absolute discretion, may file an application to the Denver District Court for a determination of whether disclosure is required or exempted. In the event a lawsuit to compel disclosure is filed, the City may tender all such material to the court for judicial determination of the issue of disclosure. In both situations, Contractor agrees it will either waive any claim of privilege or confidentiality or intervene in such legal process to protect materials Contractor does not wish disclosed. Contractor agrees to defend, indemnify, and hold harmless the City, its officers, agents, and employees from any claim, damages, expense, loss, or costs arising out of Contractor's objection to disclosure, including prompt reimbursement to the City of all reasonable attorney's fees, costs, and damages the City may incur directly or may be ordered to pay by such court, including but not limited to time expended by the City Attorney Staff, whose costs shall be computed at the rate specified in Section 5.

## **24. EXAMINATION OF RECORDS AND AUDITS:**

**A.** Any authorized agent of the City, including the City Auditor or his or her representative, has the right to access, and the right to examine, copy and retain copies, at City's election in paper or electronic form, any pertinent books, documents, papers and records related to Contractor's performance pursuant to this Contract, provision of any goods or services to the City, and any other transactions related to this Contract. Contractor shall cooperate with City representatives and City representatives shall be granted access to the foregoing documents and information during reasonable business hours and until the latter of six (6) years after the final payment under the Contract or expiration of the applicable statute of limitations. When conducting an audit of this Contract, the City Auditor shall be subject to government auditing standards issued by the United States Government Accountability Office by the Comptroller General of the United States, including with respect to disclosure of information acquired during the course of an audit. No examination of records and audits pursuant to this paragraph shall require Contractor to make disclosures in violation of state or federal privacy laws. Contractor shall at all times comply with D.R.M.C. § 20-276.

**B.** Additionally, Contractor agrees until the expiration of six (6) years after the final payment under this Contract, any duly authorized representative of the City, including the CEO or their representative, shall have the right to examine any pertinent books, documents, papers and records of Contractor related to Contractor's performance of this Contract, including communications or correspondence related to Contractor's performance, without regard to whether the work was paid for in whole or in part with federal funds or was otherwise related to a federal grant program.

**C.** In the event the City receives federal funds to be used toward the services performed under this Contract, the Federal Aviation Administration ("FAA"), the Comptroller General of the United States and any other duly authorized representatives shall have access to any

books, documents, papers and records of Contractor which are directly pertinent to a specific grant program for the purpose of making audit, examination, excerpts and transcriptions. Contractor further agrees that such records will contain information concerning the hours and specific services performed along with the applicable federal project number.

## **25. MINIMUM WAGE REQUIREMENTS:**

To the extent required by law, Contractor shall comply with and agrees to be bound by all requirements, conditions, and City determinations regarding the City's Minimum Wage Ordinance, D.R.M.C. §§ 20-82 through 20-84, including, but not limited to, the requirement that every covered worker shall be paid no less than the City Minimum Wage in accordance with the City's Minimum Wage Ordinance. By executing this Contract, Contractor expressly acknowledges that Contractor is aware of the requirements of the City's Minimum Wage Ordinance and that any failure by Contractor, or any other individual or entity acting subject to this Contract, to strictly comply with the foregoing D.R.M.C. Sections shall result in the penalties and other remedies authorized therein.

## **26. COMPLIANCE WITH SMALL BUSINESS ENTERPRISE REQUIREMENTS:**

**A.** This Agreement is subject to D.R.M.C. Article VII of Chapter 28, §§ 28-201 to 28-236 (the "**SBE Ordinance**"), and the Rules and Regulations promulgated pursuant thereto. This Agreement is also subject to the defined selection pool requirements of the SBE Ordinance. The Contractor is a certified Small Business Enterprise ("**SBE**") and pursuant to D.R.M.C. § 28-208, the Contractor is required to self-perform a minimum of 30% of the contract work.

**B.** Under D.R.M.C. § 28-222, the Contractor has an ongoing, affirmative obligation for the duration of this Agreement to comply with the SBE defined selection pool requirements and with the SBE self-performance requirements upon which this Agreement was awarded, unless the City initiates a material modification to the scope of work affecting this Agreement through change order, contract amendment, force account, or other modification under D.R.M.C. § 28-223. The Contractor acknowledges that:

- (1) It must establish and maintain records and submit regular reports, as required, which will allow the City to assess the Contractor's compliance with the defined selection pool requirements and SBE self-performance requirements.
- (2) Contractor shall have a continuing obligation to promptly inform DSBO in writing of any agreed upon increase or decrease in the scope of work of this Agreement, upon any of the bases under D.R.M.C. § 28-223, regardless of whether such increase or decrease in scope of work has been reduced to writing at the time of notification of the change to the City. Any increase in the scope of services of this Agreement, whether by amendment or other modification, which increases the dollar value of the Agreement, if such change is within the scope of work designated for performance by the

Contractor at the time of award of this Agreement, shall be promptly submitted to the DSBO.

- (3) The Contractor shall achieve defined selection pool requirements and self-performance requirements with respect to such changed scope of work by performing such work.
- (4) The Contractor shall supply to DSBO documentation required by ordinance with respect to the increased dollar value of this Agreement. The Contractor shall not, during the term of this Agreement:
  - (i) Fail to in fact perform as an SBE to achieve the work scope originally listed at proposal submission in order to achieve defined selection pool and self-performance requirements; or
  - (ii) Modify or eliminate all or any portion of the scope of work upon which self-performance is based and the contract was awarded, unless directed by the City.
- (5) Failure to comply with these provisions may subject the Contractor to sanctions set forth in § 28-229 of the SBE Ordinance.
- (6) Should any questions arise regarding SBE and DSBO requirements the Contractor should consult the SBE Ordinance or may contact the DSBO representative at (720) 913-1999.

## **27. SENSITIVE SECURITY INFORMATION:**

Contractor acknowledges that, in the course of performing its work under this Contract, Contractor may be given access to Sensitive Security Information (“**SSI**”), as material is described in the Code of Federal Regulations, 49 C.F.R. Part 1520. Contractor specifically agrees to comply with all requirements of the applicable federal regulations, including but not limited to, 49 C.F.R. Parts 15 and 1520. Contractor understands any questions it may have regarding its obligations with respect to SSI must be referred to DEN’s Security Office.

## **28. DEN SECURITY:**

**A.** Contractor, its officers, authorized officials, employees, agents, subcontractors, and those under its control, shall comply with safety, operational, or security measures required of Contractor or the City by the FAA or Transportation Security Administration (“**TSA**”). If Contractor, its officers, authorized officials, employees, agents, subcontractors or those under its control, fail or refuse to comply with said measures and such non-compliance results in a monetary penalty being assessed against the City, then, in addition to any other remedies available to the City, Contractor shall fully reimburse the City any fines or penalties levied against the City, and any attorney fees or related costs paid by the City as a result of any such violation. Contractor must pay this amount within fifteen (15) days from the date of the invoice or written notice. Any fines and fees assessed by the FAA or TSA against the City due to the actions of Contractor and/or its agents will be deducted directly from the invoice for that billing period.

**B.** Contractor is responsible for compliance with Airport Security regulations and 49 C.F.R. Parts 1542 (Airport Security) and 14 C.F.R. Parts 139 (Airport Certification and Operations). Any and all violations pertaining to Parts 1542 and 139 resulting in a fine will be passed on to and borne by Contractor. The fee/fine will be deducted from the invoice at time of billing.

## **29. FEDERAL RIGHTS:**

**A.** This Contract is subject and subordinate to the terms, reservations, restrictions and conditions of any existing or future contracts between the City and the United States, the execution of which has been or may be required as a condition precedent to the transfer of federal rights or property to the City for airport purposes, and the expenditure of federal funds for the extension, expansion or development of the Airport System.

(i) General Civil Rights: Contractor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal Assistance. This provision binds Contractor and subcontractors from the bid solicitation period through the completion of the Contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

(ii) Federal Fair Labor Standards Act: This Contract incorporates by reference the provisions of 29 C.F.R. Part 201, the Federal Fair Labor Standards Act (“**FLSA**”), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part-time workers. Contractor agrees to incorporate by reference the provisions of FLSA in all contracts and subcontracts resulting from this Contract. Contractor has full responsibility to monitor compliance to the referenced regulation. Contractor must address any claims or disputes arising from this requirement directly with the U.S. Department of Labor – Wage and Hour Division.

(iii) Occupational Safety and Health Act: This Contract incorporates by reference the requirements of 29 C.F.R. Part 1910 with the same force and effect as if given in full text. Contractor must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. Contractor retains full responsibility to monitor its compliance and any subcontractor’s compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (29 C.F.R. Part 1910). Contractor must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

(iv) Contractor covenants it will include the provisions of this section in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Federal Acts, Regulations and directives issued pursuant thereto. Contractor covenants it will take action with respect to any subcontract or procurement as the City or the FAA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if Contractor becomes involved in, or is threatened with



litigation by a subcontractor, or supplier because of such direction, Contractor may request the City to enter into any litigation to protect the interests of the City. In addition, Contractor may request the United States to enter into the litigation to protect the interests of the United States.

**30. CITY EXECUTION OF CONTRACT:**

This Contract is expressly subject to, and shall become effective upon, the execution of all signatories of the City and, if required, the approval of Denver City Council. This Contract may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same.

**31. ELECTRONIC SIGNATURES AND ELECTRONIC RECORDS:**

The Contract, and any other documents requiring a signature hereunder, may be signed electronically by the City and/or Contractor in the manner specified by the City. The Parties agree not to deny the legal effect or enforceability of the Contract solely because it is in electronic form or because an electronic record was used in its formation. The Parties agree not to object to the admissibility of the Contract in the form of an electronic record, or a paper copy of an electronic document, or a paper copy of a document bearing an electronic signature, on the ground that it is an electronic record or electronic signature or that it is not in its original form or is not an original.

**[SIGNATURE PAGES FOLLOW]**

**Contract Control Number:** PLANE-202366978-00  
**Contractor Name:** CHATO'S CONCRETE, LLC

IN WITNESS WHEREOF, the parties have set their hands and affixed their seals at  
Denver, Colorado as of:

**SEAL** **CITY AND COUNTY OF DENVER:**

**ATTEST:** By: \_\_\_\_\_  
\_\_\_\_\_

**APPROVED AS TO FORM:** **REGISTERED AND COUNTERSIGNED:**  
Attorney for the City and County of Denver  
By: \_\_\_\_\_ By: \_\_\_\_\_

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

**Contract Control Number:** PLANE-202366978-00  
**Contractor Name:** CHATO'S CONCRETE, LLC

By: 

DocuSigned by:

Marlene Andrade

B052265C1AB94F4...

Name: Marlene Andrade  
(please print)

Title: OWNER/PARTNER  
(please print)

ATTEST: [if required]

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

Name: \_\_\_\_\_  
(please print)

Title: \_\_\_\_\_  
(please print)

## **EXHIBIT A**

### **Federal Title VI Assurances**

## COMPLIANCE WITH NONDISCRIMINATION REQUIREMENTS:

During the performance of this contract, the Consultant, for itself, its assignees, and successors in interest (hereinafter collectively referred to as the “Consultant”), agrees as follows:

1. **Compliance with Regulations:** The Consultant (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Nondiscrimination:** The Consultant, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Consultant will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.
3. **Solicitations for Subcontracts, including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding or negotiation made by the Consultant for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Consultant of the Consultant’s obligations under this contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.
4. **Information and Reports:** The Consultant will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities and instructions. Where any information required of a Consultant is in the exclusive possession of another who fails or refuses to furnish the information, the Consultant will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a Consultant’s noncompliance with the non-discrimination provisions of this contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:
  - a. Withholding payments to the Consultant under the contract until the Consultant complies; and/or
  - b. Cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The Consultant will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations, and directives issued pursuant

thereto. The Consultant will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Consultant becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Consultant may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the Consultant may request the United States to enter into the litigation to protect the interests of the United States.

## **TITLE VI LIST OF PERTINENT NONDISCRIMINATION ACTS AND AUTHORITIES**

During the performance of this contract, the Consultant, for itself, its assignees, and successors in interest (hereinafter referred to as the “Consultant”) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 USC § 2000d et seq., 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR part 21 (Non-discrimination in Federally-assisted programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act of 1964);
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 USC § 4601) (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973 (29 USC § 794 et seq.), as amended (prohibits discrimination on the basis of disability); and 49 CFR part 27;
- The Age Discrimination Act of 1975, as amended (42 USC § 6101 et seq.) (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982 (49 USC § 471, Section 47123), as amended (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987 (PL 100-209) (broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, the Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 USC §§ 12131 – 12189) as implemented by U.S. Department of Transportation regulations at 49 CFR parts 37 and 38;
- The Federal Aviation Administration’s Nondiscrimination statute (49 USC § 47123)

(prohibits discrimination on the basis of race, color, national origin, and sex);

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 USC 1681 et seq).

**EXHIBIT B**

**CITY AND COUNTY OF DENVER  
RULES AND REGULATIONS AND BID  
CONDITIONS OF THE  
MANAGER OF PUBLIC WORKS**

**PERTAINING TO EQUAL EMPLOYMENT OPPORTUNITY  
IN THE CITY AND COUNTY OF DENVER**

APPROVED FOR LEGALITY:

APPROVED AND ADOPTED:

/s/ \_\_\_\_\_  
Attorney for the City and  
County of Denver

/s/ \_\_\_\_\_  
Manager of Public Works

Adopted and Published Pursuant to Article 111, Division 2 of Chapter 28  
the Revised Municipal Code  
of the City and County of Denver

These Rules and Regulations cancel and supersede any and all previous issued Rules and  
Regulations on the subject



**RULES AND REGULATIONS**  
**REGARDING**  
**EQUAL EMPLOYMENT OPPORTUNITY**

Promulgated and adopted by the Manager of Public Works pursuant to and by authority of Article III, Division 2, Chapter 28 of the Revised Municipal Code of the City and County of Denver, and for the purpose of insuring that contractors, subcontractors and suppliers soliciting and receiving compensation for contract work from or through the City and County of Denver provide equal opportunity in employment without regard to race, color, creed, sex, national origin, age, religion, marital status, political opinion or affiliation or mental or physical handicap and meet certain requirements for the hiring, training, promotion and treatment during employment of members of ethnic groups subjected to differential treatment, including persons of African descent (Black), Spanish-surnamed (Hispanic), Asian-American and American Indian groups.

**RULE I**  
**DEFINITIONS**

- A. "City" means the City and County of Denver.
- B. "Manager" shall mean the Manager of Public Works for the City and County of Denver.
- C. "Contract" means a contract entered into with the City and County of Denver, financed in whole or in part by local resources or funds of the City and County of Denver, for the construction of any public building or prosecution or completion of any public work.
- D. "Contractor" means the original party to a contract with the City and County of Denver, also referred to as the "general" or "prime" contractor.
- E. "Director" means the Director of the Mayor's Office of Contract Compliance.
- F. "Subcontractor" means any person, company, association, partnership, corporation, or other entity which assumes by subordinate agreement some or all of the obligations of the general or prime contractor.
- G. The Phrase "Bidding Specifications" as used in Article 111, Division 2 of Chapter 28 of the Revised Municipal Code shall include BID CONDITION, INVITATION TO BID AND NOTICE OF PROPOSAL.
- H. "Affirmative Action Program" means a set of specific and result-oriented procedures or steps to which a contractor commits himself to apply every good faith effort to employ members of ethnic minority groups, to include persons of African descent (Black), Spanish surnamed (Hispanic), Asian-American, American Indians, and persons with mental or physical handicap.
- I. "Mayor's Office of Contract Compliance" means the City agency established pursuant to Article III, Division 1 of Chapter 28 of the Denver Revised Municipal Code.

**RULE II**  
**NOTICE OF HEARING**

When results of conciliation efforts are unsatisfactory to the Manager and he is informed in accordance with Article III, Division 2 of Chapter 28 of the Revised Municipal Code that a contractor or subcontractor has apparently failed to meet affirmative action and equal employment opportunity requirements after a reasonable period of notice to correct deficiencies, the Manager will, prior to imposition of any sanctions, afford the general contractor a hearing in order to determine whether the contractor or his subcontractors have failed to comply with the affirmative action and equal employment opportunity requirements of Article III, Division 2 of Chapter 28 of the Revised Municipal Code or of the contract. Written notice of such hearing shall be delivered personally or sent by certified mail return receipt requested, to the contractor and to any subcontractor involved at least ten days prior to the date scheduled for the hearing.

**RULE III**  
**HEARING**

- A. Contractors will appear at hearings and may be represented by counsel, and may present testimony orally and other evidence.
- B. Hearings shall be conducted by one or more hearing examiners designated as such by the Manager.
- C. The Director of the Mayor's Office of Contract Compliance may participate in hearings as a witness.
- D. Hearings shall be held at the place specified in the notice of hearing.
- E. All oral testimony shall be given under oath or affirmation and a record of such proceedings shall be made.
- F. All hearings shall be open to the public.
- G. The hearing officer shall make recommendations to the Manager who shall make a final decision.

**REGULATIONS**

**REGULATION NO. 1. ORDINANCE:** The Rules and Regulations of the Manager shall be inserted in the bidding specifications for every contract for which bidding is required.

**REGULATION NO. 2. EXEMPTIONS:** Each contract and subcontract, regardless of dollar amount, shall be subject to affirmative action requirements unless specifically exempted in writing individually by the Manager. Exemptions apply only to "affirmative action" in equal employment opportunity, and are not to be construed as condonation in any manner of "discrimination" or "discriminatory practices" in employment because of race, color, creed sex age national origin, religion, marital status, political opinion or mental or physical handicap.

**REGULATION NO. 3. DIRECTOR OF CONTRACT COMPLIANCE:** The Director of the Mayor's Office of Contract Compliance shall perform the duties assigned to such official by Article III, Division 2 of Chapter 28 of the Revised Municipal Code and by the Manager. (1) The Director of the Mayor's Office of Contract Compliance or designated representatives shall inform bidders and contractors of affirmative action procedures, programs, and goals in accordance with the ordinance at pre-bid and pre-construction conference; (2) make regular on-site inspections; (3) supply contractors and subcontractors with report forms to be completed by them when requested, and furnished to the Director of the Mayor's Office of Contract Compliance; and (4) review payroll records, employment records and practices of general contractors and their subcontractors and suppliers during the performance of any contract. The Director of the Mayor's Office of Contract Compliance shall promptly report apparent affirmative action deficiencies to the Manager.

**REGULATION NO. 4. GOALS AND TIMETABLES:** In general, goals and timetables should take into account anticipated vacancies and the availability of skills in the market place from which employees should be drawn. In addition, where discrimination in employment by a general contractor or any of his subcontractors is indicated, a corrective action program will take into account the need by the general contractor and his subcontractors to correct past discriminatory practices and reach goals of minority manpower utilization on a timely basis through such recruiting and advertising efforts as are necessary and appropriate.

**REGULATION NO.5. AWARD OF CONTRACTS:** It shall be the responsibility of the Director of the Mayor's Office of Contract Compliance to determine the affirmative action capability of bidders, contractors and subcontractors and to recommend to the Manager the award of contracts to those bidders, contractors and subcontractors and suppliers who demonstrate the ability and willingness to comply with the terms of their contract.

**REGULATION NO. 6. PUBLICATION AND DUPLICATION:** Copies of these Rules and Regulations as amended by the Manager from time to time, shall as soon as practicable and after Notice being published will be made a part of all City Contracts.

**REGULATION NO. 7. NOTICE TO PROCEED:** Prior to issuance of Notice to Proceed a sign-off will be required of the Director of the Mayor's Office of Contract Compliance or his designee.

**REGULATION NO. 8. CONTRACTS WITH SUBCONTRACTORS:** To the greatest extent possible the contractor shall make a good faith effort to contract with minority contractors, subcontractors and suppliers for services and supplies by taking affirmative actions which include but are not limited to the following:

1. Advertise invitations for subcontractor bids in minority community news media.
2. Contact minority contractor organizations for referral of prospective subcontractors.
3. Purchase materials and supplies from minority material suppliers.

**REGULATION NO. 9. AGENCY REFERRALS:** it shall be no excuse that the union with which the contractor or subcontractor has an agreement providing for referral, exclusive or otherwise, failed to refer minority employees.

**REGULATION NO. 10. CLAUSES:** The Manager shall include the appropriate clauses in every contract and the contractor shall cause to be inserted in every subcontract the appropriate clauses:

1. **APPENDIX A:** City and County of Denver Equal Opportunity Clause-ALL CONTRACTS funded only with City & County of Denver monies.
2. **APPENDIX B:** Equal Opportunity Clause (11246)-ALL FEDERAL ASSISTED
3. **APPENDIX C:** Section 3-Assurance of Compliance-HUD ASSISTED PROJECTS.
4. **APPENDIX D:** Section 3-Clause-HUD ASSISTED PROJECTS.

All amendments to the appendices shall be included by reference.

**REGULATION NO. 11. SHOW CAUSE NOTICES:** When the Manager has reasonable cause to believe that a contractor has violated Article III, Division 2 of Chapter 28 of the Revised Municipal Code, he may issue a notice requiring the contractor to show cause, within fifteen days why enforcement procedures, or other appropriate action to insure compliance, should not be instituted.

**REGULATION NO. 12. BID CONDITIONS-AFFIRMATIVE ACTION REQUIREMENTS-EQUAL EMPLOYMENT OPPORTUNITY:**

**1. APPENDIX E:**

The Bid Conditions- Affirmative Action Requirements-Equal Employment Opportunity as amended and published by the U.S. Department of Labor, Employment Standards Administration, Office of Federal Contract Compliance, shall be inserted verbatim for bidding specification for every non-exempt contract involving the use of Federal funds.

**2. APPENDIX F:**

The Bid Conditions- Affirmative Action Requirements-Equal Employment Opportunity as published by the Department of Public Works, City and County of Denver shall be inserted verbatim as bidding specifications for every non-exempt contract using City funds.

## APPENDIX A

### **CITY AND COUNTY OF DENVER EQUAL OPPORTUNITY CLAUSE-ALL CONTRACTS**

1. The contractor will not discriminate against any employee or applicant for employment because of race creed, color, sex, age, national origin, religion, marital status, political opinion or affiliation, or mental or physical handicap. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, creed, color, sex, age, national origin, religion, marital status, political opinion or affiliation, or mental or physical handicap. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
2. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, sex, age, national origin, religion, marital status, political opinion or affiliation, or mental or physical handicap.
3. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided, advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. Each contractor will comply with all provisions of Article III, Division 2, Chapter 28 of the Revised Municipal Code, and the rules, regulations, and relevant orders of the Manager and Director.
5. The contractor will furnish all information and reports required by Article III, Division 2, Chapter 28 of the Revised Municipal Code, and by rules, regulations and orders of the Manager and Director or pursuant thereto, and will permit access to his books, records, and accounts by the Manager, Director or their designee for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
6. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations or orders this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further City contracts in accordance with procedures authorized in Article III, Division 2, Chapter 28 of the Revised Municipal Code, or by rules, regulations, or order of the Manager.
7. The contractor will include Regulation 12 Paragraph 2 and the provisions of paragraphs (1) through (6) in every subcontract or purchase order unless, exempted by rules, regulations, or orders of the Manager issued pursuant to Article III, Division 2, Chapter 28 of the Revised Municipal Code, so that such provisions will be binding upon each subcontractor or suppliers. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance.

The applicant further agrees to be bound by the above equal opportunity clauses with respect to its own employment practices when it participates in City contracts. The contractor agrees to assist and cooperate actively with the Manager and the Director in obtaining compliance of subcontractors and suppliers with the equal opportunity clause and the rules, regulations and relevant orders of the Manager, and will furnish the Manager and the Director such information as they may require for the supervision of compliance, and will otherwise assist the Manager and Director in the discharge of the City's primary responsibility for securing compliance. The contractor further agrees to refrain from entering into any contract or contract modification subject to Article III, Division 2, Chapter 28 of the Revised Municipal Code with a contractor debarred from, or who has not demonstrated eligibility for, City contracts.

The contractor will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the Manager and Director. In addition, the contractor agrees that failure or refusal to comply with these undertakings the Manager may take any or all of the following actions:

- A. Cancellation, termination, or suspension in whole or in part of this contract.
- B. Refrain from extending any further assistance to the applicant under the program with respect to which the failure occurred until satisfactory assurance of future compliance has been received from such applicant.
- C. Refer the case to the City Attorney for appropriate legal proceedings.

**SUBCONTRACTS:** Each prime contractor or subcontractor shall include the equal opportunity clause in each of its subcontracts.

**APPENDIX F  
BID CONDITIONS  
AFFIRMATIVE ACTION REQUIREMENTS  
EQUAL EMPLOYMENT OPPORTUNITY**

For all Non-Exempt Construction Contracts to be Awarded by  
the City and County of Denver, Department of Public Works

**NOTICE**

EACH BIDDER, CONTRACTOR OR SUBCONTRACTOR (HEREINAFTER THE CONTRACTOR) MUST FULLY COMPLY WITH THE REQUIREMENTS OF THESE BID CONDITIONS AS TO EACH CONSTRUCTION TRADE IT INTENDS TO USE ON THIS CONSTRUCTION CONTRACT, AND ALL OTHER CONSTRUCTION WORK (BOTH CITY AND NON-CITY) IN THE DENVER AREA DURING THE PERFORMANCE OF THIS CONTRACT OR SUBCONTRACT. THE CONTRACTOR COMMITS ITSELF TO THE GOALS FOR MINORITY MANPOWER UTILIZATION, AS APPLICABLE, AND ALL OTHER REQUIREMENTS, TERMS AND CONDITION OF THESE BID CONDITIONS BY SUBMITTING A PROPERLY SIGNED BID.

THE CONTRACTOR SHALL APPOINT A COMPANY EXECUTIVE TO ASSUME THE RESPONSIBILITY FOR THE IMPLEMENTATION OF THE REQUIREMENTS, TERMS AND CONDITIONS OF THESE BID CONDITIONS.

EULOIS CLECKLEY  
Manager of Public Works  
City and County of Denver

**A. REQUIREMENTS --AN AFFIRM ATIVE ACTION PLAN:**

Contractors shall be subject to the provisions and requirements of these bid conditions including the goals and timetables for minority' and female utilization, and specific affirmative action steps set forth by the Office of Contract Compliance. The contractor's commitment to the goals for minority, and female utilization as required constitutes a commitment that it will make every good faith effort to meet such goals.

**1. GOALS AND TIMETABLES:**

The goals and timetables for minority<sup>1</sup> and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade are as follows:

**GOALS FOR MINORITY PARTICIPATION  
FOR EACH TRADE**

From January 1, 1982  
to 21.7% - 23.5%  
Until Further Notice

**GOALS FOR FEMALE PARTICIPATION  
FOR EACH TRADE**

From January 1, 1982  
to 6.9%  
Until Further Notice

The goals for minority and female utilization above are expressed in terms of hours of training and employment as a proportion of the total number of hours to be worked by the contractor's aggregate workforce, which includes all supervisory personnel, in each trade, on all projects for the City and County of Denver during the performance of its contract (i.e., The period beginning with the first day of work on the City and County of Denver funded construction contract and ending with the last day of work).

The hours of minority and female employment and training must be substantially uniform throughout the length of the contract in each trade and minorities and females must be employed evenly on each of a contractor's projects. Therefore, the transfer of minority or female employees from contractor to contractor or from project to project for the purpose of meeting the contractor's goals shall be a violation of these Bid Conditions.

If the contractor counts the nonworking hours of apprentices they must be employed by the contractor during the training period; the contractor must have made a commitment to employ apprentices at the completion of their training subject to the availability of employment opportunities; and the apprentices must be trained pursuant to training programs approved by the Bureau of Apprenticeship and Training.

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<sup>1</sup> "Minority" is defined as including, Blacks, Spanish Surname Americans, Asian-Americans, and American Indians, and includes both men and Minority women.



## 2. **SPECIFIC AFFIRMATIVE ACTION STEPS:**

No contractor shall be found to be in noncompliance solely on account of its failure to meet its goals, but will be given an opportunity to demonstrate that the contractor has instituted all the specific affirmative action steps specified and has made every good faith effort to make these steps work toward the attainment of its goals within the timetables, all to the purpose of expanding minority and female utilization in its aggregate workforce. A contractor, who fails to comply with its obligation under the Equal Opportunity Clause of its contract and fails to achieve its commitments to the goals for minority and female utilization has the burden of proving that it has engaged in an Affirmative Action Program directed at increasing minority and female utilization and that such efforts were at least as extensive and as specific as the following:

- a. The contractor should have notified minority and female organizations when employment opportunities were available and should have maintained records of the organization's response.
- b. The contractor should have maintained a file of the names and addresses of each minority and female referred to it by any individual or organization and what action was taken with respect to each such referred individual, and if the individual was not employed by the contractor, the reasons. If such individual was sent to the union hiring hall for referral and not referred back by the union or if referred, not employed by the contractor, the file should have documented this and their reasons.
- c. The contractor should have promptly notified the Department of Public Works, and Mayor's Office of Contract Compliance when the union or unions with which the contractor has collective bargaining agreements did not refer to the contractor a minority or female sent by the contractor, or when the contractor has other information that the union referral process has impeded efforts to meet its goals.
- d. The contractor should have disseminated its EEO policy within its organization by including it in any employee handbook or policy manual; by publicizing it in company newspapers and annual reports and by advertising such policy at reasonable intervals in union publications. The EEO policy should be further disseminated by conducting staff meetings to explain and discuss the policy; by posting of the policy; and by review of the policy with minority and female employees.
- e. The contractor should have disseminated its EEO policy externally by informing and discussing it with all recruitment sources; by advertising in news media, specifically including minority and female news media; and by notifying and discussing it with all subcontractors.
- f. The contractor should have made both specific and reasonably recurrent written and oral recruitment efforts. Such efforts should have been directed at minority and female organizations, schools with substantial minority and female enrollment, and minority and female recruitment and training organizations within the contractor's recruitment area.

- g. The contractor should have evidence available for inspection that all tests and other selection techniques used to select from among candidates for hire, transfer, promotion, training, or retention are being used in a manner that does not violate the OFCCP Testing Guidelines in 41 CFR Part 60-3.
- h. The contractor should have made sure that seniority practices and job classifications do not have a discriminatory effect.
- i. The contractor should have made certain that all facilities are not segregated by race.
- j. The contractor should have continually monitored all personnel activities to ensure that its EEO policy was being carried out including the evaluation of minority and female employees for promotional opportunities on a quarterly basis and the encouragement of such employees to seek those opportunities.
- k. The contractor should have solicited bids for subcontracts from available minority and female subcontractors engaged in the trades covered by these Bid conditions, including circulation of minority and female contractor associations.

**NOTE:** The Director and the Mayor's Office of Contract Compliance will provide technical assistance on questions pertaining to minority and female recruitment sources, minority and female community organizations, and minority and female news media upon receipt of a request for assistance from a contractor.

**3. NON-DISCRIMINATION:**

In no event may a contractor utilize the goals and affirmative action steps required in such a manner as to cause or result in discrimination against any person on account of race, color, religion, sex, marital status, national origin, age, mental or physical handicap, political opinion or affiliation.

**4. COMPLIANCE AND ENFORCEMENT:**

In all cases, the compliance of a contractor will be determined in accordance with its obligations under the terms of these Bid Conditions. All contractors performing or to perform work on projects subject to these Bid Conditions hereby agree to inform their subcontractors in writing of their respective obligations under the terms and requirements of these Bid Conditions, including the provisions relating to goals of minority and female employment and training.

**A. Contractors Subject to these Bid Conditions:**

In regard to these Bid Conditions, if the contractor meets the goals set forth therein or can demonstrate that it has made every good faith effort to meet these goals, the contractor shall be presumed to be in compliance with Article III, Division 2, Chapter 28 of the Revised Municipal Code, the implementing regulations and its obligations under these Bid Conditions. In the event, no formal sanctions or proceedings leading toward sanctions shall be instituted unless the contracting or administering agency otherwise determines that the contractor is violating the Equal Opportunity Clause.

- 1. Where the Office of Contract Compliance finds that a contractor failed to comply with the requirements of Article 111, Division 2, Chapter 28 of the Revised Municipal

Code or the implementing regulations and the obligations under these Bid Conditions, and so informs the Manager, the Manager shall take such action and impose such sanctions, which include suspension, termination, cancellation, and debarment, as may be appropriate under the Ordinance and its regulations. When the Manager proceeds with such formal action it has the burden of proving that the contractor has not met the goals contained in these Bid Conditions. The contractor's failure to meet its goals shall shift to it the requirement to come forward with evidence to show that it has met the good faith requirements of these Bid Conditions.

2. The pendency of such proceedings shall be taken into consideration by the Department of Public Works in determining whether such contractor can comply with the requirements of Article 111, Division 2, Chapter 28 of the Revised Municipal Code, and is therefore a "responsible prospective contractor".
3. The Mayor's Office of Contract Compliance shall review the contractor's employment practices during the performance of the contract. If the Mayor's Office of Contract Compliance determines that the contractor's Affirmative Action Plan is no longer an acceptable program, the Director shall notify the Manager.

**B. Obligations Applicable to Contractors:**

It shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority or female employees. Discrimination in referral for employment, even if pursuant to provisions of a collective bargaining agreement, is prohibited by the National Labor Relations Act, as amended, Title VI of the Civil Rights Act of 1964, as amended, and Article III, Division 2, Chapter 28 of the Revised Municipal Code. It is the policy of the Department of Public Works that contractors have a responsibility to provide equal employment opportunity, if they wish to participate in City and County of Denver contracts. To the extent they have delegated the responsibility for some of their employment practices to a labor organization and, as a result, are prevented from meeting their obligations pursuant to Article III, Division 2, Chapter 28 of the Revised Municipal Code, such Contractors cannot be considered to be in compliance with Article III, Division 2, Chapter 28 of the Revised Municipal Code, or its implementing rules and regulations.

**C. General Requirements**

Contractors are responsible for informing their subcontractors in writing regardless of tier, as to their respective obligations. Whenever a contractor subcontracts a portion of work in any trade covered by these Bid Conditions, it shall include these Bid Conditions in such subcontracts and each subcontractor shall be bound by these Bid Conditions to the full extent as if it were the prime contractor. The contractor shall not, however, be held accountable for the failure of its subcontractors to fulfill their obligations under these Bid Conditions. However, the prime contractor shall give notice to the Director of any refusal or failure of any subcontractor to fulfill the obligations under these Bid Conditions. A subcontractor's failure to comply will be treated in the same manner as such failure by a prime contractor.

1. Contractors hereby agree to refrain from entering into any contract or contract modification subject to Article 111, Division 2, Chapter 28 of the Revised Municipal Code with a contractor debarred from, or who is determined not to be a "responsive" bidder for the City and County of Denver contracts pursuant to the Ordinance.
2. The contractor shall carry out such sanctions and penalties for violation of these Bid Conditions and the Equal Opportunity Clause including suspension, termination and cancellation of existing subcontracts and debarment from future contracts as may be ordered by the Manager pursuant to Article 111, Division 2, Chapter 28 of the Revised Municipal Code and its implementing regulations.
3. Nothing herein is intended to relieve any contractor during the term of its contract from compliance with Article III, Division 2, Chapter 28 of the Revised Municipal Code, and the Equal Opportunity Clause of its contract with respect to matters not covered in these Bid Conditions.
4. Contractors must keep such records and file such reports relating to the provisions of these Bid Conditions as shall be required by the Office of Contract Compliance.
5. Requests for exemptions from these Bid Conditions must be made in writing, with justification, to the Manager of Public Works, City and County Building, Room 379, Denver, Colorado 80202, and shall be forwarded through and with the endorsement of the Director.

**EXHIBIT C****CITY AND COUNTY OF DENVER  
INSURANCE REQUIREMENTS FOR DEPARTMENT OF AVIATION  
OWNER CONTROLLED INSURANCE PROGRAM (OCIP/ROCIP) PROJECT**

**NOTICE OF CHANGE TO ROCIP:** DEN reserves the right to terminate or modify the DEN ROCIP or any portion thereof. Further, dependent on factors including, but not limited to, the official timing and duration of the ROCIP project for which services are provided under this Agreement, DEN may need to transition from one ROCIP program to another and introduce corresponding requirements for contractors. DEN will provide Contractor notice in accordance with the terms and conditions of this Agreement.

**1. General Information**

City and County of Denver and Denver International Airport (hereinafter referred to collectively as “DEN”) has arranged for certain construction activities at DEN to be insured under an Owner Controlled Insurance Program (OCIP) or a Rolling Owner Controlled Insurance Program (ROCIP) (hereinafter collectively referred to as “ROCIP”). A ROCIP is a single insurance program that insures DEN, the Contractor and subcontractors of any tier, and other designated parties (Enrolled Parties), for work performed at the Project Site. Certain trade contractors and subcontractors are ineligible for this program; see ROCIP Insurance Manual Section 4. Insurance requirements are determined based on the scope of work.

**1.2 ROCIP Manuals**

Below are links to access the current reference manuals related to DEN ROCIP. These manuals are part of the Contract Documents.

[ROCIP Insurance Manual](#)

[ROCIP Safety Manual](#)

[ROCIP Claims Guide](#)

**2. Insurance Requirements for Non-ROCIP Contractors and Subcontractors (Ineligible Parties)**

Contractor and subcontractors of any tier shall require all Ineligible Parties, as defined in ROCIP Insurance Manual Section 4 or confirmed as excluded by DEN, to provide and maintain insurance of the type and in limits as set forth in the Contractor Subcontract Agreement and such insurance shall include the minimum defined coverages and be evidenced to DEN as required in this Section 2.

**2.1 Certificate Holder**

Certificate(s) shall be issued to:

CITY AND COUNTY OF DENVER  
Denver International Airport  
8500 Peña Boulevard, Suite 8810  
Denver CO 80249  
Attn: Risk Management

**2.2 Acceptable Certificate of Insurance Form and Submission Instructions**

Please read these requirements carefully to ensure proper documentation and receipt of your certificate(s) of insurance.

- ACORD FORM (or equivalent) certificate is required.
- SUBMIT via emailed in pdf format to: [contractadmininvoices@flydenver.com](mailto:contractadmininvoices@flydenver.com)
- ELECTRONIC CERTIFICATES are required, hard copy documents will not be accepted.

- THIRD PARTY SOFTWARE may be implemented during the term of this Agreement to manage insurance compliance and documents with required use by Vendor of such system.
- REFERENCE on the certificate must include the DEN assigned Contract Number.

## 2.3 Coverage and Limits

### 2.3.1 Commercial General Liability

Contractor shall maintain insurance coverage including bodily injury, property damage, personal injury, advertising injury, independent contractors, and products and completed operations in minimum limits of \$1,000,000 each occurrence, \$2,000,000 products and completed operations aggregate; if policy contains a general aggregate, a minimum limit of \$2,000,000 annual aggregate must be maintained.

- 2.3.1.1 Coverage shall include Contractual Liability covering liability assumed under this Agreement (including defense costs assumed under contract) within the scope of coverages provided.
- 2.3.1.2 Coverage shall include Mobile Equipment Liability, if used to perform services under this Agreement.

### 2.3.2 Business Automobile Liability

Contractor shall maintain a minimum limit of \$1,000,000 combined single limit each occurrence for bodily injury and property damage for all owned, leased, hired and/or non-owned vehicles used in performing services under this Agreement.

- 2.3.2.1 If operating vehicles unescorted airside at DEN, a \$10,000,000 combined single limit each occurrence for bodily injury and property damage is required.
- 2.3.2.2 If Contractor does not have blanket coverage on all owned and operated vehicles and will require unescorted airside driving privileges, then a schedule of insured vehicles (including year, make, model and VIN number) must be submitted with the Certificate of Insurance.
- 2.3.2.3 If transporting waste, hazardous material, or regulated substances, Contractor shall carry a Broadened Pollution Endorsement and an MCS 90 endorsement on its policy.
- 2.3.2.4 If Contractor does not own any fleet vehicles and Contractor's owners, officers, directors, and/or employees use their personal vehicles to perform services under this Agreement, Contractor shall ensure that one or both of the following coverages are maintained as appropriate: (i) Personal Automobile Liability including a Business Use Endorsement by the vehicle owner and (ii) Non-Owned Auto Liability by the Contractor.
- 2.3.2.5 If Contractor will be completing all services to DEN under this Agreement remotely and not be driving to locations under direction of the City to perform services, this requirement is waived.

### 2.3.3 Workers' Compensation and Employer's Liability Insurance

Contractor shall maintain the coverage as required by statute for each work location and shall maintain Employer's Liability insurance with limits no less than \$1,000,000 per occurrence for each bodily injury claim, \$1,000,000 per occurrence for each bodily injury caused by disease claim, and \$1,000,000 aggregate for all bodily injuries caused by disease claims.

2.3.3.1 Colorado Workers' Compensation Act allows for certain, limited exemptions from Worker's Compensation insurance coverage requirements. It is the sole responsibility of the Contractor to determine their eligibility for providing this coverage, executing all required documentation with the State of Colorado, and obtaining all necessary approvals. Verification document(s) evidencing exemption status must be submitted with the Certificate of Insurance.

#### 2.3.4 Professional Liability (Errors and Omissions) Insurance

Contractor shall maintain a minimum limit of \$1,000,000 each claim and policy aggregate, providing coverage for applicable services outlined in this Agreement. If there are no applicable professional services, this coverage will not be required.

The Contractor shall be responsible for conferring with DEN Risk Management on any subcontractors providing work to the Project to obtain a formal determination if this coverage will be required.

#### 2.3.5 Contractor's Pollution Legal Liability

If required by DEN Risk Management for any specific Excluded Party based on their scope of work, Contractor shall maintain coverage for its work site operations that are conducted on DEN's premises including project management and site supervision duties with a limit no less than \$1,000,000 each occurrence and aggregate resulting from claims arising out of a pollution condition or site environmental condition resulting out of work site operations on DEN's premises.

2.3.5.1 Coverage shall include claims/losses for bodily injury, property damage including loss of use of damaged property, defense costs including costs and expenses incurred in the investigation, defense or settlement of claims, and cleanup cost for pollution conditions resulting from illicit abandonment, the discharge, dispersal, release, escape, migration or seepage of any solid, liquid, gaseous or thermal irritant, contaminant, or pollutant, including soil, silt, sedimentation, smoke, soot, vapors, fumes, acids, alkalis, chemicals, electromagnetic fields, hazardous substances, hazardous materials, waste materials, low level radioactive waste, mixed wastes, on, in, into, or upon land and structures thereupon, the atmosphere, surface water or groundwater on the DEN premises.

2.3.5.2 Work site means a location where covered operations are being performed, including real property rented or leased from DEN for the purpose of conducting Contractor's covered operations.

The Contractor shall be responsible for conferring with DEN Risk Management on any subcontractors providing work to the Project to obtain a formal determination if this coverage will be required.

#### 2.3.6 Cyber Liability

If required by DEN Risk Management for any specific Excluded Party based on their scope of work, Contractor shall maintain a minimum limit of \$1,000,000 per occurrence and \$1,000,000 annual policy aggregate covering claims involving privacy violations, information theft, damage to or destruction of electronic information, intentional and/or unintentional release of private information, alteration of electronic information, extortion, and network security.

The Contractor shall be responsible for conferring with DEN Risk Management on any subcontractors providing work to the Project to obtain a formal determination if this coverage will be required.

### 2.3.7 Technology Errors and Omissions, Network Security, and Privacy Liability (Cyber):

If required by DEN Risk Management for any specific Excluded Party based on their scope of work, Contractor shall maintain a limit no less than \$1,000,000 each claim and aggregate; \$1,000,000 each claim and aggregate for cyber extortion; and no less than \$250,000 each claim for invoice manipulation and email spoofing.

2.3.7.1 Coverage shall include, but not be limited to, liability arising from theft, dissemination and/or use of personal, private, confidential, information subject to a non-disclosure agreement, including information stored or transmitted, privacy or cyber laws, damage to or destruction of information, intentional and/or unintentional release of private information, alteration of information, extortion and network security, introduction of a computer virus into, or otherwise causing damage to, a customer's or third person's computer, computer system, network or similar computer related property and the data, software, and programs thereon, advertising injury, personal injury (including invasion of privacy) and intellectual property offenses related to internet.

The Contractor shall be responsible for conferring with DEN Risk Management on any subcontractors providing work to the Project to obtain a formal determination if this coverage will be required.

### 2.3.8 Unmanned Aerial Vehicle (UAV) Liability

If Contractor desires to use drones in any aspect of its work on DEN premises, the following requirements must be met prior to commencing any drone operations:

- 2.3.8.1 Express written permission must be granted by DEN.
- 2.3.8.2 Express written permission must be granted by the Federal Aviation Administration (FAA).
- 2.3.8.3 Drone equipment must be properly registered with the FAA.
- 2.3.8.4 Drone operator(s) must be properly licensed by the FAA.
- 2.3.8.5 Contractor must maintain UAV Liability including flight coverage, personal and advertising injury liability, and hired/non-owned UAV liability for its commercial drone operations with a limit no less than \$1,000,000 combined single limit each occurrence for bodily injury and property damage.

### 2.3.9 Excess/Umbrella Liability

Combination of primary and excess coverage may be used to achieve minimum required coverage limits. Excess/Umbrella policy(ies) must follow form of the primary policies with which they are related to provide the minimum limits and be verified as such on any submitted Certificate of Insurance.

## 2.4 Reference to Project and/or Contract

The DEN Project and/or Contract Number and project description shall be noted on the Certificate of Insurance.

## 2.5 Additional Insured

For all coverages required under this Agreement (excluding Workers' Compensation and Professional Liability, if required), Contractor's insurer(s) shall include the City and County of Denver, its elected and appointed officials, successors, agents, employees and volunteers as Additional Insureds by policy endorsement.



## 2.6 Waiver of Subrogation

For all coverages required under this Agreement (excluding Professional Liability, if required), Contractor's insurer(s) shall waive subrogation rights against the City and County of Denver, its elected and appointed officials, successors, agents, employees and volunteers by policy endorsement.

If Contractor will be completing all services to the City under this Agreement remotely and not be traveling to locations under direction of the City to perform services, this requirement is waived specific to Workers' Compensation coverage.

## 2.7 Notice of Material Change, Cancellation or Nonrenewal

Each certificate and related policy shall contain a valid provision requiring notification to the Certificate Holder in the event any of the required policies be canceled or non-renewed or reduction in required coverage before the expiration date thereof.

- 2.7.1 Such notice shall reference the DEN assigned contract number related to this Agreement.
- 2.7.2 Said notice shall be sent thirty (30) days prior to such cancellation, non-renewal or reduction in coverage unless due to non-payment of premiums for which notice shall be sent ten (10) days prior.
- 2.7.3 If such written notice is unavailable from the insurer or afforded as outlined above, Contractor and/or its insurance broker/agent shall provide written notice of cancellation, non-renewal and any reduction in coverage to the Certificate Holder within seven (7) business days of receiving such notice by its insurer(s) and include documentation of the formal notice received from its insurer(s) as verification. Contractor shall replace cancelled or nonrenewed policies with no lapse in coverage and provide an updated Certificate of Insurance to DEN.
- 2.7.4 In the event any general aggregate or other aggregate limits are reduced below the required minimum per occurrence limits, Contractor will procure, at its own expense, coverage at the requirement minimum per occurrence limits. If Contractor cannot replenish coverage within ten (10) calendar days, it must notify the City immediately.

## 2.8 Cooperation

Contractor agrees to fully cooperate in connection with any investigation or inquiry and accept any formally tendered claim related to this Agreement, whether received from the City or its representative. Contractor's failure to fully cooperate may, as determined in the City's sole discretion, provide cause for default under the Agreement. The City understands acceptance of a tendered claim does not constitute acceptance of liability.

## 2.9 Additional Provisions

- 2.9.1 Deductibles or any type of retention are the sole responsibility of the Contractor.
- 2.9.2 Defense costs shall be in addition to the limits of liability. If this provision is unavailable that limitation must be evidenced on the Certificate of Insurance.
- 2.9.3 Coverage required may not contain an exclusion related to operations on airport premises.
- 2.9.4 A severability of interests or separation of insureds provision (no insured vs. insured exclusion) is included under any policy requiring Additional Insured status.
- 2.9.5 A provision that coverage is primary and non-contributory with other coverage or self-insurance maintained by DEN, excluding Professional Liability and Workers' Compensation policies, if required.

- 2.9.6 The insurance requirements under this Agreement shall be the greater of (i) the minimum limits and coverage specified hereunder or (ii) the broader coverage and maximum limits of coverage of any insurance policy or proceeds available to the Contractor. It is agreed that the insurance requirements set forth herein shall not in any way act to reduce coverage that is broader or that includes higher limits than the minimums set forth in this Agreement.
  - 2.9.7 All policies shall be written on an occurrence form when available and industry norm. If an occurrence form is unavailable and/or the industry norm, claims-made coverage may be accepted by DEN provided the retroactive date is on or before the Agreement Effective Date or the first date when any goods or services were provided to DEN, whichever is earlier, and continuous coverage will be maintained or an extended discovery period of three years beginning at the time work under this Agreement is completed or the Agreement is terminated, whichever is later.
  - 2.9.8 Certificates of Insurance must specify the issuing companies, policy numbers and policy periods for each required form of coverage. The certificates for each insurance policy are to be signed by an authorized representative and must be submitted to the City at the time Contractor signed this Agreement.
  - 2.9.9 The insurance shall be underwritten by an insurer licensed or authorized to do business in the State of Colorado and rated by A.M. Best Company as A- VIII or better.
  - 2.9.10 Certificate of Insurance and Related Endorsements: The City's acceptance of a certificate of insurance or other proof of insurance that does not comply with all insurance requirements shall not act as a waiver of Contractor's breach of this Agreement or of any of the City's rights or remedies under this Agreement. All coverage requirements shall be enforced unless waived or otherwise modified in writing by DEN Risk Management. Contractor is solely responsible for ensuring all formal policy endorsements are issued by their insurers to support the requirements.
  - 2.9.11 The City shall have the right to verify, at any time, all coverage, information, or representations, and the insured and its insurance representatives shall promptly and fully cooperate in any such audit the City may elect to undertake including provision of copies of insurance policies upon request. In the case of such audit, the City may be subject to a non-disclosure agreement and/or redactions of policy information unrelated to the required coverage and premium amounts.
  - 2.9.12 No material changes, modifications, or interlineations to required insurance coverage shall be allowed without the review and written approval of DEN Risk Management.
  - 2.9.13 Contractor shall be responsible for ensuring the City is provided updated Certificate(s) of prior to each policy renewal.
  - 2.9.14 Contractor's failure to maintain required insurance shall be the basis for immediate suspension and cause for termination of this Agreement, at the City's sole discretion and without penalty to the City.
- 2.10 Part 230 and the DEN Airport Rules and Regulations

If the minimum insurance requirements set forth herein differ from the equivalent types of insurance requirements in Part 230 of the DEN Airport Rules and Regulations, the greater and broader insurance requirements shall supersede those lesser requirements, unless expressly excepted in writing by DEN Risk Management.

### **3. Insurance Requirements for ROCIP Enrolled Contractors and Subcontractors**

#### **3.1 Insurance Provided by the DEN ROCIP**

DEN retains the right to have this Project insured under a ROCIP. ROCIP coverage shall provide: (i) Commercial General Liability, (ii) Workers' Compensation & Employer's Liability, (iii) Excess Liability, (iv) Contractor's Pollution Liability, and (v) Builder's Risk as outlined herein and as defined by the respective policies for each coverage, for the period from the start of Work through completion and final acceptance by DEN except as otherwise provided herein.

### 3.2 Enrollment Required

Parties performing labor or services at the Project Site are eligible to enroll in the DEN ROCIP, unless they are Ineligible Parties (as defined in ROCIP Insurance Manual Section 4). Participation is mandatory but not automatic. Parties eligible for enrollment shall follow the procedures and follow the instructions as provided in the DEN ROCIP Insurance Manual to enroll in the program. When the Contractor and subcontractors of any tier are properly enrolled, the DEN ROCIP Administrator will issue a Certificate of Insurance evidencing the coverages afforded to each Enrolled Party under the DEN ROCIP, prior to their commencing Work on the Project Site.

### 3.3 Exclusion of Contractor/Subcontractor Insurance Costs from Proposal and Bid Prices

Contractor shall exclude from Contractor's cost of work and ensure that each subcontractor of any tier exclude from their cost of work, normal costs for insurance for those coverages provided under the DEN ROCIP. As part of the enrollment process, Contractor and subcontractors shall provide policy declaration rate pages and deductible endorsements on the General Liability, Workers' Compensation, and Excess Liability policies as required in the DEN ROCIP Insurance Manual. The calculation of these costs will be determined by the ROCIP Program Administrator. The costs of DEN ROCIP coverage includes reductions in insurance premiums, all relevant taxes and assessments, markup on insurance premiums, and losses retained through large deductibles, self-insured retentions, or self-funded programs. Change orders shall also exclude the cost of ROCIP coverage.

Pre-employment substance abuse testing costs will be covered by DEN and should be removed from bid prices. Drug testing will be more thoroughly discussed in the ROCIP Safety Manual.

### 3.4 Insurance Premiums

DEN will pay the insurance premiums for the DEN ROCIP insurance policies. DEN is responsible for all adjustments to the premiums and will be the sole beneficiary of all dividends, retroactive adjustments, return premiums, and any other monies due through audits or otherwise. The Contractor assigns to DEN the right to receive all such adjustments and will require that each subcontractor of any tier assign to DEN all such adjustments. The Contractor and the subcontractors who are Enrolled Parties shall execute such further documentation as may be required by DEN to accomplish this assignment.

### 3.5 Off Site Operations Coverage Under ROCIP

The DEN ROCIP will provide certain insurance coverage for DEN, Contractor and Enrolled Parties, along with their Eligible Employees performing Work at the Project Site. Off-site operations shall be covered only if designated in writing by DEN and when all operations at such site are identified and solely dedicated to the Project. Contractors and subcontractors are responsible to notify the DEN ROCIP Administrator in writing, to request coverage for specified off-site operations. Coverage is not provided at the off-site location unless confirmed in writing by the DEN ROCIP Administrator.

### 3.6 DEN ROCIP Insurance Manual

As soon as practicable, the DEN ROCIP Insurance Manual will be sent to each Enrolled Party and will become a part of the Contract and Contractor's Subcontract with its subcontractor and its subcontractors' agreements with any lower-tier subcontractor. The DEN ROCIP Insurance Manual will contain the administrative and claim reporting procedures. Contractor agrees to and will require that its subcontractors of any tier to cooperate with the DEN ROCIP Administrator in providing all required information.

### 3.7 Conflicts

Descriptions of the DEN ROCIP coverages set forth in ROCIP Insurance Manual Section 4.6 are not intended to be complete or meant to alter or amend any provision of the DEN ROCIP insurance policies. The DEN ROCIP coverages, terms, conditions, and exclusions are set forth in full in their respective policy forms. In the event of a conflict or omission between the coverages provided in the DEN ROCIP insurance policies and the coverages summarized or described in the DEN ROCIP Insurance Manual, this Exhibit or elsewhere in the Contract Documents, the DEN ROCIP insurance policies shall govern. In the event of a conflict between the provisions of this Exhibit and the DEN ROCIP Insurance Manual, that does not involve any conflict with the provisions of the DEN ROCIP insurance policies, the provisions of this Exhibit shall govern.

### 3.8 ROCIP Insurance Coverage Provided to Enrolled Parties

#### 3.8.1 Insurance Provided by DEN

Unless otherwise provided herein, prior to commencement of the Work, DEN, at its sole option and expense, shall secure and maintain at all times during the performance of this Contract the insurance specified below, insuring DEN, Enrolled Parties and such other persons or interests as DEN may designate with limits not less than those specified below for each coverage.

##### 3.8.1.1 Workers' Compensation & Employer's Liability – On Site Only

DEN shall maintain the coverage as required by statute for the Project Site and shall maintain Employer's Liability insurance with limits no less than \$1,000,000 per occurrence for each bodily injury claim, \$1,000,000 per occurrence for each bodily injury caused by disease claim, and \$1,000,000 aggregate for all bodily injuries caused by disease claims.

##### 3.8.1.2 Commercial General Liability – On Site Only

DEN shall maintain insurance coverage including bodily injury, property damage, personal injury, advertising injury, and products and completed operations in minimum limits as listed below:

Coverage	Limit
Annual General Aggregate (Per Project and Reinstates Annually)	\$4,000,000
Products/Completed Operations Aggregate (Per Project and Statute of Repose)	\$4,000,000
Total Products/Completed Operations Aggregate (Statute of Repose)	\$20,000,000
Personal / Advertising Injury Limit	\$2,000,000
Each Occurrence Limit	\$2,000,000
Fire Damage Legal Liability (any one fire)	\$ 300,000
Medical Payments (any one person)	\$ 10,000

##### 3.8.1.3 Excess Liability Insurance

DEN shall maintain coverage following form with underlying policies of Commercial General Liability and Employer's Liability in minimum limits as listed below:

Coverage	Limit
Annual General Aggregate (Per Project and Reinstates Annually)	\$200,000,000
Products/Completed Operations Aggregate (Per Project)	\$20,000,000
Total Products/Completed Operations Aggregate (Policy Cap)	\$400,000,000
Each Occurrence Limit	\$200,000,000

DEN, in its sole discretion, may elect to provide higher limits, based on Project size. Excess Liability limits are shared by all Insured parties.

#### 3.8.1.4 Contractor's Pollution Liability

DEN shall maintain coverage for bodily injury, property damage, or environmental damage caused by a pollution event resulting from covered operations, including completed operations, at the Project Site with a limit no less than \$10,000,000 each occurrence and aggregate. Coverage includes microbial matter and legionella pneumophila in any structure on land and the atmosphere contained within the structure. Products/Completed Operations coverage may extend for the statute of limitations/repose after final completion of the Project.

#### 3.8.1.5 Builder's Risk Insurance

DEN shall maintain, Builder's Risk (and/or Installation Floater) in the amount of \$200,000,000 per occurrence subject to various sublimits (as defined in the Builders' Risk Policy). Such insurance shall end when the first of the following occurs: 1) DEN's interest in the Work ceases; 2) the policy expires or is cancelled; or 3) the Work is accepted by DEN.

Builder's Risk Insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss of damage including, theft, vandalism, malicious mischief, terrorism, rigging and hoisting for materials and equipment that are part of the Project, collapse, earthquake, flood, windstorm, falsework, testing and startup (as provided by the policy), temporary buildings and debris removal including demolition occasioned by enforcement of any applicable ordinance laws, and shall cover reasonable compensation for services and expenses required as a result of such insured loss.

This Builder's Risk Insurance shall cover portions of the Work stored off site, and also portions of the Work in transit.

DEN and Contractor shall waive all rights against (1) each other and any of their subcontractors of any tier, and all respective agents and employees, and (2) the architect, architect's consultants, separate contractors, if any, and any of their subcontractors of any tier, and all respective agents and employees, for damages caused by fire or other causes of loss to the extent covered by Builder's Risk Insurance obtained pursuant to this Section or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by DEN as fiduciary. DEN or Contractor, as appropriate, shall require of the architect, architect's consultants, separate contractors, and their subcontractors of any tier, and all respective agents and employees, by appropriate agreements, written where

legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

### 3.8.2 Claim Chargeback

A claim charge-back will be assessed, regardless of fault, for the amount of any loss payable under this program with the exception of Workers' Compensation and Excess Liability, up to a maximum of \$25,000 each loss. General Contractor may elect to pass no more than \$5,000 of this charge, each loss, through to any responsible subcontractor.

## 3.9 Other Insurance Provided By Enrolled Parties

At their own expense, the Enrolled Parties of all tiers must carry the following minimum coverage and limits and such insurance shall be evidenced to DEN and the DEN ROCIP Administrator as required in this Section 3.9.

### 3.9.1 Certificate Holder

Certificate(s) shall be issued to:

CITY AND COUNTY OF DENVER  
 Denver International Airport  
 8500 Peña Boulevard, Suite 8810  
 Denver CO 80249  
 Attn: Risk Management

and

CITY AND COUNTY OF DENVER  
 Department of Aviation  
 c/o Marsh USA, Inc.  
 111 SW Columbia, Ste 500  
 Portland, OR 97201

### 3.9.2 Acceptable Certificate of Insurance Form and Submission Instructions

Please read these requirements carefully to ensure proper documentation and receipt of your certificate(s) of insurance.

- ACORD FORM (or equivalent) certificate is required.
- SUBMIT via emailed in pdf format to: contractadmininvoices@flydenver.com  
and DenverAirport.ROCIP@marsh.com
- ELECTRONIC CERTIFICATES are required, hard copy documents will not be accepted.
- THIRD PARTY SOFTWARE may be implemented during the term of this Agreement to manage insurance compliance and documents with required use by Vendor of such system.
- REFERENCE on the certificate must include the DEN assigned Contract Number.

### 3.9.3 Other Insurance Requirements

Enrolled Contractors shall adhere to the same minimum insurance requirements as stated in Section 2 of this exhibit, with the following exceptions:

- Commercial General Liability coverage requirement is Off Site Only

- Workers' Compensation and Employer's Liability coverage requirement is Off Site Only
- Contractor's Pollution Legal Liability is not required

#### **4. Contractor Warranties and Agreements**

##### **4.1 Accuracy of Contractor-provided Information**

Contractor warrants that all information submitted to DEN or the DEN ROCIP Administrator is accurate and complete to the best of its knowledge. Contractor will notify DEN or the DEN ROCIP Administrator immediately in writing of any errors discovered during the performance of the Work.

##### **4.2 Contractor Responsible to Review Coverage**

Contractor acknowledges that all references to DEN ROCIP policy terms, conditions, and limits of liability in this document, as well as the DEN ROCIP Insurance Manual, are for reference only. Contractor and its subcontractors of any tier are responsible for conducting their own independent review and analysis of the DEN ROCIP insurance policies in formulating any opinion or belief as to the applicability of such coverage in the event of any loss or potential claim. Any type of insurance or increase of limits not described above, which the Contractor requires for its own protection or on account of statute, shall be its own responsibility and at its own expense.

##### **4.3 Audit**

Contractor agrees to make its records available for review and to cooperate with DEN, its insurers and insurance brokers, the City Auditor, and representatives of the aforesaid parties in the event of an audit. In the event that a DEN audit of Contractor's records, as permitted in the Contract or other DEN ROCIP documents, reveals a discrepancy in the insurance, payroll, safety, or any other information required to be provided to DEN or the DEN ROCIP Administrator, or reveals inclusion of costs for DEN ROCIP coverage or other coverage beyond what is described above in any payment for the Work, DEN will have the right to deduct from payments due Contractor all such insurance costs as well as all audit costs.

##### **4.4 Insurance Costs Removed**

Contractor warrants that the costs for insurance as provided under the DEN ROCIP were not included in Contractor's bid or proposal for the Work, the Contract Price/Contract Sum, and will not be included in any change order or any request for payment for the Work or extra work.

#### **5. Contractor Obligations**

##### **5.1 ROCIP Documents Shall be Provided to Subcontractor**

Contractor shall furnish each bidding subcontractor, vendor, supplier, material dealer or other party a copy of this Exhibit, the DEN ROCIP Insurance Manual and the DEN ROCIP Safety Manual and shall incorporate the terms of this Exhibit in all contracts and agreements entered into for performance of any portion of the Work.

##### **5.2 Timely Enrollment Required**

Contractor shall enroll in the DEN ROCIP within five (5) business days following a request by DEN or the DEN ROCIP Administrator. Contractor shall notify each subcontractor of the process for enrolling in DEN ROCIP and confirm that enrollment is mandatory, but not automatic. Contractor shall assure that subcontractors of any tier shall not commence Work until verification of enrollment is confirmed by the DEN ROCIP Administrator by the issuance of a Certificate of Insurance to each individual Enrolled Party.

### 5.3 Compliance with Conditions

Contractor shall not violate any condition of the policies of insurance provided by DEN under the terms of this Exhibit, the DEN ROCIP Insurance Manual or the DEN ROCIP Safety Manual. All requirements imposed by the subject policies and to be performed by Contractor shall likewise be imposed on, assumed, and performed by each subcontractor of any tier.

### 5.4 Claims Cooperation

Contractor shall participate in claim reporting procedures. Contractor agrees to assist and cooperate in every manner possible in connection with the adjustment of all claims arising out of operations within the scope of the Work required by the Contract, and to cooperate with DEN's insurer(s) in all claims and demands which DEN's insurer(s) is called upon to adjust or to defend against. Contractor shall take all necessary action to assure that its subcontractors of any tier comply with any request for assistance and cooperation. This obligation includes, without limitation, providing light or modified duty for injured workers, appearing in mediation, arbitration, or court proceedings and/or participating in settlement meetings, as may be required.

### 5.5 Monthly Payroll Submission

All Enrolled Parties shall submit monthly payrolls and worker-hour reports to DEN and/or the DEN ROCIP Administrator via the DEN ROCIP Administrator's online reporting system as outlined in the DEN ROCIP Insurance Manual. The online reporting instructions will be provided to all Contractors at time of enrollment. Failure to submit these reports may result in funds being held or delayed from monthly progress payments. Payroll must be submitted online for each month, including zero (0) payroll, if applicable, until completion of the Work under each Contract and Subcontract. For subcontractors of any tier performing Work under multiple Subcontracts, a separate payroll report is required for each Subcontract under which Work is being performed.

### 5.6 Response to Information Requests

All insurance underwriting, payroll, rating or loss history information requested by DEN or the DEN ROCIP Administrator shall be provided by the Contractor within three (3) business days of request. Contractor agrees (and will require each subcontractor to agree) that DEN, DEN's insurers or its representative may audit the Contractor's records or records of subcontractors of any tier to confirm the accuracy of all insurance information provided including, without limitation, any such information that may have any effect on insurance resulting from changes in the Work. At all times during performance of the Contract and Subcontracts, the Contractor and subcontractors of any tier shall cooperate with DEN, the DEN ROCIP Administrator and DEN's insurers.

### 5.7 Responsibility for Safety

Notwithstanding the DEN ROCIP, the Contractor shall initiate, maintain, and supervise all safety precautions and programs in connection with the Work. Contractor is solely responsible, at no adjustment to the contract sum payable or contract time, for initiating, maintaining, and supervising all safety precautions and programs relating to the conduct of Work including, without limitation, any safety programs or procedures that are required by any applicable state or federal laws, rules or regulations, or under the terms of the DEN ROCIP Safety Manual.

### 5.8 Duty of Care

Nothing herein shall relieve the Enrolled Parties of their respective obligations to exercise due care in the performance of their duties in connection with the Work or to complete the Work in strict compliance with this Contract and subsequent subcontracts.



## 6. Notices and Costs

### 6.1 Limitations on DEN Provided Coverage and DEN Right to Purchase Other Coverage

DEN assumes no obligations to provide insurance other than that evidenced by the policies referred to in Section 3.8. DEN, however, reserves the right to furnish insurance coverage of various types and limits provided that such coverage shall not be less than that specified in Section 3.8 and the costs of such insurance shall be paid by DEN. Apart from the DEN ROCIP, DEN may at its option purchase additional insurance coverages that insure the Project that may not necessarily insure the Contractor or the subcontractors. Without limitation, examples of such coverage may include pollution liability, excess professional liability, and excess automobile liability insurance.

### 6.2 Contractors Responsible for Own Equipment

Contractor and subcontractors are solely responsible for loss or damage of all construction tools and other equipment whether owned, leased, rented, borrowed, or used on Work at the Project Site. If an individual Enrolled Party purchases insurance on their tools and equipment, such insurance shall contain a waiver of subrogation in favor of the City and County of Denver, its elected and appointed officials, agents, employees and volunteers and all other Enrolled Parties. If an individual Enrolled Party does not purchase such insurance, that Enrolled Party will hold harmless the City and County of Denver, its elected and appointed officials, agents, employees and volunteers and other Enrolled Parties for loss or damage to its tools and equipment.

### 6.3 No Release; No Waiver of Immunity

The provision of the DEN ROCIP shall in no way be interpreted as relieving Contractor or subcontractors of any tier of any responsibility or liability under the Contract Documents, the DEN ROCIP insurance policies or applicable laws including, without limitation, Contractor's and subcontractor's responsibilities relative to indemnification and their obligation to exercise due care in the performance of the Work and to complete the Work in strict compliance with the Contract Documents. The parties hereto understand and agree that the City and County of Denver, its elected and appointed officials, agents, employees and volunteers are relying on, and do not waive or intend to waive by any provisions of this agreement, the monetary limitations or any other rights, immunities and protections provided by the Colorado Governmental Immunity Act, §§ 24-10-101 to 120, C.R.S., or otherwise available to DEN, its officers, officials and employees.

### 6.4 DEN Right to Withhold Payments

In addition to any other rights of withholding that DEN may have under the Contract Documents, DEN has the right to withhold any payments otherwise due to Contractor in the event of a failure by Contractor or any subcontractor to comply with the requirements of this Exhibit, the DEN ROCIP Insurance Manual or the DEN ROCIP Safety Manual. DEN may withhold from any payment owing to Contractor the costs of DEN ROCIP coverages if included in a request for payment. Such withholding by DEN shall not be deemed to be a default under the Contract. DEN shall withhold from Contractor the costs of DEN ROCIP coverages attributable to an increase in an Enrolled Party's total payroll for the Work over the amount reported to DEN and/or the DEN ROCIP Administrator at time of enrollment.

### 6.5 DEN Remedies

Without limitation upon any of DEN's other rights or remedies, any failure of an Enrolled Party to comply with any provision of this Exhibit, the DEN ROCIP Insurance Manual, or the DEN ROCIP Safety Manual shall be deemed a material breach of the Contract, thereby entitling DEN, at its option, upon notice to Contractor, to (1) suspend performance by Contractor and/or the offending subcontractor, without any adjustment to Contract Sum Payable or Contract Time, until there is full compliance, or (2) terminate this Contract for cause.

6.6 Off Site Storage

Unless otherwise provided in the Contract Documents, the property insurance provided by DEN shall not cover portions of the Work stored off the Site without written approval of DEN. Contractor shall be responsible for reporting such property or work if ownership has been transferred to DEN. If ownership rests with the Contractor, Contractor shall be responsible for obtaining insurance to protect its interests.

6.7 Partial Occupancy

Partial occupancy or use shall not commence until DEN insurer(s) providing Builders Risk and/or Property Insurance have consented to such partial occupancy or use by endorsement or otherwise. DEN and the Contractor shall take reasonable steps to obtain consent of the insurer(s) and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

6.8 DEN Right to Exclude Parties from the DEN ROCIP

DEN reserves the right to exclude any subcontractor from the DEN ROCIP, before or after enrollment by the subcontractor. If DEN elects to exclude a subcontractor from the DEN ROCIP, the Contractor will be responsible for ensuring the insurance coverages outlined in the Contractor’s Subcontract Agreement are provided to DEN or the DEN ROCIP Administrator before the subcontractor can begin or resume Work on the Project.

6.9 DEN’s Right to Modify or Discontinue DEN ROCIP Coverages

If DEN determines that modification or discontinuation of the DEN ROCIP is in the best interest of DEN, the Contractor and subcontractor will receive sixty (60) days advance written notice to secure and maintain such insurance as is required to provide replacement coverage comparable to that provided under the DEN ROCIP. Provided that the foregoing is not the result of any failure by the Contractor or any subcontractor to comply with the requirements of the Contract Documents, the DEN ROCP Insurance Manual or DEN ROCIP Safety Manual, the costs of such replacement insurance shall be deemed a cost of Work for which the Contractor shall be entitled to a Contract Adjustment, without any sum added thereto for Allowable Markup. The form, content, limits of liability, cost and the rating of the insurer(s) issuing such replacement coverage shall be subject to DEN’s prior written approval.

7. Definitions

Certificate of Insurance:	A document providing evidence of coverage for a particular insurance policy or policies. This will include certificates issued to Enrolled Parties evidencing the coverage afforded under the DEN ROCIP and certificates issued to DEN evidencing additional coverage “Provided by Enrolled Parties”
DEN:	City and County of Denver and Denver International Airport
Contract:	The written agreement between DEN and Contractor describing the Work, contract terms and conditions, or a portion thereof; also includes a written agreement between a Contractor and any subcontractor as well as between subcontractors and their subcontractors of any tier.
Contractor Insurance Cost:	The costs of ROCIP coverage are defined as the amount of Contractor’s and eligible Subcontractors’ of every tier reduction in insurance costs due to participation in the DEN ROCIP.

Rolling Owner Controlled Insurance Program (ROCIP): A coordinated insurance program providing certain coverage, as defined herein, for DEN, Contractor and Enrolled Subcontractors, along with their Eligible Employees, performing Work at the Project Site.

Eligible Employees: Employees of the Contractor and Enrolled Subcontractors who are not excluded from the ROCIP under the “Excluded Parties” definition.

Enrolled Parties: The Contractor and those subcontractors that have submitted all necessary enrollment information and been accepted into the ROCIP as evidenced by the issuance of a Certificate of Insurance.

Ineligible/Excluded Parties: Parties not covered by the ROCIP because of ineligibility or DEN explicit exclusion. No insurance coverage provided by DEN under the ROCIP shall extend to the activities or products of the following:

- Any person or organization that fabricates or manufactures products, materials or supplies away from a Project Site with no direct onsite installation responsibility

Exception: The ROCIP Insurer may agree to extend General Liability coverage only if the General Contractor has a written contract with the off-site fabricator or manufacturer to provide the pre-fabricated product. To consider extending coverage, the Insurer requires 30 days advance written notice to the ROCIP Administrator with details of the work/product and a copy of the contract between the General Contractor and the off-site fabricator or manufacturer. Approval must be obtained from the Insurer before enrolling in the ROCIP for General Liability coverage only.

- Scaffolding contractors (erecting and dismantling scopes of work only)
- Hazardous materials remediation, removal, or transportation companies and their consultants
- Architects, engineers, surveyors and their consultants
- Truckers, haulers, material dealers, vendors, suppliers, and others who merely transport, pick up, deliver, or carry materials, personnel, parts or equipment or any other items or persons to or from a Project Site including companies providing supplemental services
- Contractors, subcontractors and subconsultants who do not work at a Project Site
- Employees of an Enrolled Party who either (i) do not work on-site or (ii) occasionally visit a Project Site to make deliveries, pick-up supplies or personnel, to perform supervisory or progress inspections, or for any other reason

- Temporary labor employees (individuals working directly for the Contractor and not procured through a third party such as a Professional Employer Organization)

Exception: The ROCIP Insurer typically will accept including employees working for a contractor, or employed by temporary staffing agencies or professional employer organizations, as long as those employer-entities are enrolled as subcontractors to supply supplemental workforce.

Insured: (liability policies)	DEN, Contractor and Enrolled Parties and their Eligible Employees and any other party named in the insurance policies.
Insurers:	Those insurance companies providing the DEN ROCIP coverage. The insurers will be identified on the issued Certificate of Insurance and in the DEN ROCIP Insurance Manual.
Net Bid:	Contractor bids with insurance costs removed because of the obligation of any Enrolled Party to delete insurance costs for coverage provided by the ROCIP from its bid and all change orders. Net bids are subject to verification by the Administrator through the providing of contractors' rate and declaration pages from their Insurance policies.
ROCIP Administrator:	The DEN ROCIP Administrator will be identified in the DEN ROCIP Insurance Manual.
ROCIP Insurance Manual:	A reference document provided to Contractor and subcontractors of all tiers, which summarizes the terms and provisions of the DEN ROCIP and provides information about requirements and compliance.
ROCIP Safety Manual:	A reference document provided to Contractor and subcontractors of all tiers which contains workplace safety requirements of all Enrolled Parties.
Off Site Work:	Work performed away from the Project Site.
Payroll:	For purposes of the ROCIP only, refers to Unburdened Straight Time Payroll per Workers Compensation Class Code.
Policy Owner:	City and County of Denver and Denver International Airport
Project:	The Project as defined in the contract documents and as described in the Declarations of the DEN ROCIP insurance policies.

**Project Site:** Means those areas designated in writing by DEN in a Contract document for performance of the Work and such additional areas as may be designated in writing by DEN for Contractors' use in performance of the Work. Subject to the ROCIP Insurer(s) written approval, the term "Project Site" shall also include: (1) field office sites, (2) property used for bonded storage of material for the Project approved by DEN, staging areas dedicated to the Project, and (4) areas where activities incidental to the Project are being performed by Contractor or subcontractors covered by the DEN ROCIP Worker's Compensation policy (if included), but excluding any permanent locations of any Enrolled Party.

*Items 1 through 4 above must be approved by the ROCIP Insurer and listed on the DEN ROCIP insurance policies.*

**Subcontract:** The written agreement between Contractor and subcontractor, or between subcontractor and a lower tier subcontractor, describing the Work, subcontract terms and conditions, or a portion thereof.

**Subcontractor:** Includes those persons, firms, joint venture entities, corporations, or other parties that enter into a Subcontract with Contractor to perform Work at the Project Site and any of these subcontractor's lower-tier subcontractors.

**Work:** Operations, as fully described in the Contract and Subcontract, performed at the Project Site.



**TO:** All Users of the City and County of Denver Prevailing Wage Schedules  
**FROM:** Alex Marvin, Classification and Compensation Analyst Staff  
**DATE:** March 2, 2023  
**SUBJECT:** Latest Change to Prevailing Wage Schedules

The effective date for this publication will be **Friday, February 24, 2023**, and applies to the City and County of Denver for **HIGHWAY CONSTRUCTION PROJECTS** in accordance with the Denver Revised Municipal Code, Section 20-76(c).

General Wage Decision No. CO20230009  
Superseded General Decision No. CO20220009  
Modification No. 1  
Publication Date: 02/24/2023  
(7 pages)

Unless otherwise specified in this document, apprentices shall be permitted only if they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor (DOL). The employer and the individual apprentice must be registered in a program which has received prior approval by the DOL. Any employer who employs an apprentice and is found to be in violation of this provision shall be required to pay said apprentice the full journeyman scale.

Attachments as listed above.

**\*Career Service Board approved to adjust all Davis Bacon classifications under \$17.29 to comply with the city's minimum wage. The effective date is January 1, 2023. See page 7 for reference.**

Office of Human Resources  
201 W. Colfax Ave. Dept. 412 | Denver, CO 80202  
p: 720.913.5751 | f: 720.913.5720  
[www.denvergov.org/humanresources](http://www.denvergov.org/humanresources)

"General Decision Number: CO20230009 02/24/2023

Superseded General Decision Number: CO20220009

State: Colorado

Construction Type: Highway

Counties: Denver and Douglas Counties in Colorado.

#### HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658.

Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

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If the contract is entered	. Executive Order 14026
into on or after January 30,	generally applies to the
2022, or the contract is	contract.
renewed or extended (e.g., an	. The contractor must pay
option is exercised) on or	all covered workers at
after January 30, 2022:	least \$16.20 per hour (or
	the applicable wage rate
	listed on this wage
	determination, if it is

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker



protections under the Executive Orders is available at  
<http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/06/2023
1	02/24/2023

CARP9901-008 11/01/2019

	Rates	Fringes
CARPENTER (Form Work Only) .....	\$ 26.50	10.32
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ELEC0068-016 03/01/2011		

	Rates	Fringes
TRAFFIC SIGNALIZATION:		
Traffic Signal Installation		
Zone 1 .....	\$ 26.42	4.75%+8.68
Zone 2 .....	\$ 29.42	4.75%+8.68

TRAFFIC SIGNAL INSTALLER ZONE DEFINITIONS

Zone 1 shall be a 35 mile radius, measured from the following  
addresses in each of the following cities:  
Colorado Springs - Nevada & Bijou  
Denver - Ellsworth Avenue & Broadway  
Ft. Collins - Prospect & College  
Grand Junction - 12th & North Avenue  
Pueblo - I-25 & Highway 50  
All work outside of these areas shall be paid Zone 2 rates.

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\* ENGI0009-008 05/01/2022

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
(3)-Hydraulic Backhoe		

(Wheel Mounted, under 3/4 yds), Hydraulic Backhoe (Backhoe/Loader combination), Drill Rig Caisson (smaller than Watson 2500 and similar), Loader (up to and including 6 cu. yd.).....\$ 33.14	13.30
(3)-Loader (under 6 cu. yd.)	
Denver County.....\$ 33.14	13.30
(3)-Motor Grader (blade-rough)	
Douglas County.....\$ 33.14	13.30
(4)-Crane (50 tons and under), Scraper (single bowl, under 40 cu. yd).....\$ 33.83	13.30
(4)-Loader (over 6 cu. yd)	
Denver County.....\$ 33.30	13.30
(5)-Drill Rig Caisson (Watson 2500 similar or larger), Crane (51-90 tons), Scraper (40 cu.yd and over),.....\$ 33.48	13.30
(5)-Motor Grader (blade-finish)	
Douglas County.....\$ 33.65	13.30
(6)-Crane (91-140 tons).....\$ 35.28	13.30

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 \* SUCO2011-004 09/15/2011

	Rates	Fringes
CARPENTER (Excludes Form Work)...	\$ 19.27	5.08
CEMENT MASON/CONCRETE FINISHER		
Denver.....	\$ 20.18	5.75
Douglas.....	\$ 18.75	3.00
ELECTRICIAN (Excludes Traffic Signal Installation).....	\$ 35.13	6.83
FENCE ERECTOR (Excludes		

Link/Cyclone Fence Erection).....\$	13.02 **	3.20
GUARDRAIL INSTALLER.....\$	12.89 **	3.20
HIGHWAY/PARKING LOT STRIPING:Painter		
Denver.....\$	12.62 **	3.21
Douglas.....\$	13.89 **	3.21
IRONWORKER, REINFORCING (Excludes Guardrail Installation).....\$	16.69	5.45
IRONWORKER, STRUCTURAL (Includes Link/Cyclone Fence Erection, Excludes Guardrail Installation).....\$	18.22	6.01
LABORER		
Asphalt Raker.....\$	16.29	4.25
Asphalt Shoveler.....\$	21.21	4.25
Asphalt Spreader.....\$	18.58	4.65
Common or General		
Denver.....\$	16.76	6.77
Douglas.....\$	16.29	4.25
Concrete Saw (Hand Held)....\$	16.29	6.14
Landscape and Irrigation....\$	12.26 **	3.16
Mason Tender- Cement/Concrete		
Denver.....\$	16.96	4.04
Douglas.....\$	16.29	4.25
Pipelayer		
Denver.....\$	13.55 **	2.41
Douglas.....\$	16.30	2.18
Traffic Control (Flagger)....\$	9.55 **	3.05
Traffic Control (Sets Up/Moves Barrels, Cones, Install Signs, Arrow Boards and Place Stationary Flags) (Excludes Flaggers).....\$	12.43 **	3.22
PAINTER (Spray Only).....\$	16.99	2.87

## POWER EQUIPMENT OPERATOR:

Asphalt Laydown		
Denver.....	\$ 22.67	8.72
Douglas.....	\$ 23.67	8.47
Asphalt Paver		
Denver.....	\$ 24.97	6.13
Douglas.....	\$ 25.44	3.50
Asphalt Roller		
Denver.....	\$ 23.13	7.55
Douglas.....	\$ 23.63	6.43
Asphalt Spreader.....	\$ 22.67	8.72
Backhoe/Trackhoe		
Douglas.....	\$ 23.82	6.00
Bobcat/Skid Loader.....	\$ 15.37 **	4.28
Boom.....	\$ 22.67	8.72
Broom/Sweeper		
Denver.....	\$ 22.47	8.72
Douglas.....	\$ 22.96	8.22
Bulldozer.....	\$ 26.90	5.59
Concrete Pump.....	\$ 21.60	5.21
Drill		
Denver.....	\$ 20.48	4.71
Douglas.....	\$ 20.71	2.66
Forklift.....	\$ 15.91 **	4.68
Grader/Blade		
Denver.....	\$ 22.67	8.72
Guardrail/Post Driver.....	\$ 16.07 **	4.41
Loader (Front End)		
Douglas.....	\$ 21.67	8.22
Mechanic		
Denver.....	\$ 22.89	8.72
Douglas.....	\$ 23.88	8.22
Oiler		
Denver.....	\$ 23.73	8.41
Douglas.....	\$ 24.90	7.67
Roller/Compactor (Dirt and Grade Compaction)		
Denver.....	\$ 20.30	5.51
Douglas.....	\$ 22.78	4.86
Rotomill.....	\$ 16.22	4.41
Screed		
Denver.....	\$ 22.67	8.38
Douglas.....	\$ 29.99	1.40
Tractor.....	\$ 13.13 **	2.95

## TRAFFIC SIGNALIZATION:

## Groundsman

Denver.....	\$ 17.90	3.41
Douglas.....	\$ 18.67	7.17

## TRUCK DRIVER

## Distributor

Denver.....	\$ 17.81	5.82
Douglas.....	\$ 16.98	5.27

## Dump Truck

Denver.....	\$ 15.27 **	5.27
Douglas.....	\$ 16.39	5.27

## Lowboy Truck.....

\$ 17.25	5.27
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## Mechanic.....

\$ 26.48	3.50
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Multi-Purpose Specialty &  
Hoisting Truck

Denver.....	\$ 17.49	3.17
Douglas.....	\$ 20.05	2.88

## Pickup and Pilot Car

Denver.....	\$ 14.24 **	3.77
Douglas.....	\$ 16.43	3.68

## Semi/Trailer Truck.....

\$ 18.39	4.13
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## Truck Mounted Attenuator....

\$ 12.43 **	3.22
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## Water Truck

Denver.....	\$ 26.27	5.27
Douglas.....	\$ 19.46	2.58

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WELDERS - Receive rate prescribed for craft performing  
operation to which welding is incidental.

**Office of Human Resources  
Supplemental Rates  
(Specific to the Denver Projects)  
Revised 01/01/2023)**

<b>Classification</b>		<b>Base</b>	<b>Fringe</b>
Guard Rail Installer		\$17.29	\$3.20
Highway Parking Lot Striping: Painter		\$17.29	\$3.21
Ironworker (Ornamental)		\$26.05	\$12.00
Laborer	Removal of Asbestos	\$21.03	\$8.55
Laborer (Landscape & Irrigation)		\$17.29	\$3.16
Laborer: Traffic Control (Flagger)		\$17.29	\$3.05
Laborer: Stationary Flags (excludes Flaggers)		\$17.29	\$3.22
Line Construction	Lineman, Gas Fitter/Welder	\$36.88	\$9.55
	Line Eq Operator/Line Truck Crew	\$25.74	\$8.09
Millwright		\$28.00	\$10.00
Pipefitter		\$30.45	\$12.85
Plumber		\$30.19	\$13.55
Power Equipment Operator (Tunnels Above and Below Ground, shafts and raises):	Group 1	\$25.12	\$10.81
	Group 2	\$25.47	\$10.85
	Group 3	\$25.57	\$10.86
	Group 4	\$25.82	\$10.88
	Group 5	\$25.97	\$10.90
	Group 6	\$26.12	\$10.91
	Group 7	\$26.37	\$10.94
Power Equipment Operator	Group 1	\$22.97	\$10.60
	Group 2	\$23.32	\$10.63
	Group 3	\$23.67	\$10.67
	Group 4	\$23.82	\$10.68
	Group 5	\$23.97	\$10.70
	Group 6	\$24.12	\$10.71
	Group 7	\$24.88	\$10.79
Truck Driver	Group 1	\$18.42	\$10.00
	Group 2	\$19.14	\$10.07
	Group 3	\$19.48	\$10.11
	Group 4	\$20.01	\$10.16
	Group 5	\$20.66	\$10.23
	Group 6	\$21.46	\$10.31
Truck Driver: Truck Mounted Attenuator		\$17.29	\$3.22

Go to <http://www.denvergov.org/Auditor> to view the Prevailing Wage Clarification Document for a list of complete classifications used.

## **V. SPECIAL CONDITIONS**

### **SC-1 CONSTRUCTION CONTRACT GENERAL CONDITIONS**

The Construction Contract General Conditions which constitute a part of the Contract Documents are set forth in a separately published document, entitled "City and County of Denver, Department of Aviation and Department of Public Works, Standard Specifications for Construction, General Contract Conditions," 2011 Edition, the Table of Contents to which is bound herein (which may be informally referred to as the Yellow Book). The General Conditions book is available for purchase for \$12.00 per copy at the following locations during the business hours stated, Monday through Friday, excluding holidays:

Office of the Cashier  
Wellington E. Webb Municipal Office Building, 2nd Floor  
201 West Colfax Avenue  
Denver, Colorado, USA 80202  
7:30 a.m. to 4:30 p.m.

The General Conditions are also available on the City and County of Denver website at:

<https://www.denvergov.org/content/denvergov/en/contract-administration/contractor-resources/general-contract-conditions.html>

### **SC-2 DRAWINGS AND SPECIFICATIONS TO BE FURNISHED BY THE CITY**

The City will provide the following Contract Documents to the Contractor in electronic format at no expense to the Contractor:

1. Contract Drawings dated March 22, 2023
2. Division 01 Specifications dated March 22, 2023
3. Division 02 Project Special Provisions dated March 22, 2023

Additional copies of the foregoing documents will be furnished to the Contractor at the Contractor's expense. The Contractor will be responsible for supplying all subcontractors with copies of the Contract Documents at its expense.

If Sensitive Security Information ("SSI") is provided to the Contractor, the Contractor shall be required to comply with Department of Aviation, Standard Policies and Procedures No. 6003, "Contractor Protection of Sensitive Security Information," or its successor, and 49 C.F.R. § 1520, or its successor.

The City will not supply any copies of the General Contract Conditions to the Contractor at City expense.

### **SC-3 REVISIONS TO G.C. 201**

The second sentence of General Condition 201 is amended to read: "The unit responsible for this management and control is the Airport Infrastructure Management Office under the supervision of the Senior Vice President for Maintenance and Airport Infrastructure Management."

### **SC-4 CITY LINE OF AUTHORITY AND CONTACTS**

In accordance with General Condition 214, the City's line of authority for administration of this Contract is:

Chief Executive Officer (CEO). Executive Office, 9th Floor, Airport Office Building, 8500 Peña Boulevard, Denver, CO 80249. Any reference to the Manager of Aviation shall also mean Chief Executive Officer, Department of Aviation (CEO).

Executive Vice President – Chief Construction and Infrastructure Officer (EVP-CCIO) who reports to the CEO. Airport Infrastructure Management office, 9th Floor, Airport Office Building, 8500 Peña Boulevard, Denver, CO 80249.

Senior Vice President - Airport Infrastructure Management (SVP-AIM) who reports to the COO. Airport Infrastructure Management office, 10th Floor, Airport Office Building, 8500 Peña Boulevard, Denver, CO 80249.

Director of Infrastructure and Quality Assurance, reports to the SVP-AIM. The Project Manager reports to the Director of Infrastructure and Quality Assurance. Airport Infrastructure Management Division, 7<sup>th</sup> Floor, Airport Office Building, 8500 Peña Boulevard, Denver, CO 80249.

Project Manager, the City representative who has day to day administrative responsibility of this Contract, and who reports to the SVP-AIM. All notices, requests, pay applications (pursuant to G.C. 902), and other correspondence from the Contractor shall be sent to the assigned Project Manager unless otherwise provided in this Contract. The Project Manager for this Contract is: Daniel Liddle, Airport Infrastructure Management Office, 7th Floor, Airport Office Building, 8500 Peña Boulevard, Denver, CO 80249, phone 303-342-2200.

The CEO may from time to time substitute a different City official as the designated “SVP-AIM” hereunder, and any such change will be effective upon the issuance of written notice to the Contractor which identifies the successor SVP-AIM. The SVP-AIM may from time to time change the assigned Project Manager, and any such change will be effective upon the issuance of written notice to the Contractor which identifies the successor Project Manager.

**SC-5 CONTRACTOR PERFORMANCE; SUBCONTRACTING**

With respect to General Condition 501, no more than seventy percent (70%) of the work may be subcontracted. If it is determined to be in the City’s best interest, this percentage may be modified throughout the course of the project by the SVP-AIM.

**SC-6 COOPERATION WITH OTHERS**

The Technical Specifications describe the constraints on the physical work site areas. These descriptions are not exhaustive, and the Contractor is required to coordinate its activities and work as may be required to meet FAA or City requirements while performing work on DEN.

Without limiting the foregoing, contracts administered by the City involve or may involve work overlapping or adjoining the Work under this Contract and may be prosecuted concurrently with the Work performed under this Contract. There may also be other adjoining or overlapping contracts which are not listed.

**SC-7 PROSECUTION AND COMPLETION OF THE WORK:**

The Work to be performed under the Contract is described in the Technical Specifications and Contract Drawings. The Contractor shall complete the Work within 341 consecutive calendar days from Notice to Proceed.

The Work to be performed under the Contract may be divided into the Milestone Areas which are described in the Technical Specifications or Contract Drawings. The Contractor shall complete the work included within these areas within the number of days set forth by the Project Manager.

<u>Milestone</u>	<u>Date of Completion (or Days from NTP)</u>
Substantial completion: Gun Club Widening	172 days from NTP
Substantial completion: Remaining Work	285 days from NTP



**SC-8 LIQUIDATED DAMAGES**

If the Contractor fails to achieve Substantial Completion of the Work within the Contract Time, the Contractor shall be liable to the City for liquidated damages at the rate of Two Thousand, Five Hundred Dollars (\$2,500.00) per day until substantial completion is achieved.

Article IV of the Contract and General Condition 602 cover payment and withholding of liquidated damages.

**SC-9 FACILITY SECURITY AND PERSONNEL ACCESS**

The Contractor shall conduct all its activities at the Airport in compliance with the Airport security system rules and regulations, which are administered by the Airport Operations Division. The Contractor shall obtain the proper access authorizations for its employees, subcontractors, and suppliers (i.e., Badges and Permits), and shall be responsible for such persons' compliance with all the Airport rules and regulations. A copy of the Contractors' section of the Airport Security rules and regulations are available for Contractor review at the Airport Access Services Office, Concourse A East Subcore, 4th Level. Persons regularly entering the construction areas must obtain personnel access badges from the Airport Access Services Office and must display badges, at all times, upon entering the construction, restricted and sterile areas of the airport. Any employee, subcontractor or supplier who violates such rules may be subject to revocation of his access authorization, including authorization for access to the construction site and all other restricted and sterile areas.

The security status of the Airport is subject to change without notice. These contract Special Conditions are applicable to the current security status of the Airport. Should the security status of the Airport change at any time during the term of this Contract, a written notice shall be issued to the Contractor detailing all applicable security modifications from the airport's current security status. The Contractor shall take **immediate steps** to comply with those security modifications as directed in the written notice.

If these security modifications involve any additional project cost, the Contractor shall submit a Contractor Change Request in accordance with the General Conditions for the additional cost. The Contractor Change Request shall outline in specific detail the effects of the security modifications on the Contractor's performance of the Contract and shall provide a detailed cost breakdown for each item for which the Contractor is requesting reimbursement.

The Contractor shall return to the City, at contract completion or termination, or upon demand by the City, all access keys issued to it by the City to all areas of the Airport. If the Contractor fails to return any such key or keys at contract completion or termination or upon demand by the City, the Contractor shall be liable to the City for all the City's costs, including the City's labor costs for employees, incurred in re-coring doors and any other work which is required to prevent compromise of the Airport security system. In order to collect such costs hereunder, the City may withhold funds in such amount from any amounts due and payable to the Contractor under this Contract.

The construction of all the Project/Task Items that involve the breaching of any airport perimeter security boundary or continued access to restricted access rooms or areas will require the posting of authorized contract security personnel to maintain required security controls. The Contractor's **Total Contract BID Amount** shall include the cost of providing security services to maintain control and supervision of any and all airport perimeter security boundary breaches and for the duration of work activities where access to restricted areas is required and until the airport perimeter security boundaries are reestablished.

When security boundaries are opened for any reason, the Contractor must maintain one hundred percent (100%) control and supervision for the entire time that the openings are present to prevent unauthorized access to the secure / restricted access areas.

**THE IMPORTANCE OF THIS SPECIAL CONDITION CANNOT BE OVER-EMPHASIZED. SEVERE FINANCIAL PENALTIES AS WELL AS CONTRACT TERMINATION COULD RESULT IF AIRPORT PERIMETER SECURITY REQUIREMENTS ARE NOT STRICTLY FOLLOWED. THE REQUIREMENT TO PROVIDE ONE HUNDRED PERCENT (100%) CONTROL AND SUPERVISION OF BREACHES IN THE AIRPORT'S PERIMETER SECURITY BOUNDARY IS ABSOLUTE. AT NO TIME, DURING WORK AND NON-WORK HOURS SHALL ANY BREACHES IN THE AIRPORT'S SECURITY PERIMETER BE UNSUPERVISED AND / OR UNSECURED.**

For off-hours of construction, the Contractor may choose to erect a temporary wall to close all perimeter openings. The wall construction shall be of sufficient materials and strength to prevent access to the airport's Sterile/Restricted Areas. The Contractor shall submit for review and approval, the details, and materials for the temporary closure of security perimeter breaches for review and approval.

The Contractor will provide contract security guard services to maintain supervision of these openings. The security services must provide coverage to allow for lunch breaks, comfort breaks and etc. The security services **must** be obtained from the following contract security guard company:

Covenant Aviation Security, LLC  
1112 W. Boughton Road  
Suite 355  
Bolingbrook, IL 60440

DEN Contact:  
Covenant Management  
720-222-4774

All security guards provided for this project must have a Denver Airport SIDA Badge.

The DEN Security Guard Contractor may change between the bidding or Bid phase of this contract from Notice to Proceed to closure of all security perimeter breaches. The Contractor shall maintain a contractual relationship with the Security Guard Contractor holding the most current contract with Denver International Airport.

The Contractor shall continue to provide security of these areas until such time that the breaches in the airport's security perimeter have been permanently secured.

The Contractor shall submit a written security plan for approval to the Director of Airport Security prior to the start of construction on any work where a breach of the perimeter security boundaries is required.

#### **SC-10 CONSTRUCTION ACCESS**

The work site is located at Gun Club Road between 75<sup>th</sup> and 78<sup>th</sup> Avenue. The Contractor shall have access to the work site via public roadways. The Contractor is responsible for ensuring all of the Contractor's and Subcontractor's personnel have the ability to access and locate the areas of work where the scope is to be performed without additional escorting or supervision from DEN.

The City will not provide parking spaces for the Contractor's employees or subcontractor employees at the Airport. Arrangements for transportation and parking for all of its and its subcontractors' employees will be the responsibility of the Contractor. The Total Contract Bid Amount or Contract Amount shall include any and all costs associated with the Contractor's and subcontractors' employee parking. Information about parking facilities and charges is available from the Airport Parking Office. Refundable deposits are required for all parking passes.

Unless specifically required by the Contract Documents, the Contractor shall install no fences or other physical obstructions on or around any project work area without the approval of the City.

**SC-11 VEHICLE PERMITTING**

Vehicle access on the Airport Operation Area ("AOA") is controlled by and requires permission from the Airport Access Services Office. It is not anticipated that the Contractor will need to operate vehicles on the AOA to perform the Work. Only direct construction support vehicles and/or equipment will be allowed in the contractor's work areas or sites.

**SC-12 VENDORS AND SUPPLIERS**

The Contractor shall provide the Project Manager's office with a list of its equipment/material vendors and suppliers. Vendors or suppliers shall access the construction work areas via the Contractor's access route, described in SC-10 above. All delivery vehicles are subject to search.

**SC-13 COMMUNICATION DEVICES**

Any site communications devices, mobile communication devices or internet data devices used at DEN must be approved by DEN Technologies.

**SC-14 USE, POSSESSION OR SALE OF ALCOHOL OR DRUGS**

The Contractor and its officers, agents, and employees shall cooperate and comply with the provisions of Executive Order No. 94 and Attachment A thereto concerning the use, possession, or sale of alcohol or drugs. Violation of these provisions or refusal to cooperate with implementation of the policy can result in the City's barring the Contractor from City facilities or participating in City operations.

**SC-15 ATTORNEYS' FEES**

Colorado Revised Statute 38-26-107 requires that in the event any person or company files a verified statement of amounts due and unpaid in connection with a claim for labor and materials supplied on this project, the City shall withhold from payments to the Contractor sufficient funds to insure the payment of any such claims. Should the City and County of Denver be made a party to any lawsuit to enforce such unpaid claims or any lawsuit arising out of or relating to such withheld funds, Contractor agrees to pay to the City its costs and a reasonable attorney's fee. Because the City Attorney Staff does not bill the City for legal services on an hourly basis, Contractor agrees a reasonable fee shall be computed at the rate of two hundred dollars (\$200) per hour of City Attorney time.

**SC-16 INSURANCE REQUIREMENTS**

In accordance with the provisions of Title 16 of the General Conditions, the minimum insurance requirements for this contract are set forth in Section II-15 of the Instructions to Bidders. The Contractor specifically agrees to comply with each condition, requirement or specification set forth in the attachment for each required coverage during all periods when the required coverages are in effect.

Contractor and sub-contractors shall procure and maintain until all of their obligations have been discharged, including any warranty periods under this Contract are satisfied, required insurance against claims for injury to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees, or sub-contractors.

The insurance requirements herein are minimum requirements for this Contract and in no way limit the indemnity covenants contained in this Contract.

The City and County of Denver 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, his agents, representatives, employees, or sub-contractors. The Contractor shall assess its own risks as it deems appropriate and/or prudent, maintain higher limits and/or broader coverages. 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.

Contractor shall furnish the City and County of Denver with certificates of insurance (ACORD form or equivalent approved by CCD) as required by this Contract. The certificates for each insurance policy are to be signed by a person authorized by the insurer to bind coverage on its behalf.

All certificates and any required endorsements are to be received and approved by the City before work commences. Each insurance policy required by this Contract must be in effect at or prior to commencement of work under this Contract and remain in effect for the duration of the project. Failure to maintain the insurance policies as required by this Contract or to provide evidence of renewal is a material breach of the Contract. All insurance coverages for sub-contractors shall be subject to the minimum requirements identified in the Exhibit. All sub-contractors' certificates and endorsements shall be received and approved by the Contractor before work commences. The City reserves the right to request copies of these certificates at any time.

All certificates required by this Contract shall be sent directly to [ContractAdminInvoices@flydenver.com](mailto:ContractAdminInvoices@flydenver.com). The City project/contract number and project description shall be noted on the certificate of insurance. The City reserves the right to require complete, certified copies of all insurance policies required by this Contract at any time.

The parties hereto understand and agree that the City and County of Denver, its officers, officials and employees, are relying on, and do not waive or intend to waive by any provisions of this Contract, the monetary limitations or any other rights, immunities and protections provided by the Colorado Governmental Immunity Act, §§ 24-10-101 - 120, C.R.S., or otherwise available to the City and County of Denver, its officers, officials and employees.

#### **SC-17 SUBCONTRACTOR RELEASES**

The release form referred to in General Condition 907 is attached to this Contract. It is entitled "Denver International Airport Partial Release."

#### **SC-18 ADDITIONAL AFFIRMATIVE ACTION REQUIREMENTS, FEDERAL PROVISIONS**

This contract is subject and subordinate to the terms, reservations, restrictions, and conditions of any existing or future agreements between the City and the United States, the execution of which has been or may be required as a condition precedent to the transfer of federal rights or property to the City for airport purposes, and the expenditure of federal funds for airport purposes. The "Federal Requirements" section attached hereto is made a part of this Contract.

#### **SC-19 ESTIMATED QUANTITIES OF UNIT PRICED ITEMS**

The "total estimated quantity" of each unit price item as stated on the bid schedules shall be the estimated quantity which is used to determine the percentage of change in such item for purposes of G.C. 1104.7.

#### **SC-20 REVISIONS TO G.C. 1102**

G.C. 1102.2 is amended by replacing the phrase "Change Request" in all its occurrences in such G.C. with the phrase "Change Notice."

G.C. 1102.3 is amended by replacing the phrase "Field Order/Change Order Directive" in all its occurrences in such G.C. with the phrase "Change Order Directive."

#### **SC-21 LISTING OF ACCEPTABLE MANUFACTURERS**

The Technical Specifications list "Acceptable Manufacturers" for certain products. Such listing identifies manufacturers of certain products which have been determined by a preliminary review to be able to meet the basic product and/or system technical requirements. The listing is not intended to provide a blanket endorsement or acceptance of the manufacturer's specified products or product line. All products from listed manufacturers

must meet the detailed requirements of the Technical Specifications. Products that do not meet all detailed Technical Specifications are not acceptable and will be rejected, regardless of whether the manufacturer was listed as “acceptable.” The Contractor is responsible for determining the acceptability of all products under the Technical Specifications prior to submission of products for approval.

#### **SC-22 ACCESSIBLE PARKING SPACES, ACCESS AISLES AND ROUTES OF TRAVEL**

If any Work is performed in or adjacent to parking facilities at the Airport, the Contractor is responsible for compliance with this SC-30. “Accessible” parking spaces and access aisles as used in this SC-30 mean parking spaces and access aisles which are accessible for, and reserved for use by, persons with disabilities. These parking spaces and access aisles are designed and built to standards established by federal regulations implementing the Americans with Disabilities Act of 1990 (“ADA”) and are marked by signage. “Accessible routes of travel” as used herein means routes through parking facilities which comply with ADA accessibility standards, including degree of slope and absence of obstructions.

Accessible routes of travel and accessible parking spaces and access aisles must be kept free of obstructions and construction debris at all times. No accessible parking spaces or access aisles or accessible routes of travel shall be relocated, blocked, or rendered unusable unless the contractor has obtained specific advance approval in writing for such actions from the airport’s ADA Compliance Officer.

When prosecution of the Work requires that accessible spaces be temporarily blocked, those accessible spaces and their access aisles shall be temporarily relocated to another location as close as possible to an accessible building entrance. Temporary signage that identifies these parking spaces and access aisles as reserved for the handicapped shall be installed, and the accessible route shall be clearly marked as required.

Before blocking or relocating accessible parking spaces or accessible routes of travel, the contractor must obtain written approval from the DEN ADA Compliance Officer, by submitting a completed request form, which will be provided to the Contractor by the Project Manager at the preconstruction meeting if it is not included as a standard form in Section 019990 of the Technical Specifications. The request shall include the location of alternative spaces and/or routes, and specifications of the temporary signage to be used. Work shall not proceed without this approval.

If a vehicle is parked in any accessible space which is either temporary or approved to be relocated, the contractor will not remove signage or take any other action which would allow the access aisle for such parking space to be blocked. Such actions must be postponed until the parking space is no longer occupied.

#### **SC-23 SUBCONTRACTOR PAYMENTS AND SUBCONTRACTOR RELEASES – REQUIRED USE OF THE B2G CONTRACT MANAGEMENT SYSTEM**

The Contractor is required to use the City B2G Contract Management System to report all subcontractor payments and shall adhere to the City’s Procedure for Reporting Subcontractor Payments. It is the Contractor’s obligation to ensure that complete subcontractor information is entered into the B2G System prior to submission of the first application for payment in order to avoid any delays in payment. The Contractor shall, prior to the submission of each subsequent invoice, ensure payments to subcontractors have been entered into the B2G System, including subcontractor confirmation of amount of payment received, for services performed during the prior billing period.

#### **SC-24 PAYMENTS TO CONTRACTORS**

The Contractor recognizes and agrees that applications for payment shall be submitted using the Textura® Payment Management System (PPM System), which will also be the payment mechanism to disburse payments to sub-contractors used on this Project. For more information, please refer to Division I, Technical Specifications.

The Contractor further agrees that, to the fullest possible within the TPM System, the City shall be entitled to all non-Confidential records, reports, data, and other information related to the project that are available to Contractor through the TPM System, including, but not limited to, information related to Contractor and subcontractor billings. To that end, Contractor agrees that it will activate any available settings within the TPM System that are necessary to grant the City access to such non-Confidential information related to the contract and the project. Applications for payment shall be based on the Contract Unit Prices or the approved Schedule of Values described in GC 903.1

In accordance with General Contract Condition 902, PAYMENT PROCEDURE, the party(ies) responsible for review of all Pay Applications shall be:

**Agency/Firm**

DEN Division CA

DEN Division PM

DEN Division Director

DEN Contract Procurement CA

CCD Denver Prevailing Wage

In accordance with General Contract Condition 906, APPLICATIONS FOR PAYMENT, each Application submitted shall include the following:

- a. The estimate of Work completed shall be based on the approved schedule of values or unit prices, as applicable, and the percent of the Work complete.
- b. Each Application for Payment shall include each and every independent subcontractor's payroll information including pay dates and pay amounts.
- c. The Contractor shall also submit to the Auditor and other appropriate officials of the City in a timely fashion, information required by General Contract Condition 1004, REPORTING WAGES PAID.

In accordance with General Contract condition 907, RELEASES AND CONTRACTORS' CERTIFICATION OF PAYMENT, Applications for Payment must be accompanied by a completed Partial or Final Claim Release Form, as appropriate, from EACH subcontractor and supplier, **AND** the Contractor's Certification of Payment Form.

**SC-25 CONFIRMATION OF LAWFUL EMPLOYMENT**

General Condition 311 is deleted in its entirety and replaced by:

**311 No employment of a worker without authorization to perform work under the agreement.**

1. This Agreement is subject to Division 5 of Article IV of Chapter 20 of the Denver Revised Municipal Code, and any amendments (the "Certification Ordinance").
2. The Contractor certifies that: At the time of its execution of this Agreement, it does not knowingly employ or contract with a worker without authorization who will perform work under this Agreement, nor will it knowingly employ or contract with a worker without authorization to perform work under this Agreement in the future.

- a. It will participate in the E-Verify Program, as defined in § 8-17.5-101(3.7), C.R.S., and confirm the employment eligibility of all employees who are newly hired for employment to perform work under this Agreement.
  - b. It will not enter into a contract with a subconsultant or subcontractor that fails to certify to the Contractor that it shall not knowingly employ or contract with a worker without authorization to perform work under this Agreement.
  - c. It is prohibited from using the E-Verify Program procedures to undertake pre-employment screening of job applicants while performing its obligations under this Agreement, and it is required to comply with any and all federal requirements related to use of the E-Verify Program including, by way of example, all program requirements related to employee notification and preservation of employee rights.
  - d. If it obtains actual knowledge that a subconsultant or subcontractor performing work under this Agreement knowingly employs or contracts with a worker without authorization, it will notify such subconsultant or subcontractor and the City within three (3) days. The Contractor shall also terminate such subconsultant or subcontractor if within three (3) days after such notice the subconsultant or subcontractor does not stop employing or contracting with the worker without authorization, unless during the three-day period the subconsultant or subcontractor provides information to establish that the subconsultant or subcontractor has not knowingly employed or contracted with a worker without authorization.
  - e. It will comply with a reasonable request made in the course of an investigation by the Colorado Department of Labor and Employment under authority of § 8-17.5-102(5), C.R.S., or the City Auditor, under authority of D.R.M.C. 20-90.3.
3. The Contractor is liable for any violations as provided in the Certification Ordinance. If the Contractor violates any provision of this section or the Certification Ordinance, the City may terminate this Agreement for a breach of the Agreement. If this Agreement is so terminated, the Contractor shall be liable for actual and consequential damages to the City. Any termination of a contract due to a violation of this section or the Certification Ordinance may also, at the discretion of the City, constitute grounds for disqualifying the Contractor from submitting bids or proposals for future contracts with the City.

**EXHIBIT F**

# **City and County of Denver**



**D E N V E R**  
**THE MILE HIGH CITY**

**DEPARTMENT OF AVIATION  
DEPARTMENT OF PUBLIC WORKS**

## **STANDARD SPECIFICATIONS FOR CONSTRUCTION GENERAL CONTRACT CONDITIONS**

**2011 Edition**

**Statement**

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**X. ATTACHMENT 5, PERFORMANCE AND PAYMENT BOND**

Bond No. 4458150

**PERFORMANCE BOND**

**KNOW ALL MEN BY THESE PRESENTS**, that we, the undersigned Chato's Concrete, LLC [Bidder name], a corporation organized under the laws of the State of CO [Bidder state], hereinafter referred to as the "Contractor" and SureTec\* [Bond issuer], a corporation organized under the laws of the State of TX [Bond company state], and authorized to transact business in the State of Colorado, hereinafter referred to as Surety, are held and firmly bound unto the CITY AND COUNTY OF DENVER, a municipal corporation of the State of Colorado, hereinafter referred to as the "CITY", in the penal sum of Five Million Four Hundred\*\* [Bid amount text] Dollars(\$ 5,420,179.90---), lawful money of the United States of America, for the payment of which sum the Contractor and Surety bind themselves and their heirs, executors, administrators, successors and assigns, jointly and severally by these presents. \*Insurance Company

\*\*Twenty Thousand One Hundred Seventy-Nine and 90/100

**WHEREAS**, the above Contractor has, as of the date of execution listed on the contract signature page, entered into a written contract with the City for furnishing all labor, materials, equipment, tools, superintendence, and other facilities and accessories for the construction of 202366978, Gun Club On-Ramp to Peña Boulevard, Denver International Airport, in accordance with the Technical Specifications, Contract Drawings and all other Contract Documents therefor which are incorporated herein by reference and made a part hereof, and are herein referred to as the Contract.

**NOW, THEREFORE**, the condition of this performance bond is such that if the Contractor:

1. Promptly and faithfully observes, abides by, and performs each and every covenant, condition, and part of said Contract, including, but not limited to, its warranty provisions, in the time and manner prescribed in the Contract, and
2. Pays the City all losses, damages (liquidated or actual, including, but not limited to, damages caused by delays in the performance of the Contract), expenses, costs and attorneys' fees, that the City sustains resulting from any breach or default by the Contractor under the Contract, then this bond is void; otherwise, it shall remain in full force and effect.

**IN ADDITION**, if said Contractor fails to duly pay for any labor, materials, team hire, sustenance, provisions, provender, or any other supplies used or consumed by said Contractor or its subcontractors in its performance of the work contracted to be done or fails to pay any person who supplies rental machinery, tools, or equipment, all amounts due as the result of the use of such machinery, tools, or equipment in the prosecution of the work, the Surety shall pay the same in an amount not exceeding the amount of this obligation, together with interest as provided by law.

**PROVIDED FURTHER**, that the said Surety, for value received, hereby stipulates, and agrees that any and all changes in the Contract or compliance or noncompliance with the formalities in the Contract for making such changes shall not affect the Surety's obligations under this bond and the Surety hereby waives notice of any such changes.

(End of Page)

IN WITNESS WHEREOF, said Contractor and said Surety have executed these presents as of this \_\_\_\_  
day of \_\_\_\_\_, 2023.

Chato's Concrete, LLC  
CONTRACTOR

By:   
President

SureTec Insurance Company  
SURETY

By:   
Attorney-in-Fact Jody L. Anderson

(Accompany this bond with Attorney-in-Fact's authority from the Surety to execute bond, certified to include the date of the bond.)

CITY AND COUNTY OF DENVER

By:   
MAYOR  
By:   
Chief Executive Officer  
Denver International Airport

APPROVED AS TO FORM:

KERRY TIPPER, Attorney for the  
City and County of Denver

By:   
Assistant City Attorney

Bond No. 4458150

**PAYMENT BOND**

**KNOW ALL MEN BY THESE PRESENTS**, that we, the undersigned Chato's Concrete, LLC  
[Bidder name], a corporation organized under the laws of the State of CO [Bidder state],  
hereinafter referred to as the "Contractor" and SureTec Insurance Company [Bonding company  
name], a corporation organized under the laws of the State of TX [Bonding company  
state], and authorized to transact business in the State of Colorado, hereinafter referred to as Surety, are  
held and firmly bound unto the CITY AND COUNTY OF DENVER, a municipal corporation of the State of  
Colorado, hereinafter referred to as the "CITY", in the penal sum of  
Five Million Four Hundred Twenty Thousand One Hundred\* [Bid amount text] Dollars  
(\$ \$5,420,179.90), lawful money of the United States of America, for the payment of which sum  
the Contractor and Surety bind themselves and their heirs, executors, administrators, successors and  
assigns, jointly and severally, firmly by these presents.

\*Seventy-Nine and 90/100---

**WHEREAS**, the above Contractor has entered into a written contract with the City for furnishing all labor,  
materials, tools, superintendence, and other facilities and accessories for the construction of Contract No.  
202366978, Denver International Airport, in accordance with the Technical Specifications, Contract  
Drawings and all other Contract Documents therefor which are incorporated herein by reference and  
made a part hereof and are herein referred to as the Contract.

**NOW, THEREFORE**, the condition of this payment bond obligation is such that if the Contractor shall at all  
times promptly make payments of all amounts lawfully due to all persons supplying or furnishing it or its  
subcontractors with labor and materials, rental machinery, tools, or equipment, used or performed in the  
prosecution of work provided for in the above Contract and shall indemnify and save harmless the City to  
the extent of any and all payments in connection with the carrying out of such Contract which the City  
may be required to make under the law, then this obligation shall be null and void, otherwise, it shall  
remain in full force and effect;

**PROVIDED FURTHER**, that the said Surety, for value received, hereby stipulates, and agrees that any and  
all changes in the Contract, or compliance or noncompliance with the formalities in the Contract for  
making such changes shall not affect the Surety's obligations under this bond and the Surety hereby  
waives notice of any such changes.

[END OF PAGE]



IN WITNESS WHEREOF, said Contractor and said Surety have executed these presents as of this \_\_\_\_  
day of \_\_\_\_\_, 2023.

Chato's Concrete, LLC

CONTRACTOR

By: 

PRESIDENT

SureTec Insurance Company

SURETY

By: 

Attorney-in-Fact Jody L. Anderson

(Accompany this bond with Attorney-in-Fact's authority from the Surety to execute bond, certified to include the date of the bond.)

CITY AND COUNTY OF DENVER

By: 

MAYOR

By: 

Chief Executive Officer  
Denver International Airport

APPROVED AS TO FORM:

KERRY TIPPER, Attorney for the  
City and County of Denver

By: 

Assistant City Attorney

# JOINT LIMITED POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That SureTec Insurance Company, a Corporation duly organized and existing under the laws of the State of Texas and having its principal office in the County of Harris, Texas and Markel Insurance Company (the "Company"), a corporation duly organized and existing under the laws of the state of Illinois, and having its principal administrative office in Glen Allen, Virginia, does by these presents make, constitute and appoint:

Karen A. Feggestad, Bradley J. Moody, Jody L. Anderson, Elizabeth Ostblom, Andrew J. Waterbury

Their true and lawful agent(s) and attorney(s)-in-fact, each in their separate capacity if more than one is named above, to make, execute, seal and deliver for and on their own behalf, individually as a surety or jointly, as co-sureties, and as their act and deed any and all bonds and other undertaking in suretyship provided, however, that the penal sum of any one such instrument executed hereunder shall not exceed the sum of:

Fifty Million and 00/100 Dollars (\$50,000,000.00)

This Power of Attorney is granted and is signed and sealed under and by the authority of the following Resolutions adopted by the Board of Directors of SureTec Insurance Company and Markel Insurance Company:

"RESOLVED, That the President, Senior Vice President, Vice President, Assistant Vice President, Secretary, Treasurer and each of them hereby is authorized to execute powers of attorney, and such authority can be executed by use of facsimile signature, which may be attested or acknowledged by any officer or attorney, of the company, qualifying the attorney or attorneys named in the given power of attorney, to execute in behalf of, and acknowledge as the act and deed of the SureTec Insurance Company and Markel Insurance Company, as the case may be, all bond undertakings and contracts of suretyship, and to affix the corporate seal thereto."

IN WITNESS WHEREOF, Markel Insurance Company and SureTec Insurance Company have caused their official seal to be hereunto affixed and these presents to be signed by their duly authorized officers on the 15th day of December, 2021.

SureTec Insurance Company

By:   
Michael C. Keimig, President



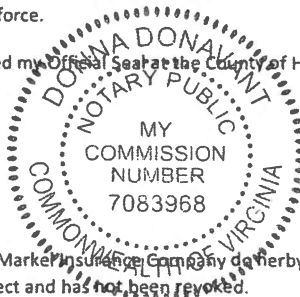
Markel Insurance Company

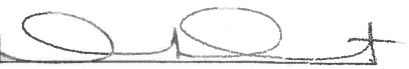
By:   
Robin Russo, Senior Vice President

Commonwealth of Virginia  
County of Henrico SS:

On this 15th day of December, 2021 A. D., before me, a Notary Public of the Commonwealth of Virginia, in and for the County of Henrico, duly commissioned and qualified, came THE ABOVE OFFICERS OF THE COMPANIES, to me personally known to be the individuals and officers described in, who executed the preceding instrument, and they acknowledged the execution of same, and being by me duly sworn, disposed and said that they are the officers of the said companies aforesaid, and that the seals affixed to the proceeding instrument are the Corporate Seals of said Companies, and the said Corporate Seals and their signatures as officers were duly affixed and subscribed to the said instrument by the authority and direction of the said companies, and that Resolutions adopted by the Board of Directors of said Companies referred to in the preceding instrument is now in force.

IN TESTIMONY WHEREOF, I have hereunto set my hand, and affixed my Official Seal at the County of Henrico, the day and year first above written.

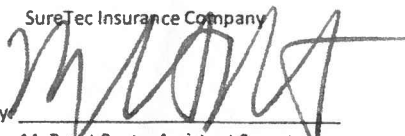


By:   
Donna Donavant, Notary Public  
My commission expires 1/31/2023

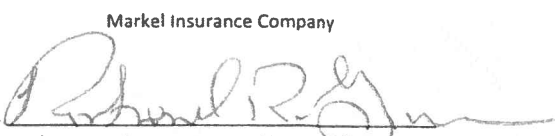
We, the undersigned Officers of SureTec Insurance Company and Markel Insurance Company, do hereby certify that the original POWER OF ATTORNEY of which the foregoing is a full, true and correct copy is still in full force and effect and has not been revoked.

IN WITNESS WHEREOF, we have hereunto set our hands, and affixed the Seals of said Companies, on the \_\_\_\_\_ day of \_\_\_\_\_, 2023.

SureTec Insurance Company

By:   
M. Brent Beaty, Assistant Secretary

Markel Insurance Company

By:   
Richard R. Grinnan, Vice President and Secretary



# PROJECT MANUAL

## GUN CLUB ON-RAMP TO PEÑA BOULEVARD

DEN Contract Number: 202366978

## VOLUME 1

Issue for Bid  
March 2023

City and County of Denver  
Department of Aviation

Philip A. Washington, CEO

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**SECTION 011100****SUMMARY OF WORK****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY AND DESCRIPTION**

- A. The Work specified in this contract consists of furnishing all management, supervision, labor, materials, tools, equipment, services, testing and incidentals for the construction of the Work indicated in the contract documents including lump sum items and unit price items.
- B. The Work in this Contract may affect operations at DEN. The Contractor shall bid, plan and execute the Work to minimize disruption of operations and inconvenience to the public.
- C. Change Notice:
1. The Contractor will be required to submit a proposal for each Change Notice
  2. The Contractor shall submit a proposal for the complete scope of the Work within the specified duration identified by the Notice. Where there is no time requirement identified by the notice documents, the Contractor shall submit a proposal within 20 days of receiving the notice or as allowed in Title 11 - Changes in the Work, Contract Price, or Contract Time of the General Contract Conditions, 2011 Edition.
  3. The proposal could contain both competitive bid and estimated costs and shall adhere to the requirements of Title 11 of the General Contract Conditions.
  4. The Contractor shall not proceed on any change notice work until a change order is issued.
- D. Change Directives:
1. The DEN Project Manager may issue Change Directive(s) for a Scope of Work. The Contractor shall keep all Time and Material record for any Change Directive(s) issued until a final settlement for the task is settled and finalized in a Change Order.
  2. The Contractor shall keep records and approvals for all Time and Material impacts of a Change Directive until a final settlement is reached and fully executed by the DEN Project Manager.
  3. The Contractor may invoice for a Change Directive in accordance with Title 11 of the General Contract Conditions, 2011 Edition.
- E. Guaranteed Maximum Price (GMP): For Contracts assigned as GMP the Contractor shall follow the Special Conditions issued for the Contract.
- F. This Project will be administered using the current Project Management Information System (PMIS). The application will be supplied by DEN at no cost to the Contractor. DEN will provide PMIS training for up to two (2) of the contractor's personnel.

**TECHNICAL SPECIFICATIONS**  
**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 011100 - SUMMARY OF WORK**

**DENVER INTERNATIONAL AIRPORT**  
**GUN CLUB ON-RAMP TO PEÑA BOULEVARD**  
**CONTRACT NO. 202366978**

- G. The Contractor shall participate in a preconstruction coordination meeting and update the existing BIM Project Execution Plan or prepare a BIM Project Execution Plan if one does not exist based upon the DEN BIM Project Execution Plan (BPXP) template included as provided by the DEN Digital Facilities and Infrastructure (DFI) group and the coordination meeting instructions.
- H. DEN utilizes several programs as part of the Asset Management System. Keeping accurate as-built record and operation and maintenance data are essential in the integrity and the validity of the airport operation. The Contractor is required to make every effort to keep the airport data informed, updated and accurate in the format required by DEN Project Manager:
  - 1. The Contractor shall provide and implement BIM Project Execution Plan based on the DEN BIM Project Execution Plan. The Contractor shall employ or contract a consultant to provide all the requirements to produce the Project model in the latest edition of the currently approved DEN format.
  - 2. The Contractor shall comply with all the requirements of DEN BIM Project Execution Plan and provide the data to DEN to produce the complete record of the BIM model of the Project
- I. Inspection Requirements:
  - 1. Special Inspection and Testing required by the building official or the Engineer of Record in the Contract Documents or in the Statement of Special Inspections will be performed by DEN contracted Agencies.
  - 2. Contractor shall subcontract Qualified Material Testing Agency(s) to perform all necessary Quality Control, processing control and any additional Testing required by the Contract Documents.
  - 3. DEN Quality Assurance Manager may audit all material tests performed by the Contractor Quality Control at any time. Testing and Inspections for structural elements (reinforced concrete, steel, masonry caissons, fire protection, precast and post tension concrete) not identified as special inspection will be performed by the Contractor Quality Control Program and Contractor Material Testing Agency and audited and confirmed by DEN Quality Assurance Manager. DEN will perform 100% visual inspection on all weldments. DEN will perform Quality Assurance testing at a frequency of approximately 10% of the Quality Control test and inspection frequencies. The testing frequencies by DEN may escalate to higher percentages and the Contractor will be responsible for all costs associated with failing tests of the same pay item elements. The Contractor may not hire the DEN contracted or testing agency in any capacity on this Project.
- J. DEN Quality Assurance will perform all quality assurance pull and adhesion tests on all airfield joint sealants. Contractor shall perform all quality control tests for the same items.
- K. DEN Quality Assurance is required to submit a letter indicating that all Work performed on the project complies with all applicable codes. The Contractor shall make sure that all required test frequencies and all deficiencies has been corrected to comply with all applicable codes and standards and the requirements of the Contract Documents.

**1.03 WORK BY OTHERS AND FUTURE WORK**

- A. Refer to Title 7 – Cooperation, Coordination and Rate of Progress of the General Contract Conditions, 2011 Edition

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**TECHNICAL SPECIFICATIONS  
DIVISION 01 – GENERAL REQUIREMENTS  
SECTION 011100 - SUMMARY OF WORK**

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**DENVER INTERNATIONAL AIRPORT  
GUN CLUB ON-RAMP TO PEÑA BOULEVARD  
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**1.04 SITE CONDITIONS**

- A. Refer to Title 14 – Site Conditions of the General Contract Conditions, 2011 Edition

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 CONTRACTOR'S DUTIES**

- A. Refer to Title 3 – Contractor Performance and Services of the General Contract Conditions, 2011 Edition
- B. Execute the Work as specified and in a timely manner. Submit a schedule of Work that will be performed at times other than during the eight-hour working day of Monday through Friday, daylight hours. Submit this schedule five (5) working days prior to the beginning of Work to the DEN Project Manager for review and acceptance. Approval to work at night may be obtained after Contractor presents a written program outlining special precautions to be taken to control the extraordinary hazards presented by night work. That program shall include, but not be limited to, supplementary lighting of work areas, availability of medical facilities, security precautions, and noise limitations.

**3.02 COORDINATION**

- A. Coordinate execution of the Work with those public utilities, governmental bodies, private utilities and other contractors performing work on and adjacent to the worksites. Eliminate or minimize delays in the Work and conflicts with those utilities, bodies, and contractors. Schedule governmental, private utility and public utility work that relies upon survey points, lines and grades established by the Contractor to occur immediately after those points, lines and grades have been established. Confirm coordination measures for each individual case with the DEN Project Manager in writing.
- B. In the coordination effort of work by others, the Contractor shall obtain and refer to equipment locations and other layouts, as available, to avoid interface problems.
- C. The City reserves the right to permit access to the site of the Work for the performance of work by other contractors and persons at such times that the City deems proper. The exercise of such reserved right shall in no way or to any extent relieve the Contractor from liability for loss and damage to the Work due to or resulting from its operations or from responsibility for complete execution of the Contract. The Contractor shall cooperate with other contractors and persons in all matters requiring common effort.

**3.03 CONTRACTOR USE OF WORK SITE**

- A. Confine work site operations to areas permitted by law, ordinances, permits, and the Contract.
- B. Consider the safety of the Work and that of the people and property on and adjacent to the work site when determining amount, location, movement, and use of materials and equipment on work site.
- C. Do not load work site with equipment and products that would interfere with the Work. Only equipment, tools, or materials required for this Work may be stored at the work site.
- D. Protect products, equipment, and materials stored on work site.

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**TECHNICAL SPECIFICATIONS**  
**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 011100 - SUMMARY OF WORK**

**DENVER INTERNATIONAL AIRPORT**  
**GUN CLUB ON-RAMP TO PEÑA BOULEVARD**  
**CONTRACT NO. 202366978**

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- E. Relocate stored products, equipment, and materials that interfere with operations of City, government bodies, public, and private utilities, and other contractors.

**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 011100**



**SECTION 011400****WORK SEQUENCE AND CONSTRAINTS****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 OTHER WORK**

- A. Other concurrent construction contracts with which the Contractor must interface are described elsewhere in the Contract Documents. Refer to Section 013210 "Schedule" and the Project Special Provisions for specific work constraints and milestones.

**1.03 WORK SEQUENCE**

- A. The work sequence shall comply with Phasing, Sequencing, and Milestones as indicated in the Contract Documents and in accordance with the approved Construction Schedule developed by the Contractor. The schedule shall comply with requirements indicated in the Special Conditions and Section 011400 "Work Sequence and Constraints". The Construction Schedule is described in Section 013210 "Schedule".

**1.04 WORK CONSTRAINTS**

- A. Site Constraints:
1. Access to the Project shall be generally as indicated in the Contract Documents. Access shall be organized and planned by the Contractor to ensure no disruption of airline or DEN operations.
  2. Access to work sites will be strictly monitored and must comply with DEN Airport Operations and FAA Regulations. The Contractor shall provide monitoring and escorts as required by DEN Operations in the area of the Work.
  3. The Contractor's staging area will be as indicated in the Construction Documents.
  4. Contractor employee parking will not be allowed within the existing revenue control system. Parking facilities will be as indicated in the Construction Documents.
  5. Material for work in the Terminal may be brought in through the Terminal Loading Dock accessed via Gate 1. Employee and material access to the Concourses will be via Gate 5.
  6. The Contractor shall use the haul routes specified in the Construction Documents.
  7. If required, the Contractor shall provide a bus and driver to transport the Contractor's employees between the designated employee parking area and the work sites. No separate payment will be made for this bus and driver. The cost shall be included in the bid item "Mobilization". The bus driver shall be provided at all times when Contractor employees are working on the Project.
- B. System Interruptions:
1. DEN is a 24/7/365 facility. Construction activity that requires any system shutdown must be coordinated with the project manager and DEN AIM MCC.

**TECHNICAL SPECIFICATIONS**  
**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 011400 - WORK SEQUENCE AND CONSTRAINTS**

**DENVER INTERNATIONAL AIRPORT**  
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2. The Shutdown cannot proceed unless all approver groups have approved the request. If any of the groups rejects the request, you may not proceed with the Shutdown. If a Shutdown is determined to be an emergency due to pending health issues or the risk of additional damage, this process may be bypassed. If the Shutdown is an emergency, proceed with the shutdown without the approvals. Approvals must be obtained as follows
    - a. Airfield Shutdowns must be submitted at least 72 hours prior to the shutdown start date.
    - b. All other Shutdowns must be submitted at least five (5) business days prior to the shutdown start date.
    - c. All Shutdown Requests must be submitted using the Shutdown Request form, which can be accessed via the Home page of the DEN intranet.
- C. Airfield Operations at Denver International Airport:
1. Full airport and aircraft operations are underway adjacent to this Project. Contractors are required to obtain a Contractor Participant Manual from the Security Manager and must follow the guidelines in the manual. Copies of the Contractor section of the manual are available for review at the Denver International Airport Access Services Office.
    - a. If any Work contains requirements for Work activities or access through or in the restricted area, reference Section 011420 "Security Requirements & Sensitive Security Information (SSI)" for requirements.
    - b. If not in a restricted area, the Contractor personnel still must be badged; reference Section 011420 "Security Requirements & Sensitive Security Information (SSI)".
- D. Conduct of persons using the Denver Municipal Airport system:
1. Contractor activities shall comply with Airport Operations and Regulation 130 "TRAFFIC" and Regulation 20 "CONDUCT OF PERSONS USING THE DENVER MUNICIPAL AIRPORT SYSTEM" shall be followed at all times. These regulations are available from Airport Operations at Denver International Airport.
- E. Operational safety on airports during construction:
1. All Work shall be accomplished in accordance with FAA Advisory Circular AC150/5370-2C, "Operational Safety on Airports during Construction", FAR Part 139 and FAR Part 107 except as herein modified.
- F. Welding Equipment, Procedures and Constraints:
1. Natural gas-powered portable welders or inverter single- and three-phase electric portable welders are the only acceptable welding equipment to be used inside the building basement or tunnel areas. Acceptability of equipment other than the equipment noted above shall be at the sole discretion of the DEN Project Manager.
  2. Welding activities inside buildings require submittal of a System Interruption Request (See paragraph "System Interruptions" above). Prior to welding in any area, the Contractor shall locate smoke detectors and shall request interruption of the fire alarm system. Subsequent to the interruption of the fire alarm system and prior to welding activities, the Contractor shall cover and protect smoke detectors until work is complete. Prior to expiration of each interruption of the system, the Contractor shall uncover the smoke detectors.
  3. Electrical Service: The Contractor shall be responsible for verifying with the DEN Project Manager or representatives locations acceptable for accessing electrical power for welders and other electrical equipment feeders. The Contractor shall be responsible for all work and equipment required to install temporary or permanent

**TECHNICAL SPECIFICATIONS**  
**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 011400 - WORK SEQUENCE AND CONSTRAINTS**

**DENVER INTERNATIONAL AIRPORT**  
**GUN CLUB ON-RAMP TO PEÑA BOULEVARD**  
**CONTRACT NO. 202366978**

electrical modifications for construction power and lighting.

- a. Temporary Hook-up: In addition to the requirements of paragraph "Temporary Power and Lighting for Construction" below, comply with the following:
    - 1) Provide wiring sized to accommodate full load of welding equipment, accounting for voltage drop.
    - 2) Provide appropriate NEMA twist-lock or ANSI receptacle for welder hook-up.
    - 3) 480V, 3 phase, 3 pole, 4-wire twist lock ground line.
    - 4) NEMA L16-20 or ANSI C73.87.
  - b. The Contractor may not begin operation of the equipment prior to request for inspection by DEN representatives and acceptance of the installation.
  - c. Permanent installation of electrical branch circuiting for welding equipment shall be made in accordance with all Division 26 Specification Sections
4. Welding Practices: All standard safe welding practices must be followed, including but not limited to the following:
- a. Flash protection for surrounding areas.
  - b. Contractor fire extinguisher in area.
  - c. One person in each welding area solely designated as fire watch for each welder.
  - d. Protect all equipment, cable trays and contents, etc., in area.
  - e. Use fire blankets and other appropriate materials to confine sparks and molten metal from the welding, cutting, and/or grinding activities.
  - f. All welders shall have been qualified through welding tests in accordance with applicable welding code, such as but not limited to AWS, ASME, API, within one year prior to welding taking place. Evidence of qualification shall be through Welding Performance Qualification Records (WPQR).
  - g. All welder qualifications test shall be or shall have been administered and witnessed by an Independent Testing Agency (ITA), AWS Certified Welding Inspector (CWI).
  - h. If recertification of welders is required, delay costs and retesting costs shall be borne by the Contractor.
5. Grounding: Review with DEN representative's area of work prior to beginning work to ensure ground procedures do not induce undesirable charges in steel building system or other systems. This review should take place subsequent to the pre-work meeting. Do not ground to adjacent building systems, baggage system, hangers, or devices that support mechanical or electrical equipment.

**G. Temporary Power and Lighting for Construction:**

1. The Contractor shall be responsible for all work and equipment required to install temporary or permanent electrical modifications for construction power and lighting.
2. The Contractor shall be responsible for all work and equipment required to install temporary or permanent electrical modifications for construction power and lighting.
  - a. Comply with all requirements of NEC Article 590.
  - b. Flexible cords used for temporary power shall be listed in accordance with NEC Article 400, and rated for 'extra-hard' usage.
  - c. Provide an equipment grounding conductor with all temporary power circuits.
  - d. All temporary power distribution devices and equipment shall be listed and rated for the application.
  - e. Provide ground fault protection for personnel.
  - f. Temporary lighting fixtures shall be protected from physical damage.

**H. Cleaning Equipment and Spoils:**

1. Discharge of water, liquids, or chemicals into a building sanitary sewer system or

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storm drainage systems is prohibited. The Contractor shall comply with all Federal, State, and Local requirements for disposal of chemicals and equipment wash water. The Contractor shall maintain and service all equipment in work areas and collect all wash water, spoils and water from excavations in containers for discharge or removal off site.

**I. Vehicle Permitting for Tunnel and Basement Use:**

1. Electric carts require permitting. The Contractor shall provide at least one (1) electric cart for Contractor use during the work in the tunnel and basements of the buildings. Only electric or CNG powered trucks are allowed in the tunnel and basements of the buildings. Only electric or CNG trucks may be used and shall not be parked overnight or for long terms within the tunnel or basements. All vehicles require permitting. Permits may be acquired at the DEN Airport Security Office.

**J. Radio and Cell Phone Use:**

1. The Contractor shall have wireless communications in place prior to initiation of work in the tunnel or basements by use of cell phone and/or radio. Radio and cell phone coverage in the tunnels and basements varies in signal strength throughout the campus. An RF Application must be submitted for the Radio equipment intended for use at least 14 days prior to intended use. Include the following radio information:
  - a. Make
  - b. Model
  - c. Frequency
  - d. Effective Radiated Power (ERP)
2. Contractors must receive an approval letter from the RF Systems Manager prior to use of the radio equipment on the DEN campus.

**K. Keys:**

1. The Contractor shall be required to contact DEN Maintenance Control to procure keys for access to all rooms having locks in order to gain access. Keys may be checked out at the beginning of each work shift by the Contractor and shall be returned to DEN Maintenance Control at the end of each work shift

**1.05 COORDINATION**

- A. The Contractor will designate a contact person for coordination with the DEN Project Manager and airline tenants. The contact person shall have the authority to make decisions for the Contractor firm and shall have binding signatory power for changes in work. The contact person shall be on site at all times during work activity.
- B. No additional costs shall be considered for coordination activities throughout this project. The Contractor shall include in the Contractor's bid costs for coordination of all activities.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 DUST/PROTECTION BARRIERS**

- A. HVAC system containment. The Contractor shall submit to DEN Maintenance HVAC and Fire Alarm shutdown requests prior to modifications to the area of work for dust

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containment. The HVAC system shall be interrupted, re-routed, or blocked off to prevent dust from entering return or supply ducts.

- B. Debris and Protection Barriers:. The Contractor shall construct code-approved and DEN-approved dust and debris barriers on both sides of walls and doors that are to be modified. Barriers shall be constructed to allow emergency ingress and egress to and from equipment and spaces. Barriers shall be constructed to allow continual uninterrupted function of building equipment and spaces.
1. Return all removed door hardware to DEN. Label each hardware set correlating the door number of the original hardware set. Coordinate with the DEN Project Manager for storage and return of hardware.

**3.02 EQUIPMENT**

- A. Equipment: CNG-powered equipment is allowed within the buildings. No other fossil fuel equipment may be used within the buildings unless the equipment is directly vented to the building exterior.
- B. Electric: Electric powered equipment is acceptable in the Work area.

**PART 4 - MEASUREMENT****4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT****5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 011400**

**SECTION 011810**  
**UTILITIES INTERFACE**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Various utilities are located within the limits of work in the Project area. The owners of these utilities may require that the Contractor work around their existing facilities until alterations, relocation, or abandonment have been completed. All known existing utilities are shown; however, the Contractor shall verify and satisfy itself that there are no other existing utilities that may not be shown.
- B. The owners of known utilities within the project area include, but are not limited to:
1. Century Link Telephone
  2. DEN Telephone
  3. Xcel Energy Natural Gas
  4. Xcel Energy Elec. Services
  5. DEN Storm Water
  6. DEN Sanitary Sewer
  7. DEN Deicing Waste
  8. Denver Water Department
  9. DEN Deicing Supply operated by Inland Technologies
  10. Fuel System (ASI)
  11. Premise Wiring System- DEN Business Technologies
  12. FAA Duct Bank
  13. Oil/Gas Wells
  14. DEN Electrical Department
  15. Fire Alarm System
  16. Paging System
- C. The location and establishment of each construction vehicle crossing shall be at sites mutually agreed upon in writing by the Contractor and the owner of the utility.
- D. At the locations where the Contractor needs to establish a construction vehicle crossing over any of the operating pipelines, the furnishing and placing of a crossing shall be by the Contractor. The crossing shall allow the normal operation of the pipeline at all times unless specifically approved by DEN or the owner of the pipeline. Each crossing shall be adequately marked and signed for safe passage of vehicles over the crossing. Construction vehicles shall not be allowed to cross over operating pipelines at any place other than an established crossing.

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- E. These utility locations are based upon information provided by the utility companies or previous construction contractors that were the basis for determining utility coordinates. The Contractor is responsible for confirming the accuracy of the provided coordinates with the utility owner.
- F. The Contractor shall control the Contractor's operations in order to avoid creating any obstacles for the utility owner's access for maintaining or operating their equipment.

**1.03 REFERENCE DOCUMENTS**

- A. Section 312323.33 "Flowable Backfill (Controlled Low-Strength Material)"

**1.04 REGULATORY REQUIREMENTS**

- A. The Contractor shall obtain and pay for all utility company permits, fees, and licenses necessary for the execution of this work. The Contractor shall give all notices and shall comply with all laws, ordinances, rules, and regulations of all authorities having jurisdiction.

**1.05 QUALITY CONTROL**

- A. When the Contractor performs any operations that will affect a utility owner, the Contractor shall give timely notice to the utility owner and the DEN Project Manager so that the Contractor's operations may be observed by the utility owner or their representative.

**1.06 WORK INCLUDED**

- A. The Work of this Section includes furnishing all materials, equipment, and labor necessary to provide utility crossings as required and as specified herein and subject to approval by the associated utility owner.
- B. North American Resources has a line passing through airport property. The Contractor shall contact the utility prior to beginning earthwork operations to ascertain any special requirements or conditions required to maintain and protect this service during construction activities.
- C. FAA Underground Duct lines: The FAA has duct lines passing under the site. The Contractor shall contact the FAA prior to beginning earthwork operations to ascertain any special requirements or conditions required to maintain this service during construction activities.

**PART 2 - PRODUCTS**

**2.01 MATERIALS**

- A. Suitable cover material shall be in accordance with Colorado Department of Transportation Standard Specifications. Wet, soft, or frozen material, asphalt chunks, or other deleterious substances shall not be used for cover.
- B. Aggregate for road base material shall consist of clean, sound and durable particles of crushed stone, crushed gravel or crushed slag, shall be free from coatings of clay, silt and organic matter, and shall contain no clay balls. Material shall conform to the State of Colorado Standard Specifications for Road and Bridge Construction Class 6 aggregate base unless otherwise specified.
- C. The materials for the load distribution system on top of the cover shall conform to the

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specification of the American Institute of Steel Construction, the American Institute of Timber Construction, or the American Concrete Institute, as applicable, depending upon the system agreed upon between the Contractor and utility owner.

- D. Materials for the sleeving of the pipelines shall be purchased by the utility owner at the Contractor's expense.
- E. Comply with utility backfill requirements for the use of flowable backfill in Section 312323.33 "Flowable Backfill (Controlled Low-Strength Material)" and Division 26 and Division 33 requirements.

**PART 3 - EXECUTION****3.01 NOTIFICATION OF UTILITIES FOR LOCATING AND POTHOLING**

- A. The Contractor shall verify the location of all utilities prior to any operations including physically uncovering the utility to verify location as required by the utility owner.
- B. The Contractor shall notify the Utility Notification Center of Colorado at (303) 534-6700 or 811, as a minimum for location of utilities.

**PART 4 - MEASUREMENT****4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT****5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 011810**



**SECTION 012300****ALTERNATES****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Section includes administrative and procedural requirements for alternates.

**1.03 DEFINITIONS**

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
  - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
  - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

**1.04 PROCEDURES**

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
  - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Prior to the Contractor signing the Contract, the Owner will notify each party involved, in writing, of the status of each alternate, indicating if alternates have been accepted, rejected, or deferred for later consideration. The owner will also include a complete description of negotiated revisions to alternates.
- C. Execute accepted alternates under the same conditions as other Work of the Contract.
- D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the Work described under each alternate.

**PART 2 - PRODUCTS (NOT USED)**

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**PART 3 - EXECUTION**

**3.01 SCHEDULE OF ALTERNATES**

- A. Alternate No. <Insert number>: <Insert title of alternate>.
- B. Base Bid: <Insert brief description of base-bid requirement> <Select reference type>.
- C. Alternate: <Insert brief description of alternate requirement> <Select reference type>.

**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 012300**

**SECTION 012510****SUBSTITUTIONS****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. All material and equipment substitutions must comply with Title 4, Article 406: Substitution of Materials and Equipment in the General Contract Conditions, 2011 Edition.
- B. The Work specified in this Section consists of submitting form CM-09, Request for Substitution for the approval of a different material, equipment, or process than is described in the Contract Documents.
- C. If the substitution changes to the Scope of Work, Maximum Contract Cost, cost of the Work (if less than the Maximum Contract Cost), or Contract time, a Change Order is required.
- D. As-built drawings and specifications must include all substitutions even if a Change Order is not issued.

**1.03 REFERENCE DOCUMENTS**

- A. Form CM-09, Request for Substitution
- B. Section 013300 "Submittal Procedures"
- C. Section 013325 "Shop and Working Drawings, Product Data and Samples"

**1.04 QUALITY CONTROL**

- A. The substitution shall provide as a minimum, the same performance as specified.

**1.05 SUBMITTALS**

- A. Refer to Section 013300 "Submittal Procedures" and Section 013325 "Shop and Working Drawings, Product Data and Samples" for submittal procedures.
- B. A completed Form CM-09 shall be submitted at least 60 days prior to when an order needs to be placed or a method needs to be changed.
- C. The submittal shall contain all the data required to be submitted for acceptance of the originally specified item or process, including, as appropriate:
  - 1. Detailed product data sheets for the specified items and the substitution.
  - 2. Samples and shop drawings of the substitution.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION****3.01 SUBSTITUTION PROCESS**

- A. Provide the information as required on Form CM-09.

**3.02 SUBSTITUTION REQUEST**

- A. The formal Request for Substitution will be evaluated by the DEN Project Manager and the Designer of Record based on the following criteria:
1. Compatibility with the rest of the project.
  2. Reliability, ease of use and maintenance.
  3. Both initial and long term cost.
  4. Schedule impact.
  5. The willingness of the Contractor to share equally in any cost savings.
  6. The ability of the item or process to meet all applicable governing regulations, rules, and laws along with funding agency requirements.
  7. The cost of evaluating the substitution.
- B. Based upon the above evaluation, the Senior Director of AIM Development will make a final determination of what is in the best interest of the City and either approve, disapprove or approve as noted the requested substitution.

**3.03 CONDITIONS**

- A. As a condition for submitting a Request for Substitution, the Contractor waives all rights to claim for extra costs or changes in the costs, schedule, Contract time or Scope of Work, other than those outlined in the request and approved by the Senior Director of AIM Development. The Contractor, by submitting a Request for Substitution, also accepts all liability for cost and scheduling impact on other contractors or the City due to the substitution.
- B. Included with the Request for Substitution shall be the following statement:
1. "The substitution being submitted is equal to or superior in all respects to the Contract-required item or process. All differences between the substitution and the Contract-required item or process are described in this request along with all required information, cost, and scheduling data."
- C. The statement shall be signed and dated by the Contractor's Superintendent.
- D. Replacement of Substitution Found to be Not Equal: The Contractor shall be responsible for all aspects and conditions of the substitution that are not clearly identified in the substitution submittal, and shall be liable for the appearance, function, performance or other aspects of the substitution that are found not to be equal to the originally specified item.
1. The Contractor shall incur all labor and costs associated with replacement of any substitution that is found to be not equal to the originally specified item or process and rejected by the DEN Project Manager.
  2. The replacement of any rejected substitution shall either be with the originally specified item or process, or a substitution approved by the DEN Project Manager.

**3.04**

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**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 012510**

## **SECTION 012600**

### **CONTRACT MODIFICATION PROCEDURES**

#### **PART 1 - GENERAL**

##### **1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions other Division 01 Specification Sections, and Related Requirements apply to this Section.

#### **PART 2 - PRODUCTS (NOT USED)**

#### **PART 3 - EXECUTION**

##### **3.01 CHANGE MANAGEMENT PROCEDURES**

- A. General Process Requirements
  - 1. Refer to Project Management for Software Requirements Section 013100 Project Management and Coordination.
  - 2. Refer to the City and County of Denver Standard Specifications for Construction General Contract Conditions Title 11 requirements
  - 3. Process
    - a. Change Mechanism Types
      - 1) Change Directive
        - a) DEN directed change/scope changes that are necessary for safety or operations – scope addition is not optional. DEN provides a budget via CD, and the contractor responds via CDR with costs (either actual or negotiated). Once the CDR is approved, a change order may be issued for the difference between the CD and the CDR.
      - 2) Change Notice
        - a) When to use: DEN directed changes/scope for which the contractor can propose costs to do the work. A CN does not mean the work will take place; project impacts, including cost and schedule, must be negotiated and agreed upon before the work takes place. Once the change notice is negotiated, a change order may be issued.
      - 3) Contractor Change Request
        - a) Adverse or changed conditions encountered by the contractor that were not the result of DEN direction; RFI responses that differ from spec that may result in additional cost or schedule. Once the CCR is approved, a change order may be created.
    - b. Non-Standard Contract Changes
      - 1) Suspension
        - a) Suspensions should be recorded through a change notice. The contractor may respond with any associated costs.
      - 2) Termination
        - a) Terminations should be recorded through a change notice. The contractor may respond with any associated costs.
      - 3) Minor Contract Language Change
        - a) Changes to contract language should be recorded through a change notice. In addition to the normal Unifier approval process, Airport Legal

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Services (ALS) should also review and approve of changes in the contract. Common situations where this may occur:

- (1) Project Milestone Changes
  - (2) Submittal Requirements
  - (3) Insurance Requirements
  - (4) Other
  - (5) Other
- 4) Specification Change
- a) Changes to spec should be recorded through an RFI if possible. If not, then a CN may be issued for spec changes. In addition to the normal Unifier approval process, the spec owner/SME should review and approve of the change.
- 5) Major Contract Language Change
- a) Major Contract Language Changes require the involvement of Airport Legal Services (ALS) and may require additional approval, up to and including City Council. Situations where this may be necessary would include
    - (1) Removal of special conditions, exhibits, or attachments to the contract
    - (2) Increase in contract capacity over a designated value
    - (3) Any other contract change that has not been covered by this section.
- c. Change orders
- 1) Change Directives, Change Notices and Contractor Change Requests will be executed and incorporated into a contract via a Change order only.

**B. Submission Requirements**

1. Refer to Section 013100 Project Management and Coordination.

**3.02 TIMELINE**

- A. The Contract General Conditions (Standard Specifications for Construction General Contract Conditions) Title 11 provides timelines and deadlines for approval. The contractor shall refer to this section of the contract for specific requirements, in addition to any special conditions within the contract.
- B. The deadlines specified in Title 11 should be applied to the initial submission package for a change. Any requests for revision, including negotiations, will be subject to the following deadlines.
1. If a contractor is asked to revise a final proposal, the revision will be completed and submitted through the designated system within seven (7) calendar days.
  2. DEN will have fourteen (14) calendar days to review any revised proposal and provide a recommendation back to the contractor. This includes any reviews of the proposal on behalf of DEN, including third parties, subject matter experts, and Project Manager reviews.

**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

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**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 012600**



**SECTION 012910****SCHEDULE OF VALUES****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions other Division 01 Specification Sections, and Related Requirements apply to this Section.

**1.02 RELATED REQUIREMENTS**

- A. The Work specified in this Section consists of preparing and submitting the Schedule of Values ("Schedule") as referenced in the General Conditions. Use the Project Specifications Table of Contents or Schedule of Prices and Quantities (Bid Tabs), if applicable, as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section. The Work also includes the preparing and submitting of updated copies of the Schedule if the Schedule is affected by change orders.
- B. A Schedule of Stored Material is a detailed cost breakdown for permanent materials that will be temporarily stored prior to their being installed and for which the Contractor seeks partial payments. The Schedule of Stored Material will be incorporated as a part of the Schedule of Values.
- C. Within 14 calendar days of issuance of the Notice to Proceed (NTP), the Contractor shall submit the Schedule of Values including the Schedule of Stored Material if applicable. The Schedule of Values and Schedule of Stored Material used to prepare the work/cost breakdown for the Schedule will be used for the Contractor's billings.
- D. Any Contract allowances shall be included in the Schedule. Expenditure of allowances shall be done using the Allowance Authorization form. Use of this form does not increase or decrease the Contract value.

**1.03 RELATED DOCUMENTS**

- A. Title 9 – Compensation of the General Contract Conditions, 2011 Edition
- B. Section 013300 "Submittal Procedures"
- C. Section 013325 "Shop and Working Drawings, Product Data and Samples".
- D. Form CM-89, Schedule of Values
- E. Form CM-91, Schedule of Values for Unit Price Contracts

**1.04 SUBMITTALS**

- A. The Schedule of Values shall be formally approved by the DEN Project Manager.
- B. The Schedule shall identify each item of work. Work items in the Schedule shall represent all Work and shall be referenced with the Technical Specifications section numbers, specification subparagraph, specification section title and the bid item number used for the Schedule of Prices and Quantities when applicable.

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- C. Upon request by the City, the Contractor shall support values given with the data that will substantiate the correctness of the values.
- D. The Schedule will be utilized only as a basis for review of the Contractor's application for progress payment.

**1.05 REVIEW AND RESUBMITTAL**

- A. If review by the DEN Project Manager indicates that changes to the Schedule are required, the Contractor shall revise and resubmit the Schedule.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 PREPARING SCHEDULE OF VALUES**

- A. Provide a breakdown of the Contract Price in enough detail to facilitate continued evaluation of Applications for Payment and progress reports.
- B. Breakdown of the items used in the Schedule shall include the following item costs. Ensure each item is complete:
  - 1. Delivered cost of product with applicable taxes paid.
  - 2. Total installation cost with overhead and profit.
  - 3. Breakdown costs of each lump sum item with a list of products and major operations for which the Contractor seeks to receive progress payments to recover the Contractor's costs for that bid item.
  - 4. Each unit price item as listed in the bid Schedule of Prices and Quantities shall list products and major operations for which the Contractor seeks to receive progress payments for that bid item.

**3.02 PREPARING SCHEDULE OF STORED MATERIAL**

- A. The Contractor shall submit with the Schedule an indication of whether products will be stored on or off the work site. The Schedule of Stored Material shall show all quantities and types of products that will be stored.
- B. Material allowances consist of only the net cost of the product, the cost of delivery and unloading at the storage site, the cost of applicable sales taxes, and all discounts.
- C. In no case will the cost paid for a permanent material be greater than 90 percent of the Contract price for the Work in which they are included.

**3.03 PAYMENT FOR STORED MATERIALS**

- A. Only materials that are described in the specifications and on the drawings will be considered permanent materials. Permanent materials are materials that will be left in the Work after the Contract is completed.
- B. Nothing in these specifications shall be interpreted as requiring the City to pay for stored materials. The DEN Project Manager shall decide on a case-by-case basis whether stored materials shall be paid for. No payment will be made for stored materials that have not been submitted and accepted.

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- C. The Contractor must, at all times, store permanent materials in accordance with manufacturer's recommendations. Any material not properly stored will not be paid for. Amounts will be deducted from payments for any stored permanent material previously paid for and subsequently found to be improperly stored or not present, based upon a physical inventory of stored permanent material.
- D. Only the neat line quantity of material needed for the finished product may be paid for.
- E. All requests for stored permanent material payment must be accompanied by paid invoices clearly showing the quantity of permanent material, the type of permanent material and discounts or rebates and the net amount paid to the supplier along with a certificate stating that the permanent material is free of any liens or judgments preventing its use by the City.
- F. If the permanent material is stored outside the Denver area the Contractor must pay for the City representative's transportation and lodging to see the stored material as needed. Acceptable lodgings must, as a minimum, have a Mobil Travel Guide Rating Criteria® rating of Two-Star or the American Automobile Association Lodging Listing Requirements & Diamond Rating Guidelines® rating of Two Diamonds. The minimum transportation shall be by regularly scheduled commercial air carrier at coach rates. The DEN Project Manager will determine if an overnight stay is required.
- G. All permanent material stored off site, for which payment is being requested, must be insured and stored in bonded, insured warehouses. The Contractor shall provide proof of insurance for all material stored off site, and specific address and storage conditions of storage location.
- H. Any permanent material on which payment is requested must be in such a form that it cannot be used on work other than this Contract, or stored in a manner acceptable to the DEN Project Manager to ensure that the permanent material cannot be used on work other than this Contract.

**3.04 ALLOWANCE AUTHORIZATION AND PAYMENT**

- A. Contractor shall request written approval for expenditure of any Contract allowances PRIOR TO performing the Work involved. List work to be performed and estimated cost in the requesting correspondence.
- B. Original copies of all invoices and receipts must be submitted with the Allowance Authorization as part of the request for payment.
- C. Using the format provided by the City, the Contractor's request for payment of all Contract allowances shall be included in the Schedule of Values.

**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

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**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 012910**

**SECTION 013100****PROJECT MANAGEMENT AND COORDINATION****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Section includes administrative provisions for coordinating construction operations and coordination with other stakeholders and adjacent Contractors on the Project including,
1. Subcontractor's Acceptance Certification and Subcontractors List.
  2. General Coordination Procedures.
  3. Contract Administration Procedures.
  4. Current Project Management Information Systems (PMIS)
  5. Coordination drawings.
  6. Current DEN Asset Management Systems
  7. Requests for Information (RFIs).
- B. Related Requirements:
1. Section 011100, " Summary of Work" for a description of the division of work among separate contracts and responsibility for coordination activities not in this Section.
  2. Section 011400 "Work Sequence and Constraints" for shutdown requests and coordinating with airport operational activities.
  3. Section 011420 "Security Requirements and Sensitive Security Information (SSI)".
  4. Section 013210 "Schedule" for preparing and submitting Contractor's Construction Schedule.
  5. Section 013223 "Construction Layout, As-built and Quantity Surveys" for coordinating, survey activities and survey related record documents.
  6. Section 013300 "Submittal Procedures. "
  7. Section 013325 "Shop and Working Drawings, Product Data and Samples".
  8. Section 017720 "Contract Closeout" for coordinating closeout of the Contract.
  9. Section 017419 "Construction Waste Management and Recycling".
  10. DEN Building Information Modeling (BIM) Design Standards Manual (DSM)

**1.03 DEFINITIONS**

- A. RFI: Request from the DEN Contractor DEN Project Manager seeking information required by or clarifications of the Contract Documents.

**1.04 SUBMITTALS - SUBCONTRACTORS ACCEPTANCE CERTIFICATION AND SUBCONTRACTORS LIST**

- A. To comply with Section 502.2 in the General Contract Conditions, 2011 Edition, the Contractor must complete and submit form CM-02 Subcontractor Acceptance Certification for each Subcontractor working on the project. Additionally, the Contractor must prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design.
- B. Provide emergency contacts list to the DEN Project Manager prior to any site activities. List must contain project name, number, location, company name and address, name and title of emergency contacts in order and time and assigned responsibilities. Keep list current and accurate at all times. Include any specific security arrangements or special projects requirements.
- C. Within two (2) days of Notice to Proceed, the Contractor shall submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identifying individuals and their duties and responsibilities listing addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Providing names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.
  - 1. Post copies of the accepted list in project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

**1.05 GENERAL COORDINATION PROCEDURES**

- A. Coordination with other Contractors:
  - 1. For details on coordinating with other Contractors, refer to Article 701 Cooperation with Other Work Forces, Article 702 Coordination of the Work, and Article 703 Coordination of Public Contact in the General Contract Conditions, 2011 Edition.
- B. Minimum cooperation requirements with other contractors include the following, unless directed by the DEN Project Manager in writing:
  - 1. Meetings, as needed.
  - 2. Construction schedule coordination.
  - 3. Staging area and access planning (to include employee shuttle routes).
  - 4. Deliveries.
  - 5. Traffic control.
  - 6. When and where required or specified, the Contractor shall develop appropriate coordination drawings for use by interfacing adjacent parties using the Denver International Airport site.
- C. The following is a list that includes, but is not limited to, all of the contractors that will be working in the area of the project limits:
- D. Coordination with DEN entities shall include but is not limited to the following:
  - 1. Coordinate with Owner Contracted Communication Contractor.
  - 2. Coordinate with Utility Companies for utilities that are single sole source.
  - 3. Coordinate with Airport Security and DEN Maintenance for all security related services.

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4. Coordinate with DEN Life Safety Team for all issues related to fire alarm, fire protection systems in addition to compliance with all regulatory agencies.
5. Coordinate all shutdowns and system interruptions in accordance with section 011400 "Work Sequence and Constraints."

**1.06 CONTRACT ADMINISTRATION PROCEDURES**

- A. This Project will be administered in part using the current Project Management Information System (PMIS). Any processes necessary to properly administer the Contract and not included in the list below shall be addressed as acceptable to the DEN Project Manager. DEN Project Manager may modify the list below in serialized correspondence without constituting a change to the Contract. Administrative tools and processes shall not in any form waive any contractual or legal requirements of the law or the Contract. The Contractor shall attend all coordination meetings with the DEN Project Manager and the DEN Project Control Administrators to arrange for staff training, and technical support to facilitate the execution of electronic data management and control.
- B. Project Management Information Systems (PMIS): Oracle Unifier Enterprise Project Portfolio Manager (EPPM), or the Oracle Primavera P6.
- C. All submittals, RFIs, Pay Applications, Correspondence, change requests, and pricing proposals and settlement agreements shall be recorded and submitted using the current PMIS:
  1. The Contractor shall follow the specified PMIS Access Request Procedure and adhere to all user license conditions.
  2. The Contractor shall sign the Information Technology Agreement (ITA) to comply with the DEN computer system security requirements and any contractual obligation to the software and service providers for the current PMIS software
  3. DEN will train the Contractor's staff on the use of the PMIS.
  4. At a minimum, the Contractor shall provide computer hardware and software to meet the following requirements and to run the following programs, as required for the project:
    - a. Internet connectivity that provides the necessary high-speed connection to perform all activities indicated in this Contract.
    - b. Internet Explorer version 8 or higher.
    - c. Based on the project, a specific Java JRE application may be required, which can be downloaded from the Internet. If needed, the revision and update number will be provided at NTP.
    - d. Other files capability pre-approved by the DEN Project Manager or as required by the DEN BIM Execution Plan
    - e. Most current version of Revit, as per DEN requirements.

**1.07 COORDINATION DRAWINGS**

- A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, BIM Design Standards Manual and BIM Project Execution Plan (BPXP), and additionally where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity. Coordination drawings will be the result of a Contractor driven Spatial Coordination effort as spelled out in the BPXP.
  1. Field verify all existing dimensions and any as-built dimensions, whether built by the

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- Contractor or others, necessary to produce accurate coordination and working drawings.
2. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
    - a. Use applicable Models/Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
    - b. Coordinate the addition of trade-specific information to the coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
    - c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
    - d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
    - e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
    - f. Indicate required installation sequences.
    - g. Indicate dimensions shown on the Models/Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to DEN Project Manager indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
- B. Coordination Drawing Organization: Using software as in the BXPX, the Contractor shall coordinate these systems per floor or zone per BXPX, and as follows:
1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
  2. Plenum Space: Indicate subframing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within ceiling plenum to accommodate layout of light fixtures indicated on Drawings. Indicate areas of conflict between light fixtures and other components.
  3. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire-protection, fire alarm, and electrical equipment.
  4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
  5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
  6. Mechanical and Plumbing Work: Show the following:
    - a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.
    - b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
    - c. Fire-rated enclosures around ductwork.
  7. Electrical Work: Show the following:



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- a. Runs of vertical and horizontal conduit.
  - b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire-alarm locations.
  - c. Panel board, switchboard, switchgear, transformer, busway, generator, and motor control center locations.
  - d. Location of pull boxes and junction boxes dimensioned from column centerlines.
8. Fire-Protection System: Show the following:
  - a. Locations of standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.
- C. Review: DEN Project Manager will review coordination drawings to confirm that the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If DEN Project Manager determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, DEN Project Manager will so inform Contractor, who shall make changes as directed and resubmit.
- D. Coordination Digital Data Files: Prepare coordination digital data files according to the following requirements:
  1. File Preparation Format: Same digital data software program, version, and operating system as original Drawings, unless approved otherwise by DEN Project Manager.
  2. File Preparation Format: Provided in the Project BIM Execution Plan operating in Microsoft Windows operating system.
  3. File Submittal Format: Submit or post coordination drawing files as required in the Project BIM Execution Plan.
  4. The submittal must be logged in accordance with the submittal procedure
  5. For Fire Protection system; provide shop drawing and design calculations as approved by the building department. Submit as-built drawings in format as outline in BPXP.
  6. For all projects, receiving official variance from the BIM requirements not utilizing BIM, coordination drawings must be submitted in acceptable digital format shall be in an industry recognized 3D AutoCAD model.
  7. BIM File Incorporation: DEN Project Manager will incorporate Contractor's coordination drawing files into Building Information Model for Revit as established for Project.
    - a. Contractor shall lead three-dimensional component conflict analysis as part of preparation of coordination drawings. Resolve component conflicts prior to submittal. Indicate where conflict resolution requires modification of design requirements by Architect or other sub-consultants.
  8. DEN Project Manager will furnish Contractor one (1) set of digital data files of Models and/or Drawings for use in preparing coordination digital data files.
    - a. The Design consultants and Contractors and Sub Contractors acknowledge and represent the following Right Of Reliance regarding Electronic Models and/or Drawing deliverables:
      - 1) Models may be transferred for allowing the recipients to develop derivative models to develop the means and methods by which to construct the project.
      - 2) It must be clear that each party be able to rely on the fact that the model furnished by others "match the 2D Contract Documents or shop drawings in their equivalent state of development."

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**1.08 COORDINATION WITH DEN ASSET MANAGEMENT SYSTEM:**

- A. The full intent is to produce comprehensive record documents integrating existing data in the form of digital files and models, reconciled to actual field conditions, modifications or additions facilities or components of existing facilities according to new Contract Documents, and to produce record documents that could be incorporated into DEN asset management system.
- B. Utilize the BIM to link all necessary data content to the model and follow the BPXP as collaboratively modified by the Contractor, Designer, and DEN BIM Administrators and approved by DEN Project Manager.
- C. Provide the following information through the execution of the Contract for all elements and element types that DEN has designated as assets. The information shall include but is not limited to:
  - 1. Project title, number, project manager contact information, contractor and subcontractor contact information
  - 2. Pertaining shop drawings
  - 3. Operational Manuals and safety information, MSDS and cut sheets, and any pertinent technical information.
  - 4. Details of all components' maintenance procedures and requirements.
  - 5. Details of all applicable warranties including but not limited to; warranty providers, manufacturers information, warranty start and finish dates, contacts , bonding company name, consent of surety,
  - 6. Equipment location (by room number and location description or grid location format acceptable to DEN Project Manager, for civil projects), equipment make, model, serial number, and other asset information as outlined in the DEN BIM DSM
  - 7. List of all spare parts including but not limited to; equipment make and model, location, submittal number or link, and suppliers reordering information
  - 8. Commissioning results, acceptance criteria, test reports, and Tab reports

**1.09 REQUESTS FOR INFORMATION (RFIS)**

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI through the PMIS
  - 1. DEN Project Manager will distribute the RFIs to the proper entities.
  - 2. DEN Project Manager will coordinate and submit RFIs in a prompt manner to avoid delays in Contractor's Work or work of subcontractors.
- B. DEN Project Manager has the right to reject RFIs or those that do not contain proper information and required data to properly evaluate the request and respond in a timely manner.
- C. RFIs: Use PMIS to generate RFIs.
  - 1. Attachments shall be electronic files in Adobe Acrobat PDF format.
  - 2. Attachments include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
    - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.

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- D. For projects not using Unifier to create the RFI, the RFI must include a detailed, legible description of item needing information or interpretation and the following:
1. Project name.
  2. Project number.
  3. Date.
  4. Name of Contractor.
  5. Name of DOR and DEN Project Manager.
  6. RFI number, numbered sequentially.
  7. RFI subject.
  8. Specification Section number and title and related paragraphs, as appropriate.
  9. Drawing number and detail references, as appropriate.
  10. Field dimensions and conditions, as appropriate.
  11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
  12. Contractor's signature.
  13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
- E. DEN Project Manager will review each RFI, determine action required, and respond. RFIs received by DEN Project Manager after 1:00 p.m. will be considered as received the following working day. Direct responses by any entity other than DEN Project Manager shall not be binding to the City and County of Denver. E-mails, and verbal conversations must be followed by an official RFI or proper contractual vehicle before it is considered for any additional compensation or time impact to the project terms and conditions.
1. The following Contractor-generated RFIs will be returned without action:
    - a. Requests for approval of submittals.
    - b. Requests for approval of substitutions.
    - c. Requests for approval of Contractor's means and methods.
    - d. Requests for coordination information already indicated in the Contract Documents.
    - e. Requests for adjustments in the Contract Time or the Contract Sum.
    - f. Requests for interpretation of DEN Project Manager's actions on submittals.
    - g. Incomplete RFIs or inaccurately prepared RFIs.
  2. DEN Project Manager will facilitate a response to the contractor within fourteen (14) calendar days of receipt, regardless of whether the RFI is an original or re-submission, either through the PMIS or, if the PMIS is not used, via email. This response time will include any reviews from a third party, including DOR/EOR, Architects, Commissioning Agents, or other SMEs.
  3. DEN Project Manager's response may include a request for additional information or revision and resubmittal of the RFI. Contractor shall clearly reference the previous RFI on the new submittal record.
  4. DEN Project Manager's action on RFIs that may result in a change to the Contract Time, or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Title 11 - Changes In the Work, Contract Price, or Contract Time in the General Contract Conditions, 2011 Edition as amended by Special Conditions.

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5. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify DEN Project Manager in writing within five (5) days of receipt of the RFI response or the time required by Title 11 - Changes In the Work, Contract Price, or Contract Time in the General Contract Conditions, 2011 Edition
- F. RFI Log: For projects not utilizing the PMIS application, prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. The log shall include but not limited to the following data:
  1. Project name.
  2. Name and address of Contractor.
  3. Name and address of DEN Project Manager.
  4. RFI number including RFIs that were returned without action or withdrawn.
  5. RFI description.
  6. Date the RFI was submitted.
  7. Date DEN Project Manager's response was received.

**PART 2 - PRODUCTS (NOT USED)****PART 3 - EXECUTION (NOT USED)****PART 4 - MEASUREMENT****4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT****5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 013100**

**SECTION 013119****PROJECT MEETINGS****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. The Work specified in this Section requires the Contractor's Project Manager, Superintendent, and Quality Control representative to attend meetings scheduled by the DEN Project Manager for the collection and dissemination of information related to the subject Contract.
- B. The DEN Project Manager will prepare the minutes of each meeting and distribute them to each of the participants.

**1.03 REFERENCE DOCUMENTS**

- A. Form CM-01, Preconstruction Meeting Agenda
- B. Form CM-62, Construction Meeting Agenda/Minutes

**1.04 OTHER MEETINGS**

- A. The Contractor shall attend all other project related meetings as directed by the DEN Project Manager.

**PART 2 - PRODUCTS (NOT USED)****PART 3 - EXECUTION****3.01 PRECONSTRUCTION MEETING**

- A. A Preconstruction Meeting will be scheduled by the DEN Project Manager after the Contract has been signed by all parties. The purpose of this meeting is to introduce the City's Representatives to their counterparts in the Contractor's organization and to establish lines of communication between these representatives and outline some Contract requirements. The Contractor's key personnel shall attend this meeting.
- B. The DEN Project Manager will distribute a notice of this meeting, along with an agenda of the subjects to be addressed. Refer to form CM-01, Preconstruction Meeting Agenda.
- C. The DEN Project Manager will explain and discuss the responsibilities and authorities of the City, the Designer of Record, and the DEN Project Manager's organization.
- D. The Contractor shall introduce the Contractor's key personnel, subcontractors, and representatives and briefly describe each person's responsibilities.

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- E. The Contractor shall prepare a presentation with the items outlined in the CM-01, Preconstruction Meeting Agenda, at a minimum.
- F. Explanations provided by the DEN Project Manager will not amend, supersede, or alter the terms or meaning of any Contract document, and the Contractor shall not claim reliance on such explanations as a defense to any breach or failure by the Contractor to perform as specified in the Contract.

**3.02 CONSTRUCTION PROGRESS MEETINGS**

- A. Progress meetings will be scheduled weekly and more often as necessary by the DEN Project Manager to promote the competent and timely execution of the Contract.
- B. The meetings will be held at the work site or at a location selected by the DEN Project Manager. Meetings will be chaired by the DEN Project Manager or the DEN Project Manager's representative.
- C. The Contractor's key personnel shall attend unless otherwise agreed by the DEN Project Manager.
- D. At a minimum, and as directed by the DEN Project Manager, the items detailed in CM-62, Construction Meeting Agenda/Minutes shall be addressed at each meeting. The items addressed in the meeting do not waive notification or submittal requirements as required elsewhere in the Contract.
- E. The DEN Project Manager will be responsible for publishing minutes of the meetings. Refer to form CM-62, Construction Agenda/Meeting Minutes.

**PART 4 - MEASUREMENT****4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT****5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 013119**

**SECTION 013210 – SCHEDULE****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. The Work specified in this Section describes the procedures and requirements for scheduling and documenting the progress of the project:
  - 1. Design Schedules
  - 2. Preliminary Construction Schedule
  - 3. Initial Project Construction Schedule (IPS)
  - 4. Monthly Progress Schedule update
  - 5. As-built Schedule
  - 6. Special reports:
    - a. Weather impacts and mitigations
    - b. Unforeseen Conditions and mitigations
    - c. Recovery Schedule and alternatives

**1.03 REFERENCE DOCUMENTS**

- A. Article 1105 – Time Extensions in the General Contract Conditions, 2011 Edition.
- B. Section 011100 "Summary of Work"
- C. Section 011420 "Work Sequence and Constraints".
- D. Section 012910 "Schedule of Values".
- E. Section 013119 "Project Meetings"
- F. Section 013300 "Submittal Procedures"

**1.04 SUBMITTALS**

- A. Submit for City acceptance the following in accordance with Section 01 33 00 – Submittal Procedures:
  - 1. Project Scheduler Qualifications
  - 2. Design Schedules
  - 3. Preliminary Project Construction Schedule
  - 4. Initial Project Construction Schedule
  - 5. Monthly Progress Update Schedules
  - 6. Time Impact Analysis, when necessary

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7. As-built Schedule

B. Scheduler/Scheduling Consultant Qualifications:

1. A professional with a minimum of two (2) years of experience with scheduling design and construction projects similar in size and scope of work as this project using Oracle Primavera P6 software.
2. The scheduler shall have a comprehensive knowledge of Critical Path Method (CPM) scheduling principles and application.
3. The scheduler shall produce reports and diagrams within 24 hours of the DEN Project Manager's request and perform tasks, including but not limited to, the following:
  - a. Create, maintain and update the project design and construction schedule, including but not limited to baseline schedule management, cost and resource loading, time impact analysis, and schedule progress analysis.
  - b. Prepare monthly progress schedule updates, submit for review and incorporate the City's review comments into the schedule.
  - c. Coordinate the participation of qualified personnel to assist in the development of the initial design and construction schedule and updating of the monthly progress schedule.
  - d. Develop a Work Breakdown Schedule (WBS) to the appropriate level and be able to discuss verbally and in writing the applicability of the WBS.
  - e. Incorporate milestone dates for Owner-furnished products and deliverables.
  - f. Incorporate submittal requirements, procedures and time required for review of submittals and resubmittals.
  - g. Incorporate requirements for tests and inspections by independent testing and inspecting agencies.
  - h. Incorporate required meetings, such as Safety and Pre-work meetings.
  - i. Incorporate time required for Project closeout and Owner start-up procedures, including commissioning activities.
  - j. Adhere to contract specifications and requirements.

C. Schedule Submittal Package Requirements:

1. XER/XML file compatible with the latest version of Oracle Primavera P6
2. PLF File (if XER)
3. Narrative report including the following:
  - a. Prepare an accurate statement of the project's progress status to assist in decision making.
    - 1) Contract Milestone Dates, Current Schedule Dates
    - 2) Activities started or completed since last update
    - 3) Identify deviations from the baseline schedule and evaluate possible corrective actions.
    - 4) Logic Changes
    - 5) Critical Path Analysis / Schedule Risks
    - 6) Upcoming Activities that are impacted by or may impact stakeholders
    - 7) Change Order Activities
    - 8) Weather and other delays
  - b. A standard layout will be provided to the contractor.
4. PDF of the following:
  - a. Full Schedule View
  - b. Critical Path
  - c. Three Week Lookahead



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**1.05 SCHEDULE PREPARATION REQUIREMENTS**

- A. Schedules should meet the requirements outlined in the “Schedule Approval Checklist” (Appendix 1) and the “Contractor Schedule Package” (Appendix 2). Contractor shall obtain current versions of Appendix 1 and 2 from the DEN Project Manager for use in developing the schedule. These requirements utilize the following documents as references for best practices:
1. AACE Recommended Practices (RP)
  2. USACE Project Schedules Regulation ER\_1-1-11
  3. DCMA 14-Point Schedule Assessment
- B. Projects regulated by the FAA must follow all FAA scheduling requirements, in addition to the requirements provided by DEN. In the event of a conflict between the DEN and FAA scheduling requirements, the more stringent requirement shall apply.
- C. The schedule shall satisfy, at minimum, the following criteria:
1. Prepare all Project Schedules utilizing the Critical Path Method (CPM) of network calculation to generate all schedule reporting.
  2. Show in the schedule, the proposed sequence to perform the work and dates contemplated for starting and completing the schedule activities.
  3. The scheduling of the entire project is required.
  4. Provide a schedule that is forward planning as well as a project monitoring tool
  5. Contractors, Design management personnel and DEN PMT/Stakeholders shall actively participate in its development.
  6. Subcontractors and suppliers working on the project shall also contribute in developing and maintaining an accurate project schedule.
  7. The contractor shall keep the subcontractors and suppliers informed of the Project Construction Schedule to enable the subcontractors to plan and perform their work properly.
  8. All schedules shall comply with the City and County of Denver General Contract Conditions (GC)
  9. The schedule WBS will align with the approved schedule of values, as determined by the DEN Project Management Team, and contain, at minimum, the following milestone activities:
    - a. Start
    - b. Mobilization Complete
    - c. Substantial Completion
    - d. Final Completion
    - e. DEN reserves the right to request additional milestones to be included in all schedules as appropriate for each projects. The additional reporting requirements will be communicated by the Project Manager and PMO.
- D. Cost and Resource Loading of P6 Schedules
1. All schedules shall be cost loaded using the Lump Sum resource. Cost loading will align with the approved schedule of values, as determined by the DEN Project Management Team.
  2. Period Performance shall be stored for each schedule update provided to DEN.
  3. All schedules will be resource loaded with manhours by critical trade. Additional

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resource loading requirement may be required by DEN PMT.

**E. Layout Requirements (.PLF)**

1. Project Layout Files (.PLF) will be created to standardize the information provided to DEN from the schedule, and the .PLF will be used to create the PDF schedule documents as part of the submittal package.
2. All PDF's will contain both the table and the Gantt Chart, and will be scaled to fit timescale to 1 page wide. Additionally, the following information will be displayed:
  - a. Table will contain: Activity ID, Activity Name, Baseline Start, Baseline Finish, Original Duration, Start, Finish, Duration at Completion, Finish Variance, Total Float
  - b. Gantt Chart:
    - 1) Timescale shall show the entire project schedule without cutting off any data
    - 2) In the Bar Options, the following Bars shall be displayed: Remaining Level of Effort, Actual Level of Effort, Primary Baseline, Actual Work, Remaining Work, Critical Remaining, Start Constraint, Finish Constraint, Milestone, Summary, Negative Float Bar. Activity names will be included as the bar label.
    - 3) In the Bar Chart Options, "Show Relationships" shall be checked.
    - 4) In the print layout, the header shall include at minimum the data date, current date, filter, project name, schedule update version, and contractor. The footer shall contain at minimum the legend and page count.
3. Full Schedule View will not be filtered, all activities will be shown.
4. Critical Path view will be filtered to show only the critical Activities.
5. Three Week Lookahead View will be filtered to show activities completed in the past week, or activities that are in progress or not started for the next three weeks.
6. Additional information or reports may be requested at the DEN Project Management Team's discretion, including but not limited to cash flow, manhours graph, earned value, period performance.

**1.06 COORDINATION**

- A. Pre-scheduling Conference: Schedule conference at Pre-Construction meeting to comply with requirements in Section 013100 "Project Management and Coordination." Review methods and procedures related to setting up the Preliminary Project Design and / or Construction Schedule and Initial Project Construction Schedule, including, but not limited to, the following:
  1. Verify availability of qualified personnel needed to develop and update schedule.
  2. Review content and format for reports.
  3. Discuss constraints, including phasing, area separations, interim milestones, stakeholder requirements and partial Owner occupancy.
  4. Review milestone dates for Owner-furnished products and deliverables.
  5. Review submittal requirements and procedures.
  6. Review time required for review of submittals and resubmittals.
  7. Review time required for Shutdown request and approval.
  8. Review requirements for tests and inspections by independent testing and inspecting agencies.
  9. Review time required for Project closeout and Owner startup procedures, including commissioning activities.

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10. Review procedures for updating schedule.
  11. Review requirements for content and input of direct man-hour resources in activities.
  12. Review requirements for cost loading of activities.
  13. Coordinate Initial Project Construction Schedule with the Schedule of Values and Schedule Template.
  14. Secure time commitments for performing critical elements of the Work from entities involved.
- B. Construction Coordination: If there are activities in the schedule that are impacted by DEN, DOR, other contractors or other stakeholders, a periodic meeting will be set up with all stakeholders to evaluate the schedule and confirm dates for activities outside of the contractor's control. The contractor will be responsible for providing the most up to date schedule to all attendees in PDF format, in accordance with Section 1.3.C Submittals of Technical Specifications 013210 Schedule. The frequency of this meeting will be at the discretion of the Project Management Team.
- C. Delays, Recovery Schedules, and Requests for Extension: If the project is experiencing delays, a meeting will be set up with the designer, engineer, contractor, the PMT, and DEN Project Controls to evaluate the package provided by the contractor. The designer / contractor will be responsible for providing the most up to date schedule to all attendees in PDF format in advance of any meetings, in accordance with Section 1.3.C Submittals of Technical Specifications 013210 Schedule, as well as any supplemental information that supports requests for re-sequencing, extensions etc. Additionally, the contractor will provide all required information from sections 3.10, 3.11, and 3.12 of Technical Specifications 013210 Schedule. If DEN determines that additional coordination is required, a periodic meeting will be set up at the discretion of the Project Management Team.

## **PART 2 - PRODUCTS**

### **2.01 SOFTWARE**

- A. DEN Default Software:
1. DEN shall use the latest release of Oracle Primavera P6 for all city scheduling needs.
- B. Designer / Contractor Software:
1. Scheduling software used by the designer / contractor shall be compatible with the latest release of Oracle Primavera P6.
  2. The software and any support agreements shall be purchased at the designer's / contractor's expense from a vendor of the contractor's choosing.
  3. The City will not provide training or support services for designer / contractor purchased software.
- C. Oracle Primavera P6 Software Settings:
1. The following settings are mandatory and required in all schedule submissions to the City. Submittals that do not meet these criteria will be rejected:
    - a. All schedules will only contain project data at the Project Level and not at the Global or EPS level. Project data includes but is not limited to calendars, risks, OBS, activity codes and user defined fields.
    - b. Time Period Administration Preferences shall remain the default "8.0 hour/day, 40 hour/week, 172 hour/month, 2000 hour/year". Set Calendar Work Hours/Day to 8.0-hour days.

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- c. Set Schedule Option for defining Critical Activities to “Longest Path”
- d. Set up cost loading using single lump sum resource. The resource should be named “Lump Sum”. The Price/Unit shall be \$1/hour, Default Units/Time shall be 8h/d”, and settings “Auto Compute Actuals” and “Calculate Cost from Units” selected.
- e. Activity ID’s shall not exceed 10 characters.
- f. Activity Names shall not exceed 30 characters, and will start with Verb/Action, followed by the work area, followed by additional information.

## **PART 3 - EXECUTION**

### **3.01 PRELIMINARY PROJECT DESIGN / CONSTRUCTION SCHEDULE SUBMISSION**

#### **A. General**

1. Within ten (10) days after the issuance of Notice to Proceed (NTP), submit the Preliminary Project Design / Construction Schedule:
  - a. If contract time is greater than 120 calendar days, submit the Schedule defining the planned operations detailed, at a minimum, for the first sixty (60) calendar days of the project for acceptance.
  - b. If contract time is shorter than 120 calendar days. submit the Schedule defining the planned operations detailed for the full contract term for acceptance.
  - c. It shall be early start and late finish constrained and logically tied as specified.
2. The Preliminary Project Design / Construction Schedule shall form the basis for the Initial Design / Project Construction Schedule specified herein and shall include all the required plan and program preparations, submissions and approvals identified in the contract. For example, Design Work Plan, Design Submittal dates and review times, Quality Control Plan, Site-specific Safety Plan, and Environmental Protection Plan, etc.
3. The DEN Project Management Team will respond within 14 days to the Preliminary Schedule submittal with either acceptance or direction to revise and resubmit.
4. In lieu of the Preliminary Project Design / Construction Schedule, the Designer / Contractor may, at the Designer’s / Contractor’s own discretion, submit the Initial Project Design / Construction Schedule at the Design Kick-Off or Preconstruction Meeting.
  - a. If the Initial Project Design / Construction Schedule is submitted in lieu of the Preliminary Project Design / Construction Schedule, the DEN Project Management Team will respond within thirty (30) days with acceptance or direction to revise and resubmission is required within ten (10) days.
5. Acceptance of Preliminary Project Construction Schedule will not constitute approval of Schedule of Values.

### **3.02 INITIAL PROJECT DESIGN / CONSTRUCTION SCHEDULE SUBMISSION**

#### **A. General**

1. Submit the Initial Project Design / Construction Schedule for acceptance within fourteen (14) days after issuance of NTP.
2. The schedule shall demonstrate a reasonable and realistic sequence of activities which represent the Work through the entire contract performance period.
3. The DEN Project Manager will respond within 14 days with acceptance or direction to revise and resubmit.

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4. The acceptance of the schedule is for general conformity to the Contract requirements and shall not constitute any relief of any Contract requirements.
5. Upon acceptance from the DEN Project Manager and DEN Project Controls, the Initial Project Design / Construction Schedule shall become the Baseline Schedule for the duration of the project.
6. The Baseline Project Design / Construction Schedule may be changed when one or more of the following events occur:
  - a. When a Change Order significantly affects the contract completion date or sequence of work.
  - b. When the Designer / Contractor elects to change the sequence or duration of work items affecting the critical path resulting in a major change that requires DEN approval.
  - c. When the City directs a change that affects a milestone dates specified in the Special Conditions or alters the length of a critical path.
7. Failure to include any work item required for performance of this Contract shall not excuse the Designer / Contractor from completing all Work within applicable completion dates, regardless of the City's acceptance of the schedule.
8. Failure of the designer / contractor to have an Initial Project Design / Construction Schedule accepted by DEN Project Manager will be considered cause for withholding progress payment.
9. This submittal shall include all package requirements included in section 1.3.C of this Technical Specifications 013210 Schedule document.

### **3.03 MONTHLY PROGRESS DESIGN / CONSTRUCTION SCHEDULE UPDATES**

#### **A. General**

1. The Designer / Contractor shall submit a monthly progress schedule at the end of each month following the issuance of NTP, prior to approval of the invoice.
2. At the end of each month, the Contractor and DEN Project Manager shall agree on the progress of the work and the Contractor shall update the Construction Schedule accordingly.
3. This review does not constitute an acceptance of the Monthly Progress Schedule update and shall not be used for the purpose of modifying the accepted Baseline Project Design / Construction Schedule.
4. Failure of the Designer / Contractor to have a Monthly Progress Design / Construction Schedule accepted by the DEN Project Manager will be considered cause for withholding progress payment per Article 306 - Working Hours and Schedules and Article 909 - Additional Withholding of Progress Payments of the General Contract Conditions, 2011 Edition.
5. The Designer's / Contractor's monthly progress schedule shall include all package requirements included in section 1.3.C of this Technical Specifications 013210 Schedule document.
6. The Contractor shall provide the DEN Project Manager an electronic copy prior to and a minimum of four (4) hard copies of the Contractor's Three (3) Week Look-Ahead Schedule for review at the DEN Project Manager's weekly progress meeting.

### **3.04 AS-BUILT CONSTRUCTION SCHEDULE:**

#### **A. General**

1. After all Contract Work items are complete, the contractor shall submit an as-built

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Project Construction Schedule that reflects the actual sequence of construction activities, includes all change order scope of work changes and shows actual start and finish dates for all work items and milestones for acceptance by the DEN Project Manager.

2. The basis for the As-built Construction schedule will be the approved Monthly Progress Schedules.

### **3.05 RECOVERY SCHEDULE**

#### **A. General**

1. When a monthly progress schedule update indicates the Work is behind the current approved schedule, the Designer / Contractor submits a separate Recovery Schedule indicating the means by which the Designer / Contractor intends to regain compliance with the schedule.
2. No additional costs will be allowed if such expediting measures are necessary to meet the agreed completion date or dates except as provided elsewhere in the Contract Documents.
3. If the early finish date for any work item or the substantial completion date does not fall within the Contract Duration, the sequence of work or duration shall be revised by the Designer / Contractor through concurrent operations, additional manpower, additional shifts or overtime, additional equipment, or alternative construction methods until the schedule produced indicates that all significant contract completion dates, occupancy dates and milestone dates will be met.
4. Provide a narrative indicating changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and date by which recovery will be accomplished.
5. The narrative shall be submitted in accordance with Article 1105 – Time Extensions in the General Contract Conditions, 2011 Edition.

### **3.06 REQUEST FOR TIME EXTENSION**

#### **A. General:**

1. Provide a justification of delay to the DEN Project Manager, in accordance with the Contract provisions and clauses, for approval within 10 days of a delay occurring.
2. Prepare a time impact analysis for each DEN Change Directive, Change Notice and Contractor's Change Request to justify time extensions.
3. Added work by the City does not necessarily entitle a Designer / Contractor to a Time Extension, unless the Designer / Contractor can prove that this new added scope impacts the current critical path without manipulating any of the logic and relationships in the most recent and approved schedule.
4. The City may reject any Time Extension Request that does not include a detailed and a clear time impact analysis that shows direct impact to the most current critical path along with a detailed productivity rate calculation to justify the requested time to execute such added work.
5. If the Designer / Contractor is granted an extension of time for completion of any milestone or contract completion date under the provisions of the Contract, the determination of the total number of extended days will be based upon the current analysis of the schedule and upon all data relevant to the extension. Such data shall be incorporated into the next monthly update of the schedule.
6. The Designer / Contractor acknowledges and agrees that delays in work items that,

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according to schedule analysis, do not affect any milestone dates or the Contract completion date shown on the CPM Network Schedule at the time of the delay will not be the basis for a Contract extension.

**B. Justification of Delay**

1. Provide a description of the event(s) that caused the delay and/or impact to the work. As part of the description, identify the schedule activities impacted.
2. Show that the event that caused the delay/impact was the responsibility of the City.
3. Provide a time impact analysis that demonstrates the effects of the delay or impact on the project completion date or interim completion dates.
4. Multiple impacts shall be evaluated chronologically; each with its own justification of delay. With multiple impacts, consider concurrency of delay.
5. A time extension and the schedule fragment become part of the project schedule and future schedule updates upon approval by DEN Project Controls.

**C. Time Impact Analysis (Prospective Analysis)**

1. Prepare a time impact analysis for City approval based on industry standard AACE 52R-06. Use a copy of the last approved schedule prior to the first day of the impact or delay for the time impact analysis.
2. If DEN Project Controls determines the time frame between the last approved schedule and the first day of impact is too great, prepare an interim updated schedule to perform the time impact analysis.
3. Unless approved by the DEN Project Controls, no other changes will be incorporated into the schedule being used to justify the time impact.

**D. Fragmentary Network (FragNet)**

1. Prepare a proposed fragment for time impact analysis. The proposed fragment shall sequence new activities into the project schedule to demonstrate the influence of the delay or impact to the project's contractual dates.
2. Clearly show how the proposed fragment shall be tied into the project schedule, including the predecessors and successors to the fragment activities.
3. Obtain City approval of the proposed fragment before incorporating it into the project schedule.

**E. Time Extension**

1. Time extensions will not be granted until after the City has approved the Justification of Delay, including the time impact analysis.
2. No time extension will be granted unless the delay consumes the available Project Float and extends the projected finish date ("Substantial Completion" milestone) beyond the Contract Duration.
3. The time extension will be in calendar days.
4. Actual delays that the City determines are caused by the Designer's / Contractor's own actions and result in a calculated schedule delay will not be a cause for an extension to the performance period, completion date, or interim milestone date.

**F. Impact to Early Completion Schedule**

1. No extended overhead will be paid for delay prior to the original Contract Substantial Completion date.

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**3.07 FAILURE TO ACHIEVE PROGRESS**

**A. General:**

1. If the progress falls behind the approved baseline project schedule for reasons other than those that are excusable within the terms of the Contract, the City may require submittal of a written recovery plan for approval.
2. The plan shall detail how progress shall be recovered, including which activities will be accelerated by adding additional crews, longer work hours, extra work days, etc.

**B. Artificially Improving Progress**

1. Artificially improving progress by means such as, but not limited to, revising the schedule logic, modifying or adding constraints, shortening activity durations, or changing calendars in the project schedule is prohibited.
2. Indicate assumptions made and the basis for logic, constraint, duration, and calendar changes used in the creation of the recovery plan.
3. Additional resources, manpower, and daily and weekly work hour changes proposed shall be evident at the work site and documented in the daily report along with the Schedule Narrative Report.

**C. Failure to Perform**

1. Failure to perform work and maintain progress in accordance with the supplemental recovery plan may result in an interim and final unsatisfactory performance rating and/or may result in Non-Conformance Report for corrective action directed by DEN Project Controls pursuant to other Contract provisions.

**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 013210**



**SECTION 013223.11****CONSTRUCTION LAYOUT AND AS-BUILT SURVEYS****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. This Section covers Denver International Airport (DEN) procedures and accuracy requirements for survey services for construction layout, and as-built.
- B. Before commencing any field surveys on DEN property, the Contractor must coordinate a pre-survey preparation activities meeting. This meeting is to be arranged through the DEN Project Manager's Office with the attendance of the Contractor and the DEN Survey Section. The Contractor is responsible for obtaining DEN related survey guidance, Access to DEN survey network, Primary Control, projection parameters, and training materials from the DEN Survey at the pre-survey meeting and/or prior to beginning any survey work.
  - 1. Project Checklist, provided as part of this Specification, must be reviewed at the pre-survey preparation activities meeting. (Refer to Article 1.11.)

**1.03 REFERENCE DOCUMENTS:**

- A. Section 013223.15 "Survey Information".
- B. Section 013300 "Submittal Procedures" and Section 013325 "Shop and Working Drawings, Product Data and Samples".
- C. Latest version of Federal Aviation Administration Advisory Circular 150/5300
- D. Latest Version of DEN BIM DSM (Design Standards Manual)
- E. Latest Version of Colorado Department of Transportation (CDOT) Survey Manual.
- F. Latest Version of Minimum Standard Detail Requirements for ALTA/ NSPS Land Title Survey

**1.04 SUBMITTALS**

- A. Refer to Section 013300 "Submittal Procedures" and Section 013325 "Shop and Working Drawings, Product Data and Samples" for the submittal process.
- B. Survey Statement of Work (SSOW):
  - 1. The Contractor must develop a complete SSOW and submit it to the DEN Project Manager. The SSOW is the Contractor's written description of the Contractor's methodology for surveying services that must be provided as part of the Project, including specific features that must be surveyed, action items, timelines necessary airport resources and general information.
  - 2. SSOW must be submitted by the Contractor prior to commencement of any survey or

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layout work on the site.

3. The SSOW will be accepted by the DEN Project Manager.
4. Under no circumstances must the Contractor begin work until the SSOW has been accepted.

**C. Survey and Quality Control Plan (SQCP):**

1. The Contractor must develop a complete SQCP and submit it to the DEN Project Manager. The SQCP is the Contractor's written description detailing the Contractor's methodologies for data collection, data safeguarding and quality assurance. Provide insight on how the Contractor must completely check all data to ensure it is complete, reliable, and accurate. Identify data safeguards used to protect the sensitive and safety critical data. Utilize a checklist based quality control process with definable and repeatable standards for each element ensuring consistency of work between different personnel within an organization. Submit the plan in a non-editable PDF.
2. SQCP must be submitted by the Contractor prior to commencement of any survey or layout work on the site.
3. The SQCP will be accepted by the DEN Project Manager.
4. Under no circumstances must the Contractor begin work until the SQCP has been accepted.

**D. Weekly Project Status Report:**

1. Contractor must submit a project status report in compliance with FAA AC 150/5300-18B to the DEN Project Manager every Monday by 2:00 P.M. Mountain Time, from the date of the task order until the date of Substantial Completion
2. The Weekly Project Status Report must use format from AC 150/5300-18B

**E. Final Project Survey Report:**

1. The Final Project Survey Report, must use format from AC 150/5300-18B
2. Final Project Survey Report must be stamped and wet signed by a current Colorado Registered Professional Land Surveyor.

**F. SURVEY DELIVERABLES:**

1. Contractor must submit all of the following deliverables.
2. All raw files: GPS and Levels that is compatible with Trimble Business Center.
3. If combining x, y from GPS and z from Levels, provide field notes and data that shows where this data came from to verify values. The GPS point numbers must match to the Level descriptions.
4. As-built or as-constructed survey submittals must need to be in both Portable Document Format (PDF) and in AutoCAD Civil 3D. Refer to current and criteria document for direction on PDF production.
5. All copies of original pages of field notes or electronic field notes must be in (PDF).
6. Scanned copies of all original field notebooks used for this Project must be submitted at the end of Contract.
7. All as-built points files must be in either CSV or TXT format.
8. All CAD drawings must be in current approved Autodesk Civil 3D format.
  - a. CAD layers are specified in DEN BIM Design Standards Manual
  - b. DEN must provide the Autodesk Civil 3D drawing template.

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9. The as-built survey must follow the most recent Minimum Standard Detail Requirements for ALTA/ NSPS Land Title Survey for all sections, as far as they are applicable to the scope of work for the project and site in question.
10. Documentation in accordance with “Table A, Optional Survey Responsibilities and Specifications” (Refer to Article 1.11.) is filled out with the required content to be submitted.
11. Hard copy of all documentation stamped and wet signature by licensed PLS responsible for the work.

**1.05 QUALITY REQUIREMENTS**

- A. Contractor – Company contracted to perform survey work under the direct supervision of a Colorado Registered Professional Land Surveyor with current FAA “Idle Certification”
- B. Subsurface Utilities Engineering (SUE): Refer to Section 011810 "Utilities Interface" for information related to underground utilities.
- C. Surveying accuracies and tolerances in control surveys, construction layouts: See CDOT Survey Manual for acceptable tolerances.

**1.06 DEN SITE SURVEY REQUIREMENTS**

- A. A site survey, construction survey, or construction as-built survey providing horizontal location and level information of surface features and both above and below ground services and utilities must be completed. This must also be annotated with information (where applicable) relating to the size, direction of and material type.
  1. When collecting utilities, Contractor must be responsible to have all exposed and installed utilities surveyed prior to being covered. If Contractor fails to survey utilities, DEN Project Manager can have the Contractor uncover the utilities so they can be surveyed.
  2. Any temporary works that remain at the completion of the project must also be surveyed.
  3. FAA and DEN Survey codes must be provided by The DEN Project Manager via DEN Survey or Designee and must be used throughout the project by Contractor for as surveyed features.
  4. The most current DEN Civil 3D template must be provided by The DEN Project Manager via the DEN BIM team. All DEN BIM requirements must be met.

**1.07 DEN ALIGNMENT MONUMENTATION**

- A. Alignment monuments must be set at their corresponding coordinates as shown on the monumentation sheet of the Alignment Plans. When monumenting the Alignment, the Contractor must verify that the latest set of Alignment plans are being used. After the Alignment monument locations are staked in the field, any necessary utility locates should be called for prior to setting the monument.
- B. All Alignment monuments set must be established within the Minimum Horizontal Accuracy Tolerance as required in this chapter for a CDOT Class B – Secondary survey.
- C. Alignment monuments must be set at the locations as shown on the Alignment Plans, which include the following locations:
  1. All angle points or changes of directions.

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2. At the beginning and ending of curves.
  3. At the points of change of direction or changes of radius of any boundary defined by circular arcs.
  4. Not to exceed 1,400 feet apart along any straight boundary line.
  5. Any other points as approved by the Survey Coordinator due to field conditions encountered during setting of the Alignment monumentation.
- D. Alignment monuments must have a witness post installed within 2 ft and facing the monument, or as accepted by DEN Survey. For setting easement monuments, the witness post requirement may be waived by DEN Survey.
- E. Use Orange Carsonite witness post:
- F. All Alignment monument caps set in the field must be stamped with the following:
1. DEN Project Code number
  2. Point number as shown on the Right of Way Plans
  3. Colorado PLS number setting the monument
- G. All Alignment monuments set in the field must be shown on the Final set of Alignment Plans in accordance with the CDOT Right of Way Manual, Chapter 2 – ROW Plans. The Colorado PLS who is in responsible charge for setting the Alignment monuments must stamp her/his number on the monument cap, and must certify on the Alignment Plans to setting of the Alignment monuments in the field.
- H. The Contractor in responsible charge of the Alignment Plans and the Contractor in responsible charge of setting the Alignment monuments in the field might not be the same individual. Therefore, care must be taken to ensure any monuments set in the field at locations different than that shown on the Alignment Plans are communicated to the Alignment plans section, and the final Alignment Plans are corrected to show these new monument locations and descriptions prior to submitting the plans to DEN Survey.
- I. Alignment monuments, witness posts, and monument box materials must be furnished by Contractor.

**1.08 FEATURES TO BE RECORDED**

- A. Surface and Above Ground Features: The survey of surface features must include, but is not limited to:
1. Structures and Surfaces – paths, driveways, retaining walls, slabs/paved areas, significant structural footings (plinths etc.), poles/ floodlighting.
  2. Drainage Structures – headwalls, open drains, grated drains, culverts.
  3. Roads – edge of pavement, curbs, shoulders, line-marking, bridges, road furniture (NOTE – the top back and bottom face of curb, and all water channels must be surveyed and recorded).
  4. Buildings – footprints, awnings, overhangs, columns, external fixtures (stairs, ramps, plant, etc.).
  5. Fences and Gates – AOA, security, general fencing, gates and handrails.
  6. Aircraft Pavements and Movement Area Structures – finished surfaces, pavement markings, airfield markers/signage/ navigational aids, PLB and other aeronautical infrastructure;

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7. Topographical Features – general topography, embankments, earthworks platforms and surcharge.
  8. Vegetation – gardens, significant trees (>0.2' trunk diameter, decorative shrubs), vegetation stands, riparian zones.
  9. Signage – road, airfield, parking, advertising, other general signage.
  10. Survey Marks – survey control points used, any settlement plates/ monitoring points placed during works.
  11. Airfield panel corner elevations must be derived from digital levels.
- B. Services and Utilities - Prior to any backfilling or covering, information on all underground services must be obtained and documented according to DEN's modified ASCE-SUE Standards, including but not limited to:
1. Electrical (LV and HV) – top of conduit every fifty feet including horizontal and vertical bends, cables and conduits, pits/ manholes and chambers, HV cable joints, earth points and earth mats, substations/ transformers and surrounding pad, pillars, cabinets and switchboards, top of conduits.
  2. Fuel Control – top of conduit every fifty feet including horizontal and vertical bends, cables and conduits, pits/ manholes and chambers, cabinets, emergency shut-off points.
  3. Communications - top of conduit every fifty feet including horizontal and vertical bends, fiber optic, microducts, comms cables and conduits, pits/ manholes and chambers, top of conduit casing/housing.
  4. Drainage – top of pipes at fifty-foot intervals and at every vertical and horizontal bend, inspection openings, pits/ manholes and chambers, roof water drainage (downpipes, small pits/ grates).
  5. Fuel – top of pipes every fifty feet including horizontal and vertical bends, all weld points with weld numbers documented in the point description and in the field notes, pits/ manholes and chambers, valves, hydrants, earth points, test points.
  6. Sewer (note whether gravity or force main) – top of pipes every fifty feet including horizontal and vertical bends, pipes, pipe inverts, pipe outflows, inspection openings, pits/ manholes and chambers, vent pipes, pump stations and associated components.
  7. Water (differentiate between potable and recycled) – top of pipes every fifty feet including horizontal and vertical bends, pits/ manholes and chambers, valves (and type), meters, taps, hydrants, tanks, pumps, irrigation control.
  8. Compressed Air – top of pipes every fifty feet including horizontal and vertical bends, hoses and other fixtures.
  9. Natural Gas / Petroleum– top of pipes every fifty feet including horizontal and vertical bends, valves, tanks, meters.
- C. Sufficient points must be recorded to ensure that the extremities of all surface features, structures and footings are clearly defined and all bends, intersections, and changes of gradient are accurately recorded. The distance between points of location should generally be about 50 feet and must not exceed 100 feet. All curves must be accurately defined using a minimum of three points (two tangent points and one midpoint).
- D. Where actual positions of linear features deviate from a straight line, sufficient additional points of location must be provided to define the deviation – horizontal and/or vertical change in directions.
- E. For systems, utilities, and features not identified herein, refer to PM for direction on capture

## requirements

**1.09 SURVEY METHODOLOGY – SERVICES AND UNDERGROUND FEATURES**

- A. Sufficient points must be recorded to ensure that the extremities of all pits, manholes, and any other features related to the service are clearly defined and all bends, joints, intersections, changes of gradient, and fittings on or along the service, pipe or conduit are accurately recorded. All curves must be accurately defined using a minimum of three points (two tangent points and one midpoint). Where actual positions of linear features deviate from a straight line, sufficient additional points of location must be provided to define the deviation – horizontal and/or vertical change of directions.
- B. The maximum distance between points of location along services must not exceed 50 feet. Horizontal and vertical locations must be surveyed on the top of the utility and must be labeled as “top”. Inverts measurements must also be taken in manholes and must be labeled.
- C. The Contractor must record and annotate all services and utilities with information relating to the size, direction of and material type. The Contractor must record and clearly differentiate between the communication service providers and DEN and/or FAA communications infrastructure.
- D. The Contractor must record the size and orientation of all grates, pits and manholes. Grates and pits must be recorded using a minimum of three corner or edge points. Pit/ manhole chambers only need to be located and where the extents of the chamber extend past the extremities of the pit at surface level. In all instances, any thrust blocks or concrete cover/ protection over services must be located, showing depth.

**1.10 EXISTING FEATURES AND SERVICES**

- A. Existing Services: where the existence of services and other features on the site of the Work and the Work exposes or interacts with these existing services, the Contractor must locate and record the details of all such features and services.
- B. Tunnel Boring: The Contractor must provide records (logs, profiles etc.) relating to all tunnel boring undertaken as part of the Project. Where appropriate this information must be incorporated into the as-built site survey. Where the contract drawings do not show the existence of certain utilities and features and the Work exposes or interacts with the utilities and features, these must be located and recorded by the Contractor.
- C. Services Alteration/ Abandonment / Demolition: Where existing infrastructure, building services and/or utilities are demolished or services realigned or abandoned this information must be reflected within the as-built site survey. A distinction must be made between services (or part services) which have been abandoned (but left in the ground) and those that have been physically removed.

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**1.11 SURVEY CHECK LIST**

	Yes	No	N/A	Project Kickoff Phase
1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did Contractor meet with DEN PM obtain the data standards and general requirements for data gathering?
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did Contractor meet with Airport Survey Office to obtain airport survey control points, projection parameters, and airport survey training materials?
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did Contractor provide Survey Statement of Work to DEN PM?
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did Contractor provide Geodetic Verification Survey to DEN PM?
5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did Contractor provide Survey Control Plan to DEN PM?
6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did Contractor provide Imagery Plan to DEN PM? (Only required if collecting aerial imagery)?
7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did the FAA accept survey plans?
	Yes	No	N/A	Construction Phase (As-Built)
8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did Contractor perform field survey of project site to collect accurate as-built data?
9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did the Contractor provide DEN PM with subsurface utility data?
10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Each week, did the Contractor provide DEN PM with Project Status Reports?
11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did the Contractor provide DEN PM with 25% as-built data in both CADD and GIS formats including all attribute information and metadata?
12a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did DEN PM report 25% QA findings via email to Contractor?
12b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If required, did the Contractor provide DEN PM with 50% as-built data in both CADD and GIS formats including all attribute information and metadata?
12c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If applicable, did DEN PM report 50% QA findings via email to Contractor?
12d	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If required, did the Contractor provide the DEN PM with 75% as-built data in both CADD and GIS formats including all attribute information and metadata?
12e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If applicable, did DEN PM report 75% QA findings via email to Contractor?
13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did the Contractor provide DEN PM with 100% as-built data in both CADD and GIS formats including all attribute information and metadata?
14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did Contractor provide DEN PM with a completed Final Survey Report?
15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Did DEN PM report QA findings via email to Contractor?

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 CONSTRUCTION LINES AND GRADES**

- A. The Contractor must make surveys and layouts as necessary to delineate the Work. The Contractor must make the surveys for the proper performance of the Work. As a part of

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such surveys, the Contractor must furnish, establish, and maintain in good order survey control points that may be required for the completion of the Work subject to the approval of the DEN Project Manager as to their location, sufficiency and adequacy. However, such approval by the DEN Project Manager must not relieve the Contractor of responsibility for the accuracy of the Contractor's survey work.

- B. The DEN Project Manager must have the right to check surveys and layouts made by the Contractor prior to approving any of the Work. The Contractor must give advance notice of not less than forty-eight (48) hours to the DEN Project Manager to enable such checking prior to placing any work. The Contractor must furnish assistance as may be required for checking purposes when so requested by the DEN Project Manager.
- C. The Contractor must furnish skilled labor, instrument platforms, ladders and such other temporary structures as may be necessary for making and maintaining points and lines in connection with the surveys required.
- D. The DEN Project Manager may draw the Contractor's attention to errors or omissions in lines or grades, but the failure to point out such errors or omissions must not give the Contractor any right or claim nor must in any way relieve the Contractor of obligations according to the terms of this Contract.
- E. The Contractor's instruments and other survey equipment must have current certification from manufacturer's representative. Surveys must be performed under the direct supervision of a current Colorado Registered Licensed Land Contractor.
- F. Field Notes:
  - 1. The Contractor must record surveys in field notebooks or as electronic field notes, whichever is more appropriate to the type of survey work.
  - 2. If the DEN Project Manager finds errors in the field notes DEN must have the Contractor correct and resubmit the notes. This review does not relieve the Contractor from the responsibility of maintaining accurate survey data. Whichever method of note-taking the Contractor starts with, the Contractor must use the same method throughout the Contract duration.
- G. The DEN Project Manager may at any time use line and grade points and markers established by the Contractor. The Contractor's surveys are a part of the Work and may be checked by the DEN Project Manager or the DEN Project Manager's representatives at any time.

**PART 4 - MEASUREMENT****4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT****5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 013223.11**



**SECTION 013223.15****SURVEY INFORMATION****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. This Section covers Denver International Airport (DEN) procedures and accuracy requirements for survey control.
- B. Before commencing any field surveys on DEN property, the Contractor must coordinate a pre-survey preparation activities meeting. This meeting is to be arranged through the DEN Project Manager's Office with the attendance of the Contractor and the DEN Survey Section. The Contractor is responsible for obtaining DEN related survey guidance, Access to DEN survey network, Primary Control, projection parameters, and training materials from the DEN Survey at the pre-survey meeting and/or prior to beginning any survey work.
- C. Survey Project Checklist, provided after the end of this Section, will be reviewed at the pre-survey preparation activities meeting.

**1.03 REFERENCE DOCUMENTS:**

- A. Section 013300 "Submittal Procedures" and Section 013325 "Shop and Working Drawings, Product Data and Samples".
- B. Latest version of Federal Aviation Administration Advisory Circular 150/5300
- C. Latest Version of DEN BIM DSM (Design Standards Manual)
- D. Latest Version of Colorado Department of Transportation (CDOT) Survey Manual.
- E. Latest Version of Minimum Standard Detail Requirements for ALTA/ NSPS Land Title Survey

**1.04 SUBMITTALS**

- A. Refer to Section 013300 "Submittal Procedures" and Section 013325 "Shop and Working Drawings, Product Data and Samples" for the submittal process.
- B. Survey Statement of Work (SSOW):
  - 1. The Contractor must develop a complete SSOW in accordance with Specification Section 013223.11, "Construction Layout and As-Built Surveys".
- C. Survey and Quality Control Plan (SQCP):
  - 1. The Contractor must develop a complete SQCP in accordance with Specification Section 013223.11, "Construction Layout and As- Built Surveys".

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**1.05 QUALITY REQUIREMENTS****A. Equipment Calibration:**

1. Equipment must be regularly checked, and calibrated for accuracy at the beginning of any survey project to ensure that the equipment is operating appropriately. Errors due to poorly maintained or malfunctioning equipment will not be accepted. If any equipment errors are found to exist they must be reported to the DEN Survey prior to the start of any surveying. These errors must be verified and eliminated prior to performing any survey work. For projects lasting longer than six (6) months, the checking, and calibration of equipment must be repeated. Furthermore, documentation must verify such equipment has met acceptable tolerances.
2. The Contractor must submit to the DEN Project Manager written proof that survey equipment has been checked and calibrated before commencing any survey work. If repairs are made, documentation of such repairs from an authorized equipment vendor must be submitted.

**B. See CDOT Survey Manual for acceptable procedures for calibrating equipment electronic survey instruments adjustments, calibration, or repairs:**

1. All electronic survey instruments must be repaired, adjusted, or calibrated only by an authorized equipment vendor or manufacturers service department.
2. A calibration check on all types of electronic survey instrumentation is essential to obtain and maintain the tolerances required for any DEN project. At the beginning of any DEN project, all survey equipment utilized to perform the survey must be calibrated by the surveyor in charge of the Project.
3. See CDOT Survey Manual for acceptable procedures for calibrating equipment.

**C. Baseline Calibration Requirements:**

1. See CDOT Survey Manual for the procedures to check the survey equipment and the method of reporting the findings to the DEN Project Manager and the DEN Survey Section.
2. The Contractor must submit to the DEN Project Manager written proof that survey equipment has been checked and calibrated before commencing any survey work. If repairs are made, documentation of such repairs from an authorized equipment vendor must be submitted.

**1.06 SURVEY CONTROL**

- A. DEN utilizes its own local coordinate system that is tied to the National Spatial Reference System (NSRS). The DEN Survey Section will provide the data required to use this coordinate system during the mandatory pre-survey preparation activities meeting. The DEN Survey Section will also provide coordinates for all Primary Control Points based upon the location of the Project.
- B. The coordinates of the Primary Airport Control Station (PACS) and Secondary Airport Control Station (SACS) were correct at the time of installation (or subsequent date listed on the plan) but may be subject to the effects of subsequent subsidence and/ or disturbance. Marks with any noticeable signs of disturbance, damage, or location out of tolerance must be reported so that they can be repaired and/ or noted on the control plan. In addition, any marks that have been or will be destroyed either before or during Works must be noted and mentioned in the Survey Statement of Work and the Survey and Quality Control Plan. If removed or destroyed, the Contractor will create a plan and must replace the PACS or SACS.

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- C. DEN is based on the North American Vertical Datum of 1988 (NAVD 1988). Vertical Control and Bench Marks must be tied into this datum. DEN has existing established National Geodetic Survey (NGS) vertical stations around its property and these points must be used in all DEN projects. Project control points must be established by performing measurements with a digital level from at least two NGS vertical stations that are given by the DEN Survey Section. The benchmarks used to establish ties to the datum must be shown in the Contractor's notes and on the CSP.
- D. The Contractor will be provided survey control from the DEN Survey Section. If the nearest NGS Vertical Station is a considerable distance from the site, the Contractor may establish a Temporary Survey Control Point (TSCP) near the site. Appropriate survey procedures must be used to establish any additional TSCP. A minimum of 3 TSM must be established for the project. Each must be visible and tied to at least 2 separate TSCP or PACS and/or SACS. It is the Contractor's responsibility to verify the stability of the mark over the life of the project. Where unacceptable discrepancies in control marks due to land settlement, disturbance or from other factors are apparent, the Contractor must refer the matter to DEN Project Manager for resolution prior to the continuation of Work.
- E. Horizontal Control is based on a local coordinate system. The Contractor must establish reliable horizontal control that will last the duration of the Project. Where unacceptable discrepancies in control marks due to land settlement, disturbance or from other factors are apparent, the Contractor must refer the matter to DEN Project Manager for resolution prior to the commencement of Work. The horizontal control establishing ties to the datum must be shown in the Contractor's notes and on the CSP.
- F. Geodetic Verification Survey Instructions and Procedures:
  - 1. The geodetic verification survey is created to insure the stable position of the DEN Primary control points that are used to reference the TSCP to the NSRS. Acceptable monuments will be identified by the DEN Survey Section and will be limited to monuments of the NSRS with permanent identifiers (PIDS) and published positions and elevations. Temporary design/construction control points established for such project will be referenced by direct measurement to at least two (2) separate NGS control stations.
    - a. The Contractor must recover each identified monument and determine its condition, stability, and suitability for the intended use. A location sketch and visibility diagram will be prepared for each station. A minimum of three (3) digital photographs, one of each type described in AC 150/5300-18B, Section 1.5.2.1, will be captured, captioned, and properly named. A recovery note will be filed with NGS if no current recovery is shown in the NSRS database.
    - b. After recovering the identified NSRS NGS control stations that are located on DEN property, the procedure to verify the control points are as follows:
      - 1) DEN has created its own Virtual Reference System (VRS) Network that will be used on all survey projects. This network will be known as DENVRS.
        - a) This system is comprised of hardware and software designed to facilitate real-time GPS/GNSS positioning based on a set of reference stations.
        - b) DEN has created a control network that incorporates fifteen (15) Primary Control Points tied together with the reference stations for the DENVRS,
        - c) This network, in turn, is tied to the National Spatial Reference System (NSRS).
        - d) DEN will be monitoring the stations on an annual basis and the primary control points on an annual basis and the primary control points on a quarterly basis.
      - 2) The Consultant is required to validate the DENVRS by observing at least two (2) Primary control points using a Fast Static method

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- a) Fast Static surveys allow for systematic errors to be resolved when high accuracy positions are required by collecting simultaneous data between stationary receivers for a shorter period of time than that of Static surveys. DEN will require an observation time of (15) minutes on all Primary control points. Each baseline between adjacent intervisible control points must be observed at least twice.
  - 3) The results must be reviewed and approved by the DEN Survey Office, allowing at least seventy-two (72) hours to review and either approve or reject the temporary control. All temporary control points MUST BE accepted before any design survey work can commence.
  - 4) Obtain elevation checks either from GPS observations or from digital levels. The distances must agree within, plus or minus, three ( $\pm 3$ ) cm; the difference in ellipsoidal height must agree within, plus or minus, four ( $\pm 4$ ) cm, and the difference in orthometric height must agree within, plus or minus, five ( $\pm 5$ ) cm. If the tolerances are not met the data must be recollected.
  - 5) Provide the results or the comparisons as part of the observational data in a report to the DEN Project Manager to be reviewed and approved by the DEN Survey Section prior to the start of construction and include this approved report in the final report.
  - 6) Submit a Recover Observe Report for the NGS horizontal control stations to the NGS. Refer to <https://www.ngs.noaa.gov/GPSonBM/Report.shtml> for the report format.
- G. Limitations and Additional Information for NGS Control Stations and NGS Benchmarks:
  1. The use of control monuments and projection parameters for construction layout other than those shown on the Contract Drawings or furnished by or approved by the DEN Survey Section is STRICTLY PROHIBITED. Use of other monuments is solely at the risk of the Contractor.
  2. The DEN Survey Section will provide the Contractor with the projection parameters and any assistance in implementing the coordinate system. It is up to the Contractor to use the correct methodology in performing any survey task which must be submitted to the DEN Project Manager and reviewed during the pre-survey preparation activities meeting.
  3. The DEN Project Manager will need all pertinent data from the Contractor to check and verify that the Contractor implemented the coordinate system correctly.
- H. Modifications to AC 150/5300-18B, Section 2.6.10.1.1, Verification of Survey Marks:
  1. DEN requires Contractor to verify the unmoved position and elevation of both the PACS and SACS for any airside projects and any two (2) DEN approved NGS control stations for any landside project.
  2. The Contractor must follow the same verification procedure as stated in Section G above.
- I. Reporting Damage or Errors of NGS Control Stations:
  1. Report damaged or destroyed airport control points, bench marks, and section corner monuments promptly to the DEN Project Manager.
    - a. If section corner monuments are damaged or destroyed during construction activities, such points must be re-established pursuant to Laws of the State of Colorado Regulating the Practice of Land Surveying by a current Registered Professional Land Contractor in the State of Colorado.
    - b. If NGS control stations or NGS bench marks are damaged, moved, altered, or destroyed by the Contractor, DEN's cost of reestablishing such points must be

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- borne by the Contractor.
- c. DEN will not be responsible for any increased costs or delays to the Contractor relating to reference points, airport control points, or bench marks which are damaged, moved, altered, or destroyed by the Contractor or its, suppliers, agents or employees or other Contractors working on the site.
- 2. Report alleged errors in NGS control stations or NGS bench marks promptly to the DEN Project Manager.
  - a. Discontinue use of NGS control stations or NGS bench marks alleged to be in error until the accuracy of points can be verified or as directed.
  - b. Claims for extra compensation for alteration or reconstruction allegedly due to errors in NGS control stations or NGS benchmarks will not be allowed unless original NGS control stations and NGS bench marks still exist or substantiating evidence proving error is furnished by the Contractor, and unless the Contractor has reported such errors to the DEN Project Manager as specified herein.

**1.07 TEMPORARY SURVEY CONTROL**

- A. The Contractor MUST set a minimum of either 'chiseled X' in concrete; a drill hole with lead and tack in concrete; a PK nail with shiner in asphalt or concrete or a 5/8" rebar with plastic cap in natural ground. An 'Inked X' set as a control point is UNACCEPTABLE.
- B. When a Contractor establishes TSCP for DEN survey work the Contractor MUST follow FAA guidelines. All TSCP must be referenced to the National Spatial Reference System (NSRS) using the NGS control stations provided by the DEN Survey Section. Temporary control may be necessary based on project site location. Below are the acceptable means to establish temporary geodetic control for DEN design or construction projects:
  - 1. Temporary control must be established under close cooperation with the DEN Survey Section following the procedures outlined in AC150/5300-16 "General Guidance and Specifications for Aeronautical Surveys: Establishment of Geodetic Control and Submission to National Geodetic Survey" only in the following cases:
    - a. Large airport construction projects that significantly changes the airport geometry and would trigger the need to acquire new Digital Stereo Imagery following AC 150/5300-17 "General Guidance and Specification for Aeronautical Survey Airport Imagery Acquisition and Submission to the National Geodetic Survey". Examples include a new runway and taxiway complex, significant modification of existing runway or taxiway system, development of new outboard deice pad complex or establishment of new mid airfield concourse and terminal complex. The size and complexity of the Project will dictate the need to acquire new digital stereo imagery for significant construction.
    - b. Construction that establishes a new ILS CAT II/III Operations.
    - c. New Instrument Development Procedure.
    - d. New Airport Layout Plan Survey Update.
    - e. New Airport Obstruction Chart Update.
    - f. New Airport Mapping Database.
  - 2. On DEN projects, the Contractor, may use TSCPs on their project site. These TSCP must be referenced to the nearest two (2) DEN primary control points and MUST BE referenced vertically to two (2) different NGS benchmarks. Also, all Contractors MUST obtain permission to establish TSCPs on DEN property by means of communicating with the DEN Survey Section.
  - 3. In addition, all vertical control MUST BE established only using a digital level unless otherwise authorized by the DEN Survey Section.
  - 4. Minimum Construction Horizontal and Vertical Accuracy Tolerance:

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- a. Adjustments:
  - 1) No adjustment of the survey field data will be permitted without the written consent of the DEN Project Manager. If it is determined that an adjustment is necessary, a weighted least squares adjustment method is recommended.
- b. Primary NGS vertical stations values must be held unless the Contractor has determined that there is an issue with one of the values. If this is the case, the Contractor must notify the DEN Project Manager to determine which other Primary stations can be used.
- c. Secondary Control Project Benchmark Minimum Vertical Accuracy Tolerance:
  - 1) Setting of secondary control benchmarks must meet the Minimum Vertical Accuracy Tolerance of the square root of the total horizontal distance of the level loop in miles multiplied by 0.035 feet.
  - 2) The results of this evaluation must be recorded in the field book for each differential level loop. At least two (2) established NGS benchmarks on the same datum must be used to verify that the starting mark has not been disturbed.
5. Whether establishing TSCPs or not, the Contractor must set up a Pre-Survey Preparation Activity meeting with the DEN Project Manager to discuss Geodetic Control Verification, obtain pertinent survey data, and projection parameters before the commencement of any survey work.
6. If TSCPs are needed, the Contractor can set and collect temporary control while performing as outlined in Part 1 of this Section. Once the data is collected the Contractor is required to submit all pertinent data to the DEN Project Manager. This data must include all GPS raw data in a Trimble format with an Excel spreadsheet that displays the comparison from each observation of the NGS control stations. The comparison must include showing the delta northings, delta eastings, and delta elevations for each redundant pair of control points Contractor Only the redundant values of the TSCPs should be averaged. The results must be reviewed and accepted by the DEN Project Manager, allowing at least seventy-two (72) hours to review and either approve or reject the temporary control. All TSCPs MUST BE approved before any survey work can commence.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 013223.15**

**SECTION 013223.19****QUANTITY SURVEYS****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. This Section covers Denver International Airport DEN procedures and accuracy requirements for survey services for construction layout, as-built and quantity surveys.
- B. Before commencing any field surveys on DEN property, the Contractor must coordinate a pre-survey preparation activities meeting. This meeting is to be arranged through the DEN Project Manager's Office with the attendance of the Contractor, the Contractor's surveyor, and the DEN Survey Section. The Contractor is responsible for obtaining DEN related survey guidance, primary control stations, projection parameters and training materials from the DEN Survey Section prior to beginning any survey work.
- C. Reference Contract General Conditions.

**1.03 REFERENCE DOCUMENTS:**

- A. Section 013326 "Survey Control".
- B. Section 013300 "Submittal Procedures" and Section 013325 "Shop and Working Drawings, Product Data and Samples".
- C. Latest version of Federal Aviation Administration Advisory Circular 150/5300
- D. Latest Version of DEN BIM DSM (Design Standards Manual)
- E. Latest Version of Colorado Department of Transportation (CDOT) Survey Manual.
- F. Latest Version of Minimum Standard Detail Requirements for ALTA/ NSPS Land Title Survey

**1.04 SUBMITTALS**

- A. Refer to Section 013300 "Submittal Procedures" and Section 013325 "Shop and Working Drawings, Product Data and Samples" for the submittal process.
- B. Weekly Project Status Report:
  - 1. Contractor must submit a project status report in compliance with FAA AC 150/5300-18B to the DEN Project Manager every Monday by 2:00 P.M. Mountain Time, from the date of the task order until the date of Substantial Completion
  - 2. The Weekly Project Status Report must use format from AC 150/5300-18B
- C. Final Project Survey Report:

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1. The Final Project Survey Report, must use format from AC 150/5300-18B
2. Final Project Survey Report must be stamped and wet signed by a current Colorado Registered Professional Land Surveyor.

**1.05 QUALITY REQUIREMENTS**

**A. Equipment Calibration:**

1. Equipment must be regularly checked, and calibrated for accuracy at the beginning of any survey project to ensure that the equipment is operating appropriately. Errors due to poorly maintained or malfunctioning equipment will not be accepted. If any equipment errors are found to exist they must be reported to the DEN Survey prior to the start of any surveying. These errors must be verified and eliminated prior to performing any survey work. For projects lasting longer than six (6) months, the checking, and calibration of equipment must be repeated. Furthermore, documentation must verify such equipment has met acceptable tolerances.
2. The Contractor must submit to the DEN Project Manager written proof that survey equipment has been checked and calibrated before commencing any survey work. If repairs are made, documentation of such repairs from an authorized equipment vendor must be submitted.

**B. See CDOT Survey Manual for acceptable procedures for calibrating equipment electronic survey instruments adjustments, calibration, or repairs:**

1. All electronic survey instruments must be repaired, adjusted, or calibrated only by an authorized equipment vendor or manufacturers service department.
2. A calibration check on all types of electronic survey instrumentation is essential to obtain and maintain the tolerances required for any DEN project. At the beginning of any DEN project, all survey equipment utilized to perform the survey must be calibrated by the surveyor in charge of the Project.
3. See CDOT Survey Manual for acceptable procedures for calibrating equipment.

**C. Baseline Calibration Requirements:**

1. See CDOT Survey Manual for the procedures to check the survey equipment and the method of reporting the findings to the DEN Project Manager and the DEN Survey Section.
2. The Contractor must submit to the DEN Project Manager written proof that survey equipment has been checked and calibrated before commencing any survey work. If repairs are made, documentation of such repairs from an authorized equipment vendor must be submitted.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 QUANTITY SURVEYS FOR PAYMENT**

- A. When the specifications or the DEN Project Manager require items in the Schedule of Prices and Quantities to be measured by surveying methods, the Contractor must perform the surveys.
- B. All such surveys, including control surveys run for establishing the measurement reference lines, must be performed in the presence of the DEN Project Manager or the DEN Project



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Manager's representative who will witness the surveying operation and who will acknowledge receipt of the field notes or keep duplicate field notes, at the DEN Project Manager's option.

- C. The Contractor must reduce the field notes and calculate final quantities for payment purposes. The note reductions and calculations must be given to the DEN Project Manager.

**PART 4 - MEASUREMENT****4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT****5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 013223.19**

**SECTION 013300  
SUBMITTAL PROCEDURES**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.
- B. Related Sections:
  - 1. 012600 - Contract Modification Procedures

**1.02 SUMMARY**

- A. The Work specified in this Section summarizes the requirements for the submittal of documents to the DEN Project Manager that are defined in these Specifications. It also describes the procedures for "supplemental" submittals.
- B. The Contractor must follow all the requirements of the procedures and the product details and keep all the submittals current and approved prior to any placement of work.

**1.03 SUBMITTAL SCHEDULE**

- A. The Contractor shall provide a submittal schedule within 14 days after Notice to Proceed. The Submittal Schedule shall be directly related to the CPM schedule, shall identify all the submittals, and shall include the following information for each submittal item
  - 1. Specification section, Contract article, or special condition.
  - 2. Specification Subparagraph.
  - 3. Item description.
  - 4. Date the submittal shall be submitted.
  - 5. Name of subcontractor or supplier.
- B. The submittal schedule shall be kept current by the Contractor and submitted with the progress payment requests.
- A. For large files that cannot be uploaded through Unifier, contact Project Manager.

**1.04 ELECTRONIC SUBMITTALS**

- A. Before the initiation of the submittal process, coordinate and ensure that all submittals comply and follow the requirements of the DEN Building Information Modeling (BIM) Design Standards Manual (DSM) and the DEN BIM PXP.
- B. Submit request for progress payment applications utilizing TEXTURA software as instructed by DEN Project Manager.
- C. Submit Subcontractor's Contract information required by the City and County of Denver Small Business Office as instructed by DEN Project Manager.

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- D. Submit original electronic copies of all City and County of Denver Development Department/ Building Inspection Department Approved drawings including all approvals of Deferred Submittals; including but not limited to shoring plans, Fire Protection distribution plans, and structural shop drawings to DEN Project Manager as Informational Submittals. The lack of approval of the Denver Development Services on any document shall be basis for rejection of Work and non-compliance.
  - 1. NOTE: Only original copies shall be accepted. Scans will not be accepted.
- E. Submit electronically scanned copies of all documents required by Chapter 17 “Special Inspection and Testing” of the International Building Code 2009 as amended by City and County of Denver 2011. Keep scale and clarify dimension where electronic copies are not as originally scaled and dimensioned.
- F. All submittals shall be delivered to the DEN Project Manager utilizing the Primavera Construction Manager program (PCM) as attachments and as separate file when files are too large to attach or of an electronic media that is not supported by PCM or Utilizing the EPPM Unifier software uploaded to the share drive Unifier's project site.
  - 1. Acceptable electronic formats
    - a. Print document format (pdf) shall have no security and bookmark every applicable submittal. All pages shall be completely legible and oriented to correct reading view.
  - 2. Formats are acceptable only with written permission of the DEN Project Manager or required by the BIM PXP. For files in any of the following formats, the corresponding stringency will apply:
    - a. Microsoft Office 2007 or newer. All files shall be fully compatible with Microsoft Office 2007.
      - 1) AutoCAD files shall be self-contained with no external x-references.
    - b. BIM files shall conform to the standards and formats outlined in the BIM PXP and DEN BIM DSM.
    - c. Portable Document Format (PDF) files shall be compatible with Adobe Acrobat 10.0, non-password-protected, and security-free.
    - d. Other files pre-approved by the DEN Project Manager.

**1.05 INITIAL SUBMITTAL**

- A. Each submittal document shall include a title block showing the following information:
  - 1. Date of submittal and revision dates.
  - 2. Contract title and number.
  - 3. The names of Contractor, subcontractor, supplier, manufacturer and when applicable, the seal and signature of an Engineer registered in the State of Colorado, for the involved discipline.
  - 4. Identification of product by either description, model number, style number or lot number.
  - 5. Subject identification by Contract Drawing or specification reference.
- B. On each submitted drawing, include a blank space on each sheet, three inches by four inches, in the lower right corner, just above the title block, in which the DEN Project Manager or the Designer of Record may indicate the action taken.
- C. Make submissions sufficiently in advance so that the DEN Project Manager Review may be completed not less than 30 days before Work represented by those submittals is scheduled

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to be performed.

- D. Allow a minimum cycle of 30 days for review of each submittal by the DEN Project Manager.
- E. Submittal shall contain the following information:
  - 1. Contractor's name, address and telephone number.
  - 2. Submittal number and date.
  - 3. Contract title and number.
  - 4. Supplier's, manufacturer's, or subcontractor's name, address and telephone number.
  - 5. Identification of variations from Contract Documents.
  - 6. Contractor's stamp and signature certifying the Contractor's review.
  - 7. Identification of submittal:
    - a. If the submittal is being made on a General Condition or Special Condition, reference the General or Special Condition number the first two digits of the specification section shall be 00XXXX.
    - b. If the submittal is being made under a specification section, reference the specification number, paragraph number, and subparagraph number.
    - c. If the submittal is being made under a drawing, reference the drawing(s) number and sub-number.
- F. The Contractor shall describe, at the time of submission, variations from the Contract documents in writing, separate from the submittal document. If the DEN Project Manager approves any such variations, an appropriate Contract change order shall be issued, except that if the variation is minor and does not involve a change in price or in time of performance, a modification need not be issued. If a submission contains variations and the variation column is not marked on the transmittal form, it will not be considered for review and acceptance. Along with marking the transmittal as a variation, a description must be included which outlines all the differences including maintenance and utility services along with any cost savings from an item not containing the variation.
- G. Changes in accepted submittal documents will not be permitted unless those changes have been accepted, in writing, by the DEN Project Manager.
- H. The form and quality of submittal documents shall comply with Section 013325 "Shop and Working Drawings, Product Data, and Samples."

## **1.06 SUPPLEMENTAL SUBMITTALS**

- A. Supplemental submittal documents initiated by the Contractor for consideration of corrective procedures shall contain sufficient data for review. Make supplemental submittals in the same manner as initial submittals with the appropriate primary transmittal referenced.

## **PART 2 - PRODUCTS (NOT USED)**

## **PART 3 - EXECUTION**

### **3.01 CONTRACTOR'S REVIEW**

- A. The Contractor shall review all submittal documents, stamp, and sign as reviewed and approved as complying with Contract Documents prior to submission to the DEN Project

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Manager. Submittal documents that are submitted to the DEN Project Manager THAT HAVE NOT BEEN REVIEWED BY THE CONTRACTOR will not be reviewed and will be returned to the Contractor. Contractor is responsible for any delays in the Project due to improperly reviewed, stamped, and signed submittals.

- B. The Owner review period will be limited to ten (10) business days from the time complete submittal documents have been submitted.
- C. The Contractor is responsible to obtain all approvals for all deferred submittals, shop drawings, and significant changes from the CCD Development Service Department.
- D. All submittals must delineate any deviation from the intended design and must submit request for substitution to address any significant variation. Refer to Title 4, Article 405 – Shop Drawings, Product Data, and Samples, and Article 406 – Substitution of Materials and Equipment of the General Contract Conditions, 2011 Edition.

### **3.02 REVIEW BY DEN PROJECT MANAGER**

- A. Submittal documents will be reviewed by the DEN Project Manager, the DEN Project Manager Team, and/or the DOR for conformance to requirements of the Contract Documents. Review of a separate item will not constitute review of an assembly in which the item functions. The DEN Project Manager will withhold approval of submittals that depend on other submittals not yet submitted. Review and acceptance will not relieve the Contractor from the Contractor's responsibility for accuracy of submittals, for compliance with all applicable regulations, for compliance with all codes and specifications, for conformity of submittal document to requirements of Contract Drawings and specifications, for compatibility of described product with contiguous products and the rest of the system, or for protection and completion of the Contract in accordance with the Contract Drawings and specifications. Acceptance is not verification or certification that the submittals comply with all requirements, nor does it guarantee approval by the Denver Building Department or Denver Fire Department.
- B. The City, the DOR, and/or the DEN Project Manager will review the submittal documents for general conformance with the Contract Documents and mark the Action Code, sign, and date the transmittal.
- C. The Action Codes have the following meanings:
  - 1. Accepted (ACC)
    - a. The submittal conforms to the respective requirements of the contract documents.
  - 2. Accepted as Noted (AAN)
    - a. The submittal conforms to the respective requirements of the Contract Documents after changes are made in accordance with reviewer's comments. AAN submittals do not need to be resubmitted.
  - 3. Revise and Resubmit (R&R)
    - a. The submittal is unacceptable and must be revised and resubmitted.
  - 4. Rejected (REJ)
    - a. The submittal is not approved and a new submittal in accordance with the Contract Documents must be prepared and submitted.
  - 5. For Information Only (FIO)
    - a. An item is received by the DEN Project Manager but is not reviewed.

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**3.03 CONTRACTOR'S RESPONSIBILITIES**

- A. Coordinate each submittal document with the requirements of the Work. Place particular emphasis upon ensuring that each submittal of one trade is compatible with other submittals of that trade and submittals of other trades including producing as needed drawings showing the relationship of the Work of different trades.
- B. Contractor's responsibility for errors and omissions in submittal documents and associated calculations is not relieved by the DEN Project Manager's review, correction, and acceptance of submittals.
- C. Contractor's liability to the City, in case of variations in the submittal document from the requirements of the Contract Documents, is not relieved by the DEN Project Manager's review and acceptance of submittals containing variations unless the DEN Project Manager expressly approves the deviation in writing, in which the DEN Project Manager describes the variation.
- D. The Contractor shall maintain a file of all approved submittal documents at the work site. The complete file of approved submittal documents shall be turned over to the DEN Project Manager with the as-built documents at the end of the job.
- E. Schedule impact due to resubmittal requirements is the responsibility of the Contractor.

**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 013300**

**SECTION 013325****SHOP AND WORKING DRAWINGS, PRODUCT DATA, AND SAMPLES****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. The Work specified in this Section consists of preparing and submitting shop and working drawings, product data, samples, and record documents required by other specifications Sections.
1. The Contractor shall submit all shop drawings, working drawings, product data, and samples, as defined in the General Conditions, to the DEN Project Manager in accordance with the requirements in the technical specifications. The DEN Project Manager will return one (1) copy of the shop drawings, working drawings and product data to the Contractor with a written transmittal.
- B. The Contractor shall not submit as shop drawings, copies or reproductions of drawings issued to the Contractor by DEN.
- C. Related Requirements
1. Section 013300 "Submittal Procedures"
  2. Section 012510 "Substitutions"
  3. Section 017720 "Contract Closeout"

**1.03 SUBMITTALS**

- A. All submittals shall be delivered to the DEN Project Manager in electronic format. All submittals must be of a consistent format (all PDF). No combination of electronic file types will be allowed unless required by a specific specification section.
1. Acceptable electronic formats: Comply with the electronic file formats approved by DEN Building Information Modeling (BIM) Design Standards Manual. If any of the files are in any of the formats listed below then the version of the software shall be no less than identified below:
    - a. Adobe Acrobat 8.0 or newer. All files shall be fully compatible with Adobe Acrobat 8.0.
    - b. Microsoft Office 2007 or newer. All files shall be fully compatible with Microsoft Office 2007.
    - c. AutoDesk AutoCAD 2007 or newer. All files shall be fully compatible with AutoDesk AutoCAD 2007.
      - 1) AutoCAD files shall be self-contained with no external x-references.
    - d. BIM format outlined in the BIM Project Execution Plan (PXP)
    - e. Other files pre-approved by the DEN Project Manager.
  2. Adobe Acrobat Requirements:
    - a. Drawings shall have security set to "No Security." Commenting, printing, adding

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photos, form fields and document signing must be allowed.

- b. PDF submittals shall be one continuous file or Portfolio. No external links are allowed.
  - c. All individual components of submittals shall be bookmarked inside the PDF file.
  - d. All original documents shall be directly converted from the original electronic format to PDF. Scanning of files shall only be allowed by the DEN Project Manager when the original electronic information is not obtainable.
  - e. Failure to comply with these requirements will result in a return of file to the Contractor for immediate revision.
3. Electronic files submitted shall correspond with DEN File Control Numbering System available from the DEN Project Manager.

**B. Quantities**

1. One (1) electronic submittal in Unifier containing electronic files of each shop or working drawing.
2. One (1) electronic submittal in Unifier containing electronic files of manufacturer's standard schematic drawings.
3. One (1) electronic submittal in Unifier containing electronic files of manufacturer's calculations and manufacturer's standard data.
4. One (1) electronic submittal in Unifier containing electronic files of manufacturer's printed installation, erection, application, and placing instructions.
5. Nine (9) samples of each item specified in the various specification sections, unless otherwise specified.
6. One electronic submittal in Unifier containing electronic files of inspection, test reports, and certificates of compliance.
7. Note: If manufacturer's printed information is in color, all copies of submittals must be in color.

**C. Review:**

1. Submittal review comments by the DEN Project Manager will be in electronic form and incorporated into the electronic submittal file.
2. Resubmittals of electronic documents shall modify the original electronic file with new information and include the DEN Project Manager's comments with appropriate responses and additional information.

**1.04 CHANGES**

- A. Changes in products for which shop or working drawings, product data or samples have been submitted will not be permitted unless those changes have been accepted and approved in writing by the Deputy Manager of Aviation as provided in Section 012510 "Substitutions."

**1.05 QUALITY CONTROL**

- A. Shop drawings and record documents shall be prepared to the standards of quality outlined in the specifications, DSM and BIM PXP, prepared and printed from Revit and checked in the spatial coordination format specified in the BIM PXP.
- B. Refer to DEN DFI DSM for other requirements that may be applicable to this Article.



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**PART 2 - PRODUCTS**

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**2.01 SHOP AND WORKING DRAWINGS**

- A. Prepare shop and working drawings in an electronic format that is current and approved by DEN to a scale large enough to easily depict and annotate each of the various items.
- B. Comply per other BIM requirements for Shop and Working Drawings as established in the DEN BIM DSM.
- C. Include the following as they apply to the subject:
  - 1. Contract title, work order, and number.
  - 2. Respective Contract drawing numbers.
  - 3. Applicable specification section numbers.
  - 4. Relation to adjacent structure or materials.
  - 5. Field dimensions clearly identified as such.
  - 6. Applicable standards such as ASTM or Federal Specification number, FAA, AASHTO, and pertinent authority specifications or standards.
  - 7. Identification of deviations from the Contract Drawings and specifications.
  - 8. Drawing name, number, and revision.
  - 9. Contractor's stamp, initialed or signed, certifying:
    - a. Verification of field measurements.
    - b. Review of submittals for compliance with Contract requirements.
    - c. Compatibility of the Work shown thereon with that of affected trades.
  - 10. Blank space on each sheet per Technical Specifications Section 013300 "Submittal Procedures."
- D. Drawings of equipment and other items that contain multiple parts shall include exploded views showing the relationship of parts and the description of the parts into the smallest units that may be purchased or serviced.
- E. Comply with all submittal requirements of Section 013300 "Submittal Procedures."

**2.02 PRODUCT DATA**

- A. Modify manufacturer's standard and/or schematic drawings to delete information that is not applicable to the Contract. Supplement standard information with additional information applicable to this Contract.
- B. Modify manufacturer's standard(s), diagrams, schedules, performance charts, illustrations, calculations, and other descriptive data to delete information that is not applicable to the Contract. Indicate dimensions, clearances, performance characteristics, and capacities. Include with the submittal electrical, plumbing, HVAC, and any other diagrams, as applicable.
- C. Modify erection, application, and placing instructions to delete information that is not applicable to the Contract or work order.
- D. Include the following:

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1. Contract title, work order, and number.
  2. Respective Contract drawing numbers.
  3. Applicable Contract technical specification section numbers.
  4. Applicable standards such as ASTM or Federal Specification number, FAA, AASHTO and pertinent authority specifications or standards.
  5. Identification of deviations from the Contract Drawings and specifications.
  6. Contractor's stamp, initialed or signed, certifying:
    - a. Dimensional compatibility of the product with the space in which it is intended to be used.
    - b. Review of submittals for compliance with Contract requirements.
    - c. Compatibility of the product with other products with which it is to perform or which will be next to it.
    - d. The products electrical, plumbing, control and HVAC requirements conform to Contract Documents and the necessary utilities are provided for in the Contract Documents.
- E. Comply with all submittal requirements of Section 013300 "Submittal Procedures."

**2.03 SAMPLES**

- A. Submit samples of sizes and quantities to clearly illustrate full color range and functional characteristics of products and materials including attachment devices.
- B. Erect field samples and mockups at the work site as specified in specification Sections and at locations acceptable to the DEN Project Manager. All field samples shall be erected in a location that will be readily visible throughout the life of the Contract to allow comparison of the Work as it progresses to the field sample. Field samples and mockups may be incorporated into the Work at Contractor's risk if approved by DEN Project Manager.
- C. The Contractor shall verify, through appropriate inspections and tests, that the samples submitted meet the specifications and shall provide inspection and test data with the samples. The review and comments on the sample shall not relieve the Contractor of the Contractor's responsibility for completion of the Contract.
- D. Show the following information:
  1. Contract title and number.
  2. Respective Contract drawing numbers.
  3. Applicable technical specification section numbers.
  4. Applicable standards such as ASTM or Federal Specification number.
  5. Identification of deviations from the Contract Drawings and specifications
  6. Contractor's stamp, initialed or signed, certifying:
    - a. Dimensional compatibility of the product with the space in which it is intended to be used
    - b. Review of submittals for compliance with Contract requirements
    - c. Compatibility of the product with other products with which it is to perform or which will be next to it
  7. If multiple samples are submitted and the DEN Project Manager is requested to make a choice, each sample shall have a unique identification number attached to it so the

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returned transmittal can state the identification number of the accepted sample and the Contractor will know which one it is.

- E. Comply with all submittal requirements of Section 013300 "Submittal Procedures."

### **PART 3 - EXECUTION**

#### **3.01 CONTRACTOR RESPONSIBILITIES**

- A. Verify field measurements, catalog numbers, and similar data.
- B. The Contractor shall not start work for which submittals are required until a transmittal has been received by the Contractor marked with the Action Code ACCEPTED or ACCEPTED AS NOTED by the DEN Project Manager.
- C. Before making submittals, ensure that the products will be available in the quantities and at the times required by the Contract.
- D. Submit final, corrected, electronic copies of Contract and shop and working drawings showing the Work as actually installed, placed, erected, and applied. Refer to Section 017720 "Contract Closeout."

#### **3.02 REVIEW BY THE DEN PROJECT MANAGER**

- A. One (1) electronic copy of the marked-up shop and working drawing and one (1) electronic copy of the product data will be returned to the Contractor by the DEN Project Manager. Only the transmittal form appropriately marked with the Action Code and comments, if any, will be returned on sample submittals.
- B. Contractor's responsibility for errors and omissions in submittals for compatibility will not be reduced, waived or otherwise limited by the review and acceptance of submittals by the DEN Project Manager. Review and acceptance will not relieve the Contractor from the Contractor's responsibility for accuracy of shop drawings, for compliance with all codes and specifications, for conformity to requirements of Contract Drawings and specifications, for compatibility of products with contiguous products and the rest of the system, or for protection and completion of the Contract in accordance with the Contract Drawings and specifications. Approval is not verification or certification that the shop drawings comply with all requirements nor does it guarantee approval by the Denver Building Department or Denver Fire Department.

### **PART 4 - MEASUREMENT**

#### **4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

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**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 013325**

**SECTION 013510 - CONSTRUCTION SAFETY****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.
- B. For Airside Construction Projects Related Specification Sections include:
  - 1. Section 011420 "Security Requirements and Sensitive Security Information".
  - 2. Section 011430 "Vehicle and Equipment Permitting".
  - 3. Section 011810 "Utilities Interface".

**1.02 SUMMARY**

- A. Work specified in this Section includes construction safety precautions and programs by the Contractor and the basis for reviews by the DEN Project Manager.
- B. For projects enrolled under a DEN Owner Controlled Insurance Program (OCIP) or Rolling Owner Controlled Insurance Program (ROCIP) reference the Contract Special Conditions and applicable DEN OCIP or ROCIP Safety Manual, included as Contract Documents, for additional safety requirements.
- C. For projects not enrolled under a DEN Owner Controlled Insurance Program (OCIP) or DEN Rolling Owner Controlled Insurance Program (ROCIP) reference the Contract Special Conditions for all safety requirements.

**1.03 RESPONSIBILITY**

- A. The Contractor is responsible for the health and safety of the Contractor's personnel, agents, subcontractors and their personnel, and other persons on the worksite, for the protection and preservation of the Work and all materials and equipment to be incorporated therein, and for the worksite and the area surrounding the worksite. The Contractor shall take all necessary and reasonable precautions and actions to protect all such persons and property.
- B. This Section shall be interpreted in its broadest sense for the protection of persons and property by the Contractor and no action or omission by the DEN Project Manager or the DEN Project Manager's authorized representatives shall relieve the Contractor of any of its obligations and duties hereunder.

**1.04 SUBMITTALS**

- A. Refer to Section 013300 "Submittal Procedures" and Section 013325 "Shop and Working Drawings, Product Data and Samples" for the submittal process.
- B. Contractor's Site Specific Safety Plan:
  - 1. The Contractor's Site Specific Safety Plan shall be submitted and accepted as provided in the Contract prior to commencing any Work. If a Task Order or Change Order is issued where the Work is not covered by the Contractor's Site Specific Safety Plan, then a revision to the Safety Plan specific for the Work in the Task Order shall be resubmitted for approval. The Contractor's Safety Plan must meet requirements as

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- outlined in the Contract. The Contractor should reference the applicable insurance requirements, including any Safety Manual and updates, and all applicable federal, state, and local laws and regulations. Additionally, for Airside Projects, the Contractor's Site Specific Safety Plan shall be developed according to the guidelines and requirements provided in the most current version of FAA Advisory (AC) 150/5370 "Operational Safety on Airports During Construction" and will describe how the Contractor will comply with the requirements of the Construction Safety and Phasing Plan (CSPP). The Site Specific Safety Plan shall cover the actions of not only the construction personnel and equipment, but the actions of inspection personnel and airport staff for the duration of construction activities.
2. No progress payment shall be approved until the Contractor's Site Specific Safety Plan has been accepted by the DEN Project Manager.
  3. For projects enrolled in a ROCIP or OCIP, Contractor shall submit their Site Specific Safety Plan in accordance with the requirements and lead time outlined in the applicable R/OCIP Safety Manual and in accordance with Part 1.04.A of this Section.
  4. For a project non enrolled in a ROCIP or OCIP, the Contractor shall submit the Contractor's Site Specific Safety Plan to the DEN Project Manager for review at least ten (10) calendar days before on-site construction begins. At a minimum, all applicable federal, state and local government requirements, and the following are to be included in the Contractor Site Specific Safety Plan:
  5. The Contractor shall provide the following information for acceptance by the DEN Project Manager prior to the commencement of construction activities. The Site Specific Safety Plan must address all aspects listed below. If an item is not applicable, then this must be noted in the plan.
    - a. Name of the Contractor's safety representative.
    - b. If the Contractor is running multiple shifts or working more than (40) hours per week, the name of an assistant safety representative who can act in the absence of the site safety representative.
    - c. Twenty-four (24) hours per day emergency phone numbers of Contractor site management to be used in case of injury or accident. Provide at least four contacts.
    - d. How personnel will be handled who are unable to safely perform their duties, including how the Contractor will determine whether personnel are unable to safely perform duties. This may include the Contractor's disciplinary process and employee's physical capabilities to perform the work safely.
    - e. Injury and accident handling, including samples of the reporting form.
    - f. The type of safety training that will be provided to personnel to inform them of safe work procedures.
    - g. How daily audits and inspections will be performed to ensure compliance with the Contractor's Site Specific Safety Plan and current, applicable OSHA regulations.
    - h. Means of protecting employees working in trenches and excavations, including sloping and shielding.
      - 1) Soil classification will be considered as Type C when designing protective systems, unless the Contractor can prove to the satisfaction of DEN that the soil classification is otherwise. Soil classification change request shall be provided to the DEN Project Manager in writing. The decision of the DEN Project Manager will be provided to the Contractor in writing.
      - 2) The Contractor shall show how material shall be stored beside the excavation. Stored material shall include the excavated and backfilled material.
    - i. How and when equipment will be checked to see that it is safe, that all safety guards are in place, and that the equipment is being used for its designed purpose and within its rated capacity.

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- j. How and when all electric devices will be checked for proper grounding and insulation. Describe the methods that will be used for lock out tag out of electric systems that should not be energized.
- k. How trash and human organic waste will be disposed of.
- l. How snow and ice will be removed by the Contractor in the project area.
- m. How flammable materials will be stored and handled, and how any spills will be cleaned up and removed for disposal.
- n. What system will be used to prevent fires and, if fires do occur, who will be trained to fight them. In addition, what firefighting equipment will the Contractor have available and how will this equipment's condition be monitored.
- o. How materials will be received, unloaded, stored, moved, and disposed of.
- p. How personnel will be protected from falling when working at heights of 6 feet or more.
- q. How people working beneath the construction work will be protected.
- r. What will be done to protect personnel in case of severe weather.
- s. How adequate lighting will be provided and monitored.
- t. How air quality will be monitored to ensure that chemical exposures are below current, established OSHA Permissible Exposure Limits. How personnel will be protected if these limits are exceeded.
- u. How the safety of work platforms, man lifts, material lifts, ladders, shoring, scaffolding, etc., will be ensured relating to load capacity and the protection of personnel using or working around them.
- v. Where cranes will be set up and plans for each lift.
- w. The type of personal protective equipment that will be used to protect personnel from hazards. The minimum PPE requirements include hard hat, safety toe boots, safety glasses, proper hand protection, ANSI II vests for day work, and ANSI III vests and high visibility pants (gaiters may only be used airside) for night work.
- x. Procedures to ensure that welding and other hot work is performed safely.
  - 1) A hot work permit from the Denver Fire Department (DFD) will be required for all welding, soldering, cutting, and brazing and or other processes required by DFD on the project. Contractor will comply with all of the provisions in the permit.
- y. How compressed gases will be safely stored, handled, and used.
- z. Methods to ensure that personnel safely enter, work in, and exit confined spaces.
  - 1) All confined spaces on DEN property are considered permit required. A permit must be obtained from the DFD before Contractor personnel may enter a confined space. Contractors will comply with all provisions and requirements of this permit.
- aa. How the hazards of chemicals will be communicated to personnel, including the use of material safety data sheets and chemical labels.
- bb. Methods to ensure that forklifts and other powered industrial trucks are operated in a safe manner.
- cc. How an effective hearing conservation program will be used to protect personnel from high noise levels and prevent hearing loss.
- dd. How personnel will be protected from the effects of jet blast.
- ee. How hazards will be identified and corrected when reported.

**C. Safety submittal requirements**

- 1. For projects enrolled in a ROCIP or OCIP, Contractor shall submit all required safety submittals required by the Contract Documents, including the applicable ROCIP or OCIP Safety Manual including, but not limited to, high-hazard pre-task plans,

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subcontractor pre-mobilization meetings, and incident reports. All Safety Submittals shall be submitted in accordance with Part 1.4.A of this Section unless otherwise modified by the Contract Documents. Contractor is responsible for reviewing the ROCIP or OCIP Safety Manual in its entirety and understanding full scope, timeline, and acceptance criteria outlined for the submittal requirements

**D. Additional safety submittals – ROCIP IV**

1. The following is a representative list of submittals, other than the Site-Specific Safety Plan, that are required for relevant scopes of work or events covered under ROCIP IV. This list is not all-inclusive and Contractor is responsible for reviewing the ROCIP IV Safety Manual its entirety to determine if additional submittals are required for Contractor's scope of work. In addition, DEN may require additional safety pre-planning or pre-work meetings or information based on Contractor's scope of work and safety performance:
2. High-hazard Pre-Task Plans including:
  - a. Crane Operation
  - b. Elevated Work
  - c. Lock-Out Tag-Out
  - d. Utility Damage Prevention- Ground & Concrete Penetration
  - e. Trenching
  - f. Confined Space
  - g. Demolition
  - h. Hot Work
  - i. Traffic Control
  - j. Haul Routes
  - k. Silica Exposure and Slurry Control Program
  - l. Respiratory Protection Program
3. Subcontractor Safety Pre-Mobilization Documentation
4. Preliminary Investigative Reports
5. Final Investigative Reports
6. Contractor's Monthly Safety Report
7. Meeting Minutes and Attendance Log for Contractor's Supervisory Safety Meetings

**E. Contractor Safety Representative Requirements for Gun Club Road On-ramp to Peña Boulevard**

1. The below requirements replace Sections 4.3.1 and 4.3.2 of the ROCIP 4 Safety Manual Version 1.2 for the Gun Club Road On-ramp to Peña Boulevard construction project at Denver International Airport.

**Contractor Safety Representative**

**4.3.1 Contractor Safety Representative Ratios and Shift Representation**

If the project exceeds 150 employees, the Contractor will discuss with DEN the need for adding additional safety personnel to ensure the safety requirements of the ROCIP are fully met.

A safety representative accepted by the DEN Safety Team meeting the minimum qualification outlined in Section 4.3.2 below shall be assigned to each shift when contractor is engaged in multiple shifts.



#### 4.3.2 Safety Representative Qualifications

The qualifications and resume of the Contractor's Safety Representative candidate(s) must be submitted to the DEN ROCIP Safety Team for review and acceptance within 3 days of Notice to Proceed (NTP).

**The DEN ROCIP Safety Team will schedule an interview with the candidate.**

This employee may be the superintendent on the project, or an employee assigned full time to safety. The qualifications for the safety representative shall meet the following minimum requirements:

- a. Have 1 year of experience as a full time safety professional or 3 years as a superintendent overseeing a similar scope of work.
- b. Provide proof of completed OSHA 30 Hour course for construction within the last 18 months or OSHA 510 within the last 36 months.
- c. Provide proof of non-expired completion of a Red Cross or approved equal for Cardio-Pulmonary Resuscitation (CPR), First Aid, and Automated External Defibrillation (AED).
- d. Provide proof of completion of FMCSA compliant 2-hour drug and alcohol reasonable suspicion supervisory training.
- e. Provide proof of valid Colorado Traffic Control Supervisor (TCS) or Traffic Control Technician (TCT) Certification or Endorsement, and
- f. Knowledge of and ability to fulfill contractor safety representative's responsibilities set forth in this Manual and the Contractor's CSPP where applicable.
- g. Employer will designate and affirm that they are a competent person for the work being performed.

### 1.05 DEN PROJECT MANAGER'S REVIEW

- A. Prior to the start of any work by contractor or subcontractor personnel, the Contractor shall provide the DEN Project Manager with a list of its personnel, subcontractor's personnel and other personnel the Contractor has requested to work at Denver International Airport, who have signified in writing that they have been briefed on, or have read and understand, the Contractor's Site Specific Safety Plan.

### 1.06 AUDIT OF MANUAL COMPLIANCE

- A. At its sole discretion, DEN may audit Contractor's submittals, including supporting documents that the contractor or its subcontractor is required to maintain or that would show compliance with the requirements of this Safety Manual. When documentation is requested, the Contractor must respond in the time outlined in the applicable ROCIP or OCIP Safety Manual, and where a timeline is not established, in no more than 7 days.

## PART 2 - PRODUCTS (NOT USED)

## PART 3 - EXECUTION

### 3.01 IMPLEMENT CONTRACTOR'S SITE SPECIFIC SAFETY PLAN

- A. Implement the approved Contractor's Site-Specific Safety Plan and other project safety plans as described in Part 1 of this Section, applicable Contract Safety Manual, all applicable regulations, Contract Documents, and in Section 011100 "Summary of Work."

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- B. If the Project or an individual contractor or subcontractor experiences an OSHA DART or Total Recordable injury rate greater than 75 percent of the national average for all construction, the Contractor shall notify the DEN Project Manager and audit its safety procedures and submit a plan to reduce its rate(s).
- C. If at any time the OSHA DART or Total Recordable injury rates experienced by the Project or an individual contractor or subcontractor are 150 percent or more of the national average for construction, or exceeds \$0.50/labor hour, the Contractor shall notify the DEN Project Manager and immediately hire an independent safety professional at their own cost who shall audit the Contractor's procedures and operations and make a report of changes that the Contractor should implement to reduce the rate(s) including possible personnel changes.
  - 1. The report shall be submitted to the DEN Project Manager.
  - 2. The Contractor shall immediately begin implementing the recommendations of the independent safety professional.
  - 3. A weekly report shall be submitted by the Contractor to the DEN Project Manager on the status of the implementation of the recommendations.
  - 4. Failure to comply with these requirements is a basis to withhold a portion of progress payments or to terminate the Contract.

**3.02 SAFETY REQUIREMENTS FOR ALL CONSTRUCTION PROJECTS**

- A. For projects enrolled in a ROCIP or OCIP, Contractor will abide by all requirements specified in the Contract Documents, including the applicable ROCIP or OCIP Safety Manual. The applicable ROCIP or OCIP Safety Manual is incorporated in this Technical Specification for all enrolled projects.
- B. Contractor personnel, airport staff and field inspectors directly involved in DEN construction shall:
  - 1. Be aware of the types of conditions, safety problems, and/or hazards identified each day at the airport. To ensure that all personnel are aware, daily meetings between management and supervisory personnel and their employees shall be scheduled prior to any work commencing on the shift.
  - 2. Inspect daily all work and/or storage areas for which the Contractor is responsible to be aware of current conditions.
  - 3. Promptly take all steps needed to remedy any unsafe or potentially unsafe condition. Coordinate with the DEN Project Manager to ensure immediate corrective action is undertaken.
- C. Housekeeping Requirements
  - 1. Maintain the work site in a neat, orderly, and hazard-free manner in conformance with all federal, state, and local rules, codes, regulations, and orders, including all OSHA requirements, until Final Acceptance of the Work. Keep catwalks, underground structures, work site walks, sidewalks, roadways, and streets, along with public and private walkways adjacent to the work site, free from hazards caused by construction activities. All hard concrete, steel, wood, and finished walking surfaces shall be swept clean daily.
  - 2. Inspect those facilities regularly for hazardous conditions caused by construction activities. Maintain structures, grounds, storage areas and other areas of work site, including public and private properties immediately adjacent to work site, free from accumulations of waste materials caused by construction operations. Place waste materials in covered metal containers. Remove or secure loose material on open

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decks and on other exposed surfaces at the end of each workday or more often in a manner that will maintain the work site hazard free. Secure material in a manner that will prevent dislodgment by wind and other forces.

3. Sprinkle waste materials with water or acceptable chemical palliative to prevent blowing of dust.
4. Promptly empty waste containers when they become full and legally dispose of the contents at dumping areas off the City's property.
5. Control the handling of waste materials. Do not permit materials to be dropped or thrown from structures.
6. Immediately remove spillage of construction related materials from haul routes, work site, private property, public rights of way, or on the Denver International Airport site.

**D. Hazardous Material Controls**

1. Store waste materials in properly labeled waste containers. This includes solid wastes, hazardous wastes, universal wastes, etc.
2. Store volatile wastes in covered metal containers and remove those wastes from work site daily.
3. Do not accumulate wastes that create hazardous conditions.
4. If volatile and noxious substances are being used in spaces that are not naturally ventilated adequately, provide artificial ventilation.
5. Hazard controls shall conform to the applicable federal, state, and local rules and regulations.
6. Provide appropriate waste receptacles in all areas in which employees are working. Waste receptacles shall be kept covered at all times. All materials on site shall be anchored and covered to prevent any objects from becoming wind-borne.

**E. Safe Access**

1. Maintain the work site to permit access by other City contractors as required and to allow access by emergency personnel.

**F. Aviation safety and continuity of operations is a primary consideration during construction at DEN. Activities shall be planned and scheduled to minimize disruption of normal aircraft and operation activities, including minimizing impacts to vehicular traffic. If the clearances and restrictions described in this plan cannot be maintained while construction is underway, action will be taken by the Contractor to perform Work at night or during periods of minimal aircraft or operational activity.**

1. During performance of this Contract, the airport runways, taxiways, taxi lanes, and aircraft parking aprons shall remain in use by aircraft to the maximum extent possible, consistent with continual safety. Aircraft use of areas near the Contractor's Work will be controlled to minimize disturbance to the Contractor's operation. However, AIRCRAFT HAVE THE RIGHT OF WAY AT ALL TIMES. The Contractor shall not allow employees, subcontractors, suppliers, or any unauthorized persons to enter or remain in any airport area that would be hazardous to persons or to aircraft operations.
2. Before commencement of construction activity, the Contractor, through coordination with the DEN Project Manager and DEN Operations, shall give notice using the NOTAM system of construction on the airfield. In addition, a NOTAM shall be issued for the completion of construction on the airfield.

**G. The Contractor shall take all necessary steps and precautions to mitigate the impact of**

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hazardous conditions as they may relate to the Work. Potentially hazardous conditions which may occur during airport construction include, but are not limited to, the following:

1. Trenches, holes, or excavations on or adjacent to any active runway, taxiway, taxi lane, apron, or related safety areas.
  2. Unmarked/unlighted holes or excavations on or adjacent to any active runway, taxiway, taxi lane, apron, or related safety areas.
  3. Mounds or piles of earth, construction material, temporary structures, or other objects on or in the vicinity of any active runway, taxiway, taxi lane, apron or related safety, approach, or departure areas.
  4. Pavement drop-offs that would cause, if crossed at normal operating speeds, damage to aircraft that normally use the airport. The maximum drop-off is 3 inches per the most current version of FAA AC 150/5300.
  5. Vehicles or equipment (whether operating or idle) on any active runway, taxiway, taxi lane, apron or related safety, approach, or departure areas.
  6. Vehicles, equipment, excavations, stockpiles, or other materials that could impinge upon NAVAID-critical areas and degrade or otherwise interfere with electronic NAVAIDS or interfere with visual NAVAIDS facilities.
  7. Unmarked utility, NAVAIDS, weather service, runway lighting, underground power, or signal cables that could be damaged during construction.
  8. Objects or activities anywhere on or in the vicinity of an airport which would be distracting, confusing, or alarming to pilots during aircraft operations.
  9. Unflagged/unlighted low visibility items such as tall cranes, backhoes, scrapers, dump trucks, rollers, compactors, dozers and the ilk, in the vicinity of an active runway, taxiway, taxi lane, apron or related safety, approach, or departure areas.
  10. Dirt, debris, or other transient accumulations that temporarily obscure pavement markings or pavement edges or derogate the visibility of runway or taxiway markings or lighting or of construction and maintenance areas.
  11. Trash or other materials with foreign object damage (FOD) potential, whether on runways, taxiways, taxi lanes, aprons or in related safety areas.
  12. Failure to control vehicle, human and large animal access to, and nonessential nonaeronautical activities on, open aircraft movement areas.
  13. Failure to maintain radio communication between construction vehicles and air traffic control or other on-field communications facilities.
  14. Construction activities or material which could hamper Aircraft Rescue and Fire Fighting (ARFF) vehicle access from ARFF stations to all parts of the runway/taxiway system, runway approach and departure areas, or aircraft parking locations.
  15. Inadequate fencing or other marking to separate construction areas from open aircraft operating areas.
  16. Bird attractions such as edibles (food scraps, etc.), trees, brush, other trash, grass/crop seeding, or ponded water on or near the airport.
- H. Construction Area Marking: Temporary lighting, barricades, flagging, and flashers are required as shown on the plans and per the most current version of FAA AC 150/5370 Chapter 2 Section 220.b.(1)(2) Flag lines, traffic cones, flashers, edge lights, and/or signs shall be used as necessary:
1. To clearly separate all construction from other parts of an air operations area
  2. To identify isolated hazards, such as open manholes, excavations, areas under repair,

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stockpiled material, waste areas, etc.

3. Vehicle and pedestrian access routes used for airport construction shall be controlled to prevent any unauthorized entry of persons, vehicles, or animals.
4. Vehicle parking areas for Contractor employees shall be designated in advance to minimize traffic in open/active aircraft movement areas.

**I. Cables and Utilities:**

1. Special attention shall be given to preventing unscheduled interruption of utility services and facilities. The location of all cables and utilities shall be identified prior to construction activities. In addition to following regulatory utility locate requirements, Contractor shall provide a 3rd party SUE or utility designation firm to perform a ground penetrating radar (GPR) sweep in all areas that will be excavated, or the ground penetrated, prior to work.
2. There shall be coordination among the Contractor, the DEN Project Manager, DEN Operations, the FAA, the National Weather Service, utility companies, and any other appropriate entity or organization. NAVAIDS, weather service facilities, electric cables, and other utilities must be fully protected during the entire construction time.
3. Power, communication, and control cables leading to and from any FAA NAVAIDS, weather service, and other facilities will be marked in the field by the appropriate individuals as identified in Section 011810 "Utilities Interface" for the information of the Contractor before any work in their general vicinity is started. Thereafter, through the entire duration of construction, utilities shall be protected from any possible damage.
4. At the intersection of expansion joints and centerline lighting circuits on taxiways and runways, the electrical conduit may be within the 21" portion of the Portland cement concrete pavement. Coordination with the DEN Project Manager's representative and the DEN Electrical Department is required for both the scheduling of an outage and the removal of conductors while cutting the joint.

**J. Employee Identification:**

1. The Contractor will be required to conform to the specific requirements as outlined in Section 011420 "Security Requirements and Sensitive Security Information (SSI)" of the Contract documents.

**K. Radio Communications:**

1. The Contractor's construction superintendent and flagger personnel shall be required to coordinate directly with the DEN Project Manager or designated Representative. Only the DEN Project Manager or designated Representative shall monitor transceiver radios tuned to the frequency for communications with DEN Operations and B Tower Control. Radios shall be used to obtain the proper clearance concerning the movement of equipment, trucks, etc., on the airfield. Further, any unusual occurrences in the flight pattern of approaching or departing aircraft shall be acknowledged by all concerned so that operation of the airport and the construction work can be carried out safely.

**L. Haul Routes Crossing Active Aircraft Operation Areas:**

1. The Contractor shall provide a minimum of one (1) broom truck to continuously clean the surface of the active taxiway, taxi lane or apron of any foreign object debris (FOD) or other objectionable debris that may result from hauling activities. Additional broom trucks may be required to expedite the cleanup process. Opening the taxiway, taxi lane, or apron to aircraft operations shall only be approved after a visual inspection of the pavement surface by the DEN Airfield Operations Manager.
2. The Contractor shall not work within the minimum of the following: 160 ft. of the

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centerline of an active taxiway, 310 ft. of the centerline of an active runway, or the minimum requirements of the FOD or Safety Zone unless otherwise noted in the Contract Documents and as approved in writing by the DEN Project Manager.

3. All construction equipment and vehicles shall be flagged for high daytime visibility and if appropriate, lighted for nighttime operations. Vehicles that are not marked and lighted shall be escorted by a vehicle that is equipped with appropriate marking and lighting devices. Marking and lighting shall be in conformance with FAA AC 150/5210, current edition, or as outlined in Section 011430 "Vehicle and Equipment Permitting" of the Contract Documents.
4. All Contractor and Subcontractor employees must be aware of the types of safety problems and hazards associated with aircraft operations and construction activities. All haul truck drivers must have current route maps with them in their vehicles.

**M. Airside Definitions:**

1. **Approach Surface:** A surface longitudinally centered on the extended runway centerline and extending outward and upward from either a runway threshold or 200 feet behind a threshold. This surface is needed to define where unobstructed airspace above the runway begins.
2. **Notice To Airmen (NOTAM):** A notice to the flying public (airmen) through FAA's NOTAM system. Normally initiated by message to the nearest FAA Flight Service Station. Issuance of the NOTAM will be coordinated through the DEN Project Manager and DEN Operations.
3. **Object Free Area:** A two-dimensional ground area surrounding runways, taxiways, and taxi lanes that is clear of objects, except for objects whose location is fixed by function.
4. **Safety Area (see current version of AC 150/5300):** A defined surface adjacent to runways, taxiways and taxi lanes prepared or suitable for reducing the risk of damage to aircraft in the event of an undershoot, overshoot or excursion from the paved surface. Each safety area must be cleared and graded and have no potentially hazardous ruts, humps, depressions or other surface variations. Each safety area must be drained by grading or storm sewers to prevent water accumulation. Each safety area must be capable under dry conditions of supporting snow removal and aircraft rescue and firefighting equipment and or supporting the occasional passage of aircraft without causing any damage to the aircraft. No objects may be located in any safety area, except for objects that need to be located in a safety area because of their function. These objects must be constructed, to the extent practical, on frangibly mounted structures of the lowest practical height, with the frangible point no higher than three (3) inches above grade.

**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

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**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 013510**

**SECTION 013516****ALTERATION PROJECT PROCEDURES****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Section includes special procedures for alteration work.

**1.03 DEFINITIONS**

- A. Alteration Work: This term includes remodeling, renovation, repair, and maintenance work performed within existing spaces or on existing surfaces as part of the Project.
- B. Consolidate: To strengthen loose or deteriorated materials in place.
- C. Design Reference Sample: A sample that represents the DOR's prebid selection of work to be matched; it may be existing work or work specially produced for the Project.
- D. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.
- E. Match: To blend with adjacent construction and manifest no apparent difference in material type, species, cut, form, detail, color, grain, texture, or finish; as approved by DOR.
- F. Refinish: To remove existing finishes to base material and apply new finish to match original or as otherwise indicated.
- G. Repair: To correct damage and defects, retaining existing materials, features, and finishes. This includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials.
- H. Replace: To remove, duplicate, and reinstall entire item with new material. The original item is the pattern for creating duplicates unless otherwise indicated.
- I. Replicate: To reproduce in exact detail, materials, and finish unless otherwise indicated.
- J. Reproduce: To fabricate a new item, accurate in detail to the original, and from either the same or a similar material as the original, unless otherwise indicated.
- K. Retain: To keep existing items that are not to be removed or dismantled.
- L. Strip: To remove existing finish down to base material unless otherwise indicated.



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**1.04 COORDINATION**

- A. Alteration Work Subschedule: A construction schedule coordinating the sequencing and scheduling of alteration work for entire Project, including each activity to be performed, and based on Contractor's Construction Schedule. Secure time commitments for performing critical construction activities from separate entities responsible for alteration work.
1. Schedule construction operations in sequence required to obtain best Work results.
  2. Coordinate sequence of alteration work activities to accommodate the following:
    - a. Owner's continuing occupancy of portions of existing building.
    - b. Owner's partial occupancy of completed Work.
    - c. Other known work in progress.
    - d. Tests and inspections.
  3. Detail sequence of alteration work, with start and end dates.
  4. Utility Services: Indicate how long utility services will be interrupted. Coordinate shutoff, capping, and continuation of utility services.
  5. Use of elevator and stairs.
  6. Equipment Data: List gross loaded weight, axle-load distribution, and wheelbase dimension data for mobile and heavy equipment proposed for use in existing structure. Do not use such equipment without certification from Contractor's professional engineer that the structure can support the imposed loadings without damage.
- B. Pedestrian and Vehicular Circulation: Coordinate alteration work with circulation patterns within Project buildings and site. Some work is near circulation patterns [and adjacent to restricted areas] <Insert item of concern>. Circulation patterns cannot be closed off entirely and in places can be only temporarily redirected around small areas of work.[ Access to restricted areas may not be obstructed.] Plan and execute the Work accordingly.

**1.05 PROJECT MEETINGS FOR ALTERATION WORK**

- A. Preliminary Meeting for Alteration Work: Before starting alteration work, DEN Project Manager will conduct meeting at Project Site.
1. Attendees: In addition to representatives of City, DEN Project Manager, DOR, and Contractor, a testing service representative and specialists shall be represented at the meeting.
  2. Agenda: Discuss items of significance that could affect progress of alteration work, including review of the following:
    - a. Alteration Work Subschedule: Discuss and finalize; verify availability of materials, specialists' personnel, equipment, and facilities needed to make progress and avoid delays.
    - b. Fire-prevention plan.
    - c. Governing regulations.
    - d. Areas where existing construction is to remain and the required protection.
    - e. Hauling routes.
    - f. Sequence of alteration work operations.
    - g. Storage, protection, and accounting for salvaged and specially fabricated items.
    - h. Existing conditions, staging, and structural loading limitations of areas where materials are stored.
    - i. Qualifications of personnel assigned to alteration work and assigned duties.
    - j. Requirements for extent and quality of work, tolerances, and required

- clearances.
  - k. Embedded work such as flashings and lintels, special details, collection of waste, protection of occupants and the public, and condition of other construction that affects the Work or will affect the work.
3. Reporting: DEN Project Manager will record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from meeting.
- B. Coordination Meetings: Conduct coordination meetings specifically for alteration work at monthly intervals. Coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation meeting.
- 1. Attendees: In addition to representatives of the City, DEN Project Manager, DOR, and Contractor, each specialist, supplier, installer, and other entity concerned with progress or involved in planning, coordination, or performance of alteration work activities shall be represented at these meetings. All participants at meeting shall be familiar with Project and authorized to conclude matters relating to alteration work.
  - 2. Agenda: Review and correct or approve minutes of previous coordination meeting. Review other items of significance that could affect progress of alteration work. Include topics for discussion as appropriate to status of Project.
    - a. Alteration Work Subschedule: Review progress since last coordination meeting. Determine whether each schedule item is on time, ahead of schedule, or behind schedule. Determine how construction behind schedule will be expedited with retention of quality; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities are completed within the Contract Time.
    - b. Schedule Updating: Revise Contractor's Alteration Work Subschedule after each coordination meeting where revisions to schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
    - c. Review present and future needs of each entity present, including review items listed in the "Preliminary Meeting for Alteration Work" Paragraph in this article and the following:
      - 1) Interface requirements of alteration work with other Project Work.
      - 2) Status of submittals for alteration work.
      - 3) Access to alteration work locations.
      - 4) Effectiveness of fire-prevention plan.
      - 5) Quality and work standards of alteration work.
      - 6) Change Orders for alteration work.
  - 3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

## 1.06 MATERIALS OWNERSHIP

- A. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to City that may be encountered or uncovered during the Work, regardless of whether they were previously documented, remain the City's property.
1. Carefully dismantle and salvage each item or object in a manner to prevent damage and protect it from damage, then promptly deliver it to where directed at Project site.

## 1.07 INFORMATIONAL SUBMITTALS

- A. Alteration Work Subschedule:
1. Submit alteration work subschedule within 30 days of date established for

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commencement of alteration work.

- B. Preconstruction Documentation: Show preexisting conditions of adjoining construction and site improvements that are to remain, including finish surfaces, that might be misconstrued as damage caused by Contractor's alteration work operations.
- C. Alteration Work Program: Submit 30 days before work begins.
- D. Fire-Prevention Plan: Submit 30 days before work begins.

## **1.08 QUALITY ASSURANCE**

- A. Specialist Qualifications: An experienced firm regularly engaged in specialty work similar in nature, materials, design, and extent to alteration work as specified in each Section and that has completed a minimum of five recent projects with a record of successful in-service performance that demonstrates the firm's qualifications to perform this work.
  - 1. Field Supervisor Qualifications: Full-time supervisors experienced in specialty work similar in nature, material, design, and extent to that indicated for this Project. Supervisors shall be on-site when specialty work begins and during its progress. Supervisors shall not be changed during Project except for causes beyond the control of the specialist firm.
    - a. Construct new mockups of required work whenever a supervisor is replaced.
- B. Title X Requirement: Each firm conducting activities that disturb painted surfaces shall be a "Lead-Safe Certified Firm" according to 40 CFR 745, Subpart E, and use only workers that are trained in lead-safe work practices.
- C. Alteration Work Program: Prepare a written plan for alteration work for whole Project, including each phase or process and protection of surrounding materials during operations. Show compliance with indicated methods and procedures specified in this and other Sections. Coordinate this whole-Project alteration work program with specific requirements of programs required in other alteration work Sections.
  - 1. Dust and Noise Control: Include locations of proposed temporary dust- and noise-control partitions and means of egress from occupied areas coordinated with continuing on-site operations and other known work in progress.
  - 2. Debris Hauling: Include plans clearly marked to show debris hauling routes, turning radii, and locations and details of temporary protective barriers.
- D. Fire-Prevention Plan: Prepare a written plan for preventing fires during the Work, including placement of fire extinguishers, fire blankets, rag buckets, and other fire-control devices during each phase or process. Coordinate plan with City's fire-protection equipment and requirements. Include fire-watch personnel's training, duties, and authority to enforce fire safety.
- E. Safety and Health Standard: Comply with the current version of the ANSI/ASSE Safety and Health Program Requirements for Demolition Operations

## **1.09 STORAGE AND HANDLING OF SALVAGED MATERIALS**

- A. Salvaged Materials:
  - 1. Clean loose dirt and debris from salvaged items unless more extensive cleaning is indicated.
  - 2. Pack or crate items after cleaning; cushion against damage during handling. Label contents of containers.

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3. Store items in a secure area until delivery to specified location.
  4. Transport items to the designated storage area indicated on Drawings.
  5. Protect items from damage during transport and storage.
- B. Salvaged Materials for Reinstallation:
1. Repair and clean items for reuse as indicated.
  2. Pack or crate items after cleaning and repairing; cushion against damage during handling. Label contents of containers.
  3. Protect items from damage during transport and storage.
  4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment unless otherwise indicated. Provide connections, supports, and miscellaneous materials to make items functional for use indicated.
- C. Existing Materials to Remain: Protect construction indicated to remain against damage and soiling from construction work. Where permitted by DOR, items may be dismantled and taken to an approved, suitable, protected storage location during construction work and reinstalled in their original locations after alteration and other construction work in the vicinity is complete.
- D. Storage: Catalog and store items within a weathertight enclosure where they are protected from moisture, weather, condensation, and freezing temperatures.
1. Identify each item for reinstallation with a nonpermanent mark to document its original location. Indicate original locations on plans, elevations, sections, or photographs by annotating the identifying marks.
  2. Secure stored materials to protect from theft.
  3. Control humidity so that it does not exceed 85 percent. Maintain temperatures 5°F or more above the dew point.
- E. Storage Space:
1. DEN Project Manager will arrange for limited on-site locations for free storage of salvaged material. This storage space does not include security and climate control for stored material.
  2. Arrange for off-site locations for storage and protection of salvaged material that cannot be stored and protected on-site.

## **1.10 FIELD CONDITIONS**

- A. Survey of Existing Conditions: Record existing conditions that affect the Work by use of preconstruction photographs.
1. Comply with requirements specified in Section 013233 "Photographic Documentation."
- B. Discrepancies: Notify DEN Project Manager of discrepancies between existing conditions and Drawings before proceeding with removal and dismantling work.
- C. DEN's Removals: Before beginning alteration work, verify in correspondence with DEN Project Manager that the following items have been removed:
1. TBD.
- D. Size Limitations in Existing Spaces: Materials, products, and equipment used for performing

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the Work and for transporting debris, materials, and products shall be of sizes that clear surfaces within existing spaces, areas, rooms, and openings, including temporary protection, by 12 inches or more.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 PROTECTION**

- A. Protect persons, motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm resulting from alteration work.
  - 1. Use only proven protection methods, appropriate to each area and surface being protected.
  - 2. Provide temporary barricades, barriers, and directional signage to exclude the public from areas where alteration work is being performed.
  - 3. Erect temporary barriers to form and maintain fire-egress routes.
  - 4. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during alteration work.
  - 5. Contain dust and debris generated by alteration work, and prevent it from reaching the public or adjacent surfaces.
  - 6. Provide shoring, bracing, and supports as necessary. Do not overload structural elements.
  - 7. Protect floors and other surfaces along hauling routes from damage, wear, and staining.
  - 8. Provide supplemental sound-control treatment to isolate demolition work from other areas of the building.
- B. Temporary Protection of Materials to Remain:
  - 1. Protect existing materials with temporary protections and construction. Do not remove existing materials unless otherwise indicated.
  - 2. Do not attach temporary protection to existing surfaces except as indicated as part of the alteration work program.
- C. Comply with each product manufacturer's written instructions for protections and precautions. Protect against adverse effects of products and procedures on people and adjacent materials, components, and vegetation.
- D. Utility and Communications Services:
  - 1. Notify DEN Project Manager, authorities having jurisdiction, and entities owning or controlling wires, conduits, pipes, and other services affected by alteration work before commencing operations.
  - 2. Disconnect and cap pipes and services as required by authorities having jurisdiction, as required for alteration work.
  - 3. Maintain existing services unless otherwise indicated; keep in service, and protect against damage during operations. Provide temporary services during interruptions to existing utilities.
- E. Existing Drains: Prior to the start of work in an area, test drainage system to ensure that it is

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functioning properly. Notify DEN Project Manager immediately of inadequate drainage or blockage. Do not begin work in an area until the drainage system is functioning properly.

1. Prevent solids such as adhesive or mortar residue or other debris from entering the drainage system. Clean out drains and drain lines that become sluggish or blocked by sand or other materials resulting from alteration work.
  2. Protect drains from pollutants. Block drains or filter out sediments, allowing only clean water to pass.
- F. Existing Roofing: Prior to the start of work in an area, install roofing protection as indicated on drawings.

### **3.02 PROTECTION FROM FIRE**

- A. General: Follow fire-prevention plan and the following:
1. Comply with NFPA 241, Standard for Safeguarding Construction, Alteration, and Demolition Operations requirements unless otherwise indicated. Perform duties titled "City's Responsibility for Fire Protection."
  2. Remove and keep area free of combustibles, including rubbish, paper, waste, and chemicals, unless necessary for the immediate work.
    - a. If combustible material cannot be removed, provide fire blankets to cover such materials.
- B. Heat-Generating Equipment and Combustible Materials: Comply with the following procedures while performing work with heat-generating equipment or combustible materials, including welding, torch-cutting, soldering, brazing, removing paint with heat, or other operations where open flames or implements using high heat or combustible solvents and chemicals are anticipated:
1. Obtain City's approval for operations involving use of open-flame or welding or other high-heat equipment. Use of open-flame equipment is not permitted. Notify DEN Project Manager at least 72 hours before each occurrence, indicating location of such work.
  2. As far as practicable, restrict heat-generating equipment to shop areas or outside the building.
  3. Do not perform work with heat-generating equipment in or near rooms or in areas where flammable liquids or explosive vapors are present or thought to be present. Use a combustible gas indicator test to ensure that the area is safe.
  4. Use fireproof baffles to prevent flames, sparks, hot gases, or other high-temperature material from reaching surrounding combustible material.
  5. Prevent the spread of sparks and particles of hot metal through open windows, doors, holes, and cracks in floors, walls, ceilings, roofs, and other openings.
  6. Fire Watch: Before working with heat-generating equipment or combustible materials, station personnel to serve as a fire watch at each location where such work is performed. Fire-watch personnel shall have the authority to enforce fire safety. Station fire watch according to NFPA 51B, NFPA 241, and as follows:
    - a. Train each fire watch in the proper operation of fire-control equipment and alarms.
    - b. Prohibit fire-watch personnel from other work that would be a distraction from fire-watch duties.
    - c. Cease work with heat-generating equipment whenever fire-watch personnel are not present.

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- d. Have fire-watch personnel perform final fire-safety inspection each day beginning no sooner than 30 minutes after conclusion of work in each area to detect hidden or smoldering fires and to ensure that proper fire prevention is maintained.
  - e. Maintain fire-watch personnel at each area of Project site until 60 minutes after conclusion of daily work.
- C. Fire-Control Devices: Provide and maintain fire extinguishers, fire blankets, and rag buckets for disposal of rags with combustible liquids. Maintain each as suitable for the type of fire risk in each work area. Ensure that nearby personnel and the fire-watch personnel are trained in fire extinguisher and blanket use.
- D. Sprinklers: Where sprinkler protection exists and is functional, maintain it without interruption while operations are being performed. If operations are performed close to sprinklers, shield them temporarily with guards.
- 1. Remove temporary guards at the end of work shifts, whenever operations are paused, and when nearby work is complete.

### **3.03 PROTECTION DURING APPLICATION OF CHEMICALS**

- A. Protect motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm or spillage resulting from applications of chemicals and adhesives.
- B. Cover adjacent surfaces with protective materials that are proven to resist chemicals selected for Project unless chemicals being used will not damage adjacent surfaces as indicated in alteration work program. Use covering materials and masking agents that are waterproof and UV resistant and that will not stain or leave residue on surfaces to which they are applied. Apply protective materials according to manufacturer's written instructions. Do not apply liquid masking agents or adhesives to painted or porous surfaces. When no longer needed, promptly remove protective materials.
- C. Do not apply chemicals during winds of sufficient force to spread them to unprotected surfaces.
- D. Neutralize alkaline and acid wastes and legally dispose of off City's property.
- E. Collect and dispose of runoff from chemical operations by legal means and in a manner that prevents soil contamination, soil erosion, undermining of paving and foundations, damage to landscaping, or water penetration into building interior.

### **3.04 GENERAL ALTERATION WORK**

- A. Have specialty work performed only by qualified specialists.
- B. Ensure that supervisory personnel are present when work begins and during its progress.
- C. Record existing work before each procedure (preconstruction), and record progress during the work. Use digital preconstruction documentation photographs. Comply with requirements in Section 013233 "Photographic Documentation."
- D. Perform surveys of Project site as the Work progresses to detect hazards resulting from alterations.
- E. Notify DEN Project Manager of visible changes in the integrity of material or components whether from environmental causes including biological attack, UV degradation, freezing, or thawing or from structural defects including cracks, movement, or distortion.

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1. Do not proceed with the work in question until directed by DEN Project Manager.

**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 013516**



**SECTION 014100****REGULATORY REQUIREMENTS****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. This Section identifies primary compliance with the State's and the City and County of Denver's regulatory requirements including but not limited to:
1. City and County of Denver applicable agencies, including but not limited to its Department of Aviation, Community Planning and Development (including Building Department), Department of Transportation and Infrastructure, and Mayor's Executive Orders.
  2. Colorado Department of Public Health and Environment; and
  3. The standards that govern design and construction projects at Denver International Airport; and
  4. Any other regulatory requirements that govern or apply to the specific work.
- B. Construction shall be based on the latest edition of the referenced codes including additions and revisions thereto that are in effect at the time of Project bidding or Task Order pricing or GMP established whichever is latest, and as specifically related.

**1.03 RELATED SECTIONS**

- A. Section 015719 "Temporary Environmental Controls" for environmental and related permitting requirements.

**1.04 BUILDING CODE**

- A. All design and construction work shall be governed by the Building Code for the City and County of Denver, latest edition. This is based upon the International Building Code of the International Code Council with Denver Amendments to this code. Appendix N of the Denver Amendments addresses Construction of Airport Buildings and Structures.
1. This Contract shall be based on the most current published version of the ICC series as Amended by The City and County of Denver.

**1.05 DENVER BUILDING DEPARTMENT**

- A. For review and approval of all construction documents for compliance to the Denver building code:

Community Planning and Development  
201 W. Colfax Ave., Dept 205  
Denver, CO 80202  
Telephone: 720-865-2790

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**1.06 DENVER FIRE DEPARTMENT**

- A. For review and approval of plans for compliance with the Denver Fire Department's requirements as they apply to the Denver International Airport:  
Denver Fire Department  
725 West Colfax Avenue  
Denver, CO 80204  
Telephone: 720-913-3474
- B. The Contractor is advised that the Denver Fire Department – Fire Prevention Bureau requires permitting for the following activities as they apply to the scope of work. The Contractor is responsible for obtaining the appropriate permits necessary to complete the work including, but not limited to, the work listed below. All costs associated with this permitting and policy compliance shall be the responsibility of the Contractor. The policies all reference the International Fire Code (IFC).
1. "Hot work", which is defined as the operation of any equipment or tool that creates sparks, hot slag, or radiant or convective heat as a result of the work. This includes, but is not limited to, welding, cutting, brazing, or soldering.
  2. Use and storage of compressed gas for both temporary storage and permanent facility installation. This includes, but is not limited to, flammable gas (excluding propane-LPG), oxidizer (including oxygen), and inert and/or simple asphyxiates.
  3. Tank installation, which includes aboveground storage tanks (AST) and underground storage tanks (UST) for both temporary tanks and permanent facility installations.
  4. Access to and work within areas that are designated as confined spaces.
- C. In addition to the above permits, the Denver Fire Department may require other permits that are associated with the specific work in the Contract Documents. Policies provided by the Denver Fire Department are meant to provide basic information for the most common conditions and situations. In any given occupancy, many other Uniform Fire Code requirements may be enforced. These should be addressed with the Denver Fire Department before construction begins and during construction with premise inspection(s).
1. The Fire Prevention Bureau web site is [denfpb@denvergov.org](mailto:denfpb@denvergov.org)

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 PERMITS AND CERTIFICATIONS**

- A. The Contractor shall maintain records on site of all permits acquired by federal, state, and local agencies. Posting of permits shall conform to requirements of the respective agencies.
- B. At the completion of any inspection by other agencies, the Contractor shall forward copies of the status of the inspection and copies of any approved or "signed-off" inspections by the respective agencies to the DEN Project Manager.
- C. At the time of request for Substantial Completion, the Contractor shall forward to the DEN Project Manager all permits approved by the respective agencies.

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**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 014100**

**SECTION 014210****REFERENCED MATERIAL****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 REFERENCED MATERIAL**

- A. City and County of Denver, Department of Aviation, Standard Specification for Construction, General Contract Conditions
- B. The following documents may be available for examination at the Owner's offices unless otherwise noted. The referenced material and documents are not part of the Contract Documents unless otherwise specified.
  - 1. Geotechnical Reports:
    - a. Borings, other field and laboratory explorations, and investigations have been made to indicate subsurface materials at particular locations. Explorations and investigations conducted by designers and their subconsultants are solely for the purpose of study and design.
    - b. The subsurface exploration and investigation information is presented or made available to indicate some of the conditions that may be encountered during construction and is offered as supplementary information only. Geotechnical information presented in the referenced material represents the opinion of soils consultants as to the character of the materials encountered. Subsurface information was directly obtained only at the specified location and necessarily indicates subsurface conditions only at the respective plan location, depths penetrated and only at the time of the exploration.
    - c. Neither the City nor the Designers assume any responsibility whatever in respect to the sufficiency or accuracy of borings made, or of the logs of test borings, or of other investigations, or of the interpretations made thereof, and there is no warranty or guarantee, either expressed or implied, that the conditions indicated by such investigations are representative of those existing throughout such area, or any part thereof, or that unforeseen developments may not occur. It is expressly understood that the making of deductions, interpretations, and conclusions from all of the accessible factual information, including the nature of the materials to be excavated, the difficulties of doing other work affected by the geology, groundwater elevations and other subsurface conditions at the site of the Work are the Contractor's sole responsibility.
    - d. Information derived from inspection of logs of borings, topographic maps, technical memorandum, reports, or plans showing information of the subsurface of site conditions will not relieve the Contractor from any risk or from properly examining the site and making such additional investigations as the Contractor may elect or from properly fulfilling all the terms of the Contract Documents.
  - 2. Available Conceptual Utility and Drainage Reports.
  - 3. DEN Digital Facilities and Infrastructure (DFI) Design Standards Manual (DSM)
  - 4. Woolpert, Inc. Report - "A Low Distortion Projection for Denver International Airport (DEN)", dated 12/10/2010.

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**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 014210**

## SECTION 014220

### ABBREVIATIONS AND SYMBOLS

#### PART 1 - GENERAL

##### 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.
- B. Edit and/or insert items in list below as required for Project.

##### 1.02 REFERENCE LIST

- A. Documents published by the following agencies may be referenced within these Contract Documents to define the quality of materials, equipment, workmanship, and other features of Work. Unless otherwise stated, the reference documents shall be of the latest edition as of the date of the Advertisement for Bids.
- B. Wherever used in the Contract Documents, the following abbreviations will have the meanings listed:

Abbreviation	Definition
AALA	American Association of Laboratory Accreditation
AAN	American Association of Nurserymen
AAO	Affirmative Action Officer
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ADA	Americans with Disabilities Act
AFI	Air-Filter Institute
AGTS	Automated Ground Transportation System
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Moving and Conditioning Association
ANSI	American National Standards Institute, Inc.
APA	American Plywood Association
APEN	Air Pollution Emission Notes
APWA	American Public Works Association
ARI	Air Conditioning and Refrigeration Institute
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigeration, and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASNT	American Society for Non-Destructive Testing
ASPE	American Society of Plumbing Engineers
ASSE	American Society of Sanitary Engineering
ASTM	American Society for Testing and Materials
AWPA	American Wood Preserver's Association
AWS	American Welding Society
AWWA	American Water Works Association
BID	Building Inspection Division, Department of Public Works
BIM	Building Information Modeling

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<b>Abbreviation</b>	<b>Definition</b>
CAR	Corrective Action Report
CCD	City and County of Denver
CCR	Contractor Change Request
CCRL	Cement Concrete Reference Laboratory
CD	Change Directive
CDOH	Colorado Department of Highways or Colorado Department of Health
CDOT	Colorado Department of Transportation
CMEC	Concrete Materials Engineering Council
CN	Change Notice
CO	Change Order
COE	Corps of Engineers
CPM	Critical Path Method
CR	Change Request
CRSI	Concrete Reinforcing Steel Institute
CSI	Construction Specifications Institute
DEN	Denver International Airport
DFD	Denver Fire Department
DOT	United States Department of Transportation
DOR	Designer of Record
DWB	Denver Water Board
EEO	Equal Employment Officer or Equal Employment Opportunity
EIA	Electronics Industry Association
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FHWA	Federal Highway Administration
FM	Factory Mutual Association
FS	Federal Specifications (U.S. General Services Administration)
GCC	General Contract Conditions
GIS	Geographic Information Systems
GMP -	Guaranteed Maximum Price
IAPMO	International Association of Plumbing and Mechanical Officials
IBC	International Building Code (published by ICC)
IBR	Institute of Boiler and Radiator Manufacturer's
ICBO	International Conference of Building Officials
ICC	International Code Council
ICEA	Insulated Cable Engineers Association
IEEE	Institute of Electrical and Electronic Engineers
IES	Illuminating Engineering Society
IMC	International Mechanical Code (published by ICBO)
IPC	International Plumbing Code (published by ICBO)
ISA	Instrument Society of America
ITA	Independent Testing Agency
MIL	Military Specifications (Naval Publications and Forms Center)
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
MUTCD	Manual of Uniform Traffic Control Devices
NAAB	National Association of Air Balance
NACE	National Association of Corrosion Engineers
NBS	National Bureau of Standards (now called National Institute of Standards and Technology)
NEC	National Electric Code (NFPA 70)
NECA	National Electric Contractors Association
NEMA	National Electrical Manufacturer's Association

ISSUED FOR: MARCH 2023

Revision No. 2022-Q4

**TECHNICAL SPECIFICATIONS**  
**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 014220 - ABBREVIATIONS AND SYMBOLS**

**DENVER INTERNATIONAL AIRPORT**  
**GUN CLUB ON-RAMP TO PEÑA BOULEVARD**  
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<b>Abbreviation</b>	<b>Definition</b>
NESC	National Electrical Safety Code
NFC	National Fire Code (as published by NFPA)
NFPA	National Fire Protection Association
NICET	National Institute for the Certification of Engineering Technologies
NIST	National Institute of Standards and Technology
NGS	National Geological Survey
NLMA	National Lumber Manufacturers Association
NOAA	National Oceanic and Atmospheric Administration
NRMCA	National Ready Mix Concrete Association
NTP	Notice to Proceed
NVLAP	National Voluntary Laboratory Accreditation Program
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Prestressed Concrete Institute
PDM	Precedent Diagram Method
PS	Product Standard of NIST (U.S. Department of Commerce)
PM	Project Manager
PMT	Project Management Team
PXP	Project Execution Plan
QA	Quality Assurance
QC	Quality Control
RFI	Request for Information
RTD	Regional Transportation District
SC	Special Contract Condition
SDI	Steel Door Institute
SMACNA	Sheet Metal and Air Conditioning Contractor's National Association
SSPWC	Standard Specifications for Public Works Construction
TCP	Traffic Control Plan
TSA	Transportation Security Administration
UL	Underwriters Laboratories, Inc.
USC	United States Code
WBS	Work Breakdown Schedule

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 014220**



**SECTION 014225****REFERENCE STANDARDS****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. This Section contains a summary of industry-accepted and recognized standards published by trade associations, government, and institutional organizations that are referred to in the various Sections of these specifications or elsewhere in the Contract Documents.
- B. Standards listed herein are included in the Contract Documents by this reference and become a part of the Contract Documents to the same extent as though included in their entirety unless specific limitations are noted in the individual specifications Sections.
- C. Listings of reference standards include name and address of the organization publishing the standard, and the full name and designator of each of the standards referenced herein.
- D. If a publication date or edition number is listed with the reference standard, that publication date or edition number shall apply. Otherwise, the publication date or edition number in effect at the Contract date shall apply.
- E. Inclusion of reference standards herein does not make the DEN Project Manager an agent of the publishing agency, nor does it obligate the DEN Project Manager to perform inspections required by or to enforce rules or regulations contained in the reference standards.

**1.03 SCHEDULE OF REFERENCE STANDARDS**

- A. American Association of State Highway and Transportation Officials (AASHTO), 444 North Capitol Street, NW, Suite 249, Washington, DC 20090:
1. AASHTO M 36–Corrugated Steel Pipe, Metallic-Coated for Sewers and Drains.
  2. AASHTO M216–Standard Specification for Lime for Soil Stabilization.
  3. AASHTO T26–Standard Method of Test for Water to be Used in Concrete.
  4. AASHTO T84–Specific Gravity and Absorption of Fine Aggregate.
  5. AASHTO T85–Specific Gravity and Absorption of Coarse Aggregate.
  6. AASHTO T103–Soundness of Aggregates by Freezing and Thawing
  7. AASHTO T219–Standard Methods of Testing Lime for Chemical Constituents and Particle Sizes.
- B. American Concrete Institute (ACI) 38800 Country Club Drive, Farmington Hills, MI 48331
1. ACI 211.1–Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete.
  2. ACI 301–Specifications for Structural Concrete for Buildings.

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3. ACI 304–Recommended Practices for Measuring, Mixing, Transporting and Placing Concrete.
  4. ACI 304.2R–Placing Concrete by Pumping Methods.
  5. ACI 305R–Hot Weather Concreting.
  6. ACI 306R–Cold Weather Concreting.
  7. ACI 318–Building Codes Requirements for Structural Concrete
    - a. Reference to ACI 318 may be limited to more stringent requirements of local building code.
- C. American Society for Testing and Materials (ASTM), International 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428:
1. ASTM A 27–Mild to Medium Strength Carbon - Steel Casting for General Application.
  2. ASTM A 36–Structural Steel.
  3. ASTM A 47–Malleable Iron Castings.
  4. ASTM A 82–Specification for Steel Wire, Plain, for Concrete Reinforcement: Replaced by A1064
  5. ASTM A 123–Hot-dip Galvanizing.
  6. ASTM A 184–Specification for Fabricated Deformed Steel Bar Mats for Concrete Reinforcement.
  7. ASTM A 185–Specifications for Steel Welded Wire, Fabric, Plain, for Concrete Reinforcement: Replaced by A1064
  8. ASTM A 283–Low and Intermediate Tensile Strength Carbon Steel Plates, Shapes and Bars.
  9. ASTM A 615–Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
  10. ASTM A 706–Specification for Low-Alloy Steel Deformed Bars for Concrete Reinforcement.
  11. ASTM C 25–Method for Chemical Analysis of Limestone, Quicklime, and Hydrated Lime.
  12. ASTM C29–Unit Weight and Voids in Aggregate
  13. ASTM C 31–Methods of Making and Curing Concrete Test Specimens in the Field.
  14. ASTM C 33–Specification for Concrete Aggregates.
  15. ASTM C 39–Test Method for Compressive Strength of Cylindrical Concrete Specimens.
  16. ASTM C 42–Method of Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
  17. ASTM C 76–Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.
  18. ASTM C 88–Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate.
  19. ASTM C 94–Specification for Ready Mixed Concrete.
  20. ASTM C 109–Compressive Strength of Hydraulic Cement Mortars
  21. ASTM C 110–Methods for Physical Testing of Quicklime, Hydrated Lime, and Limestone.

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<ol style="list-style-type: none"> <li>22. ASTM C 117–Materials Finer than 75 mm (No. 200) Sieve in Mineral Aggregates by Washing.</li> <li>23. ASTM C 131–Resistance of Abrasions of Small Size Coarse Aggregate by Use of the Los Angeles Machine.</li> <li>24. ASTM C 136–Method for Sieve Analysis of Fine and Coarse Aggregates.</li> <li>25. ASTM C 138–Unit Weight, Yield, and Air Content of Concrete.</li> <li>26. ASTM C 143–Test Method for Slump of Hydraulic – Cement Concrete</li> <li>27. ASTM C 150–Specification for Portland Cement</li> <li>28. ASTM C 171–Specification for Sheet Material for Curing Concrete.</li> <li>29. ASTM C 172–Method of Sampling Fresh Concrete.</li> <li>30. ASTM C 173–Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.</li> <li>31. ASTM C 231–Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.</li> <li>32. ASTM C 260–Specification for Air Entraining Admixture for Concrete.</li> <li>33. ASTM C 309–Specification for Liquid Membrane-Forming Compounds for Curing Concrete.</li> <li>34. ASTM C 443–Joints for Concrete Pipe and Manholes, using Rubber Gasket</li> <li>35. ASTM C 494–Specification for Chemical Admixtures for Concrete.</li> <li>36. ASTM C 595–Blend Hydraulic Cements.</li> <li>37. ASTM C 618–Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for use in Concrete</li> <li>38. ASTM C 655–Reinforced Concrete D Load Culvert, Storm Drain, and Sewer Pipe.</li> <li>39. ASTM C 789—Precast Reinforced Concrete Box Sections for Culverts, Storm Drains and Sewers: Replaced by C1433</li> <li>40. ASTM C 803–Test Method for Penetration Resistance of Hardened Concrete.</li> <li>41. ASTM C 805–Test Method for Rebound Number of Hardened Concrete.</li> <li>42. ASTM C 977–Specification for Quicklime and Hydrated Lime for Soil Stabilization.</li> <li>43. ASTM D 75–Sampling Aggregate.</li> <li>44. ASTM D 422–Test Method for Particle Size Analysis of Soils.</li> <li>45. ASTM D 516-88–Standard Test Method for Sulfate Ions in Water.</li> <li>46. ASTM D 693—Crushed Stone, Crushed Slag and Crushed Gravel for Dryer Water-Bound Macadam Base Courses and Bituminous Macadam Base and Surface Courses of Pavements: Withdrawn</li> <li>47. ASTM D 698–Laboratory Compaction Characteristics of Soil using Standard Effort</li> <li>48. ASTM D 751–Test Method for Coated Fabrics</li> <li>49. ASTM D 1556–Test Method for Density of Soil in Place by the Sand-Cone Method.</li> <li>50. ASTM D 1557–Laboratory Compaction Characteristics of Soil using Modified Effort</li> <li>51. ASTM D 1682—Ultraviolet Resistance Grab Tensile Strength Grab Tensile Elongation Toughness: Replaced by D5034 and D5035</li> <li>52. ASTM D 1751–Specification for Preformed Expansion Joint Fillers for Concrete</li> </ol>	

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Paving and Structural Construction.

53. ASTM D 1752—Specification for Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction.
  54. ASTM D 2167—Test Method for Density of Soil in Place by the Rubber-Balloon Method.
  55. ASTM D 2216—Method for Laboratory Determination of Water (Moisture) Content of Soil, Rock and Soil Aggregate Mixtures.
  56. ASTM D -79 (2011) Hydroxypropyl Methylcellulose
  57. ASTM D 2419—Sand Equivalent Value of Soils and Fine Aggregate.
  58. ASTM D 2487—Test Method for Classification of Soils for Engineering Purposes.
  59. ASTM D 2922—Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Method: Replaced by D6938
  60. ASTM D 3017—Test Method for Moisture Content of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth): Replaced by D6938
  61. ASTM D 3665—Random Sampling of Paving Materials.
  62. ASTM D 4253—Test Method for Maximum Index Density of Soils Using Vibratory Table.
  63. ASTM D 4318—Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
  64. ASTM D 4397—Specification for Polyethylene Sheeting for Construction, Industrial and Agricultural Applications.
  65. ASTM D 4546—Test Method for One-Dimensional Swell or Settlement Potential of Cohesive Soils.
  66. ASTM E 329—Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection
  67. ASTM F 477—Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
  68. ASTM F 758—Smooth-Wall Poly (Vinyl Chloride) (PVC) Plastic Underdrain Systems for Highway, Airport and Similar Drainage.
- D. American Welding Society (AWS), 550 NW LeJeune Road, Miami, FL 33135 AWS Code for Welding in Building Construction (Structural Welding Code).
- E. Concrete Reinforcing Steel Institute (CRSI) 933 N. Plum Grove Road, Schaumburg, IL 60195, (312) 490-1700:
1. Manual of Standard Practice.
- F. Colorado Department of Transportation (CDOT) Division of Administration, Office of Bid Plans, 4201 E. Arkansas Avenue, Denver, CO 80222:
1. Standard Specifications for Road and Bridge Construction (latest edition) Colorado Standard Plans, M&S Standards.
- G. Federal Highway Administration (FHWA) Superintendent of Documents, US Government Printing Office, Washington DC, 20402:
1. Manual of Uniform Traffic Control Devices (latest edition).

**PART 2 - PRODUCTS (NOT USED)**

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**PART 3 - EXECUTION (NOT USED)**

**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 014225**

**SECTION 014230****DEFINITIONS AND CONVENTIONS****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. This Section contains a list of definitions of words or phrases and grammatical or contextual conventions commonly used in these Contract Documents.

**1.03 DEFINITIONS**

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. Alphabetical Listing of Definitions:
1. As indicated: Shown on the drawings by graphic indication, notes, or schedules, or written in the specifications or elsewhere in the Contract Documents.
  2. As directed, as approved, as requested: Unless otherwise indicated, these terms imply "by the DEN Project Manager" and require that an instruction be obtained by the Contractor from the DEN Project Manager.
  3. Concealed: Embedded in masonry, concrete, or other construction; installed in furred spaces; within double partitions or hung ceilings; in trenches; in crawl spaces or in enclosures.
  4. Ensure: To make certain in a way that eliminates the possibility of error.
  5. Exposed: Not installed underground or "concealed" as defined above.
  6. Furnish or Provide: To supply, install and connect complete and ready for safe and regular operation of particular work unless specifically otherwise noted.
  7. Indicated, Shown, or Noted: As depicted on drawings or specifications.
  8. Install: To erect, mount and connect complete with related accessories.
  9. Or equal, or approved equal: Refers to products which, in the opinion of the DEN Project Manager, are similar in all respects to products specified by proprietary brand name. Refer to Section 012510 "Substitutions" for procedures for submittal of proposed substitutions.
  10. Rework: To repair existing items or work required to be removed and replaced in order to accomplish the Work in accordance with the Contract Documents.
  11. Related Work: Includes, but not necessarily limited to, mentioned work associated with, or affected by, the Work specified.
  12. Reviewed, Satisfactory, Accepted, or Directed: Assumes by or to the DEN Project Manager.
  13. Similar, or Equal: Same in materials, weight, size, design, construction, capacity, performance, and efficiency of specified product.
  14. Supply: To purchase, procure, acquire and deliver complete with related accessories.

**TECHNICAL SPECIFICATIONS**  
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**SECTION 014230 - DEFINITIONS AND CONVENTIONS**

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15. Unless Otherwise Indicated and Unless Otherwise Noted: General note to perform work as indicated or shown on drawings or in specifications unless specifically directed otherwise elsewhere in the Contract Documents; may be abbreviated "U.O.N.", "U.O.I.", or "U.N.O.".

**C. BIM Model Definitions:**

1. Building Information Model (BIM): BIM is a digital representation of the physical and functional characteristics of the Project and is referred as a Model(s), which term may be used to describe a Model Element, a single Model or technology used to create the Model.
2. Design Model: A Model that has reached the stage of completion that would customarily be expressed by an architect or engineer in two-dimensional Construction Documents.
3. Construction Model: The equivalent of shop drawing and other information useful to construction. A model that consists of data imported from a "Design Model or", if none exist, from a designer's "Construction Document".
4. Federated Model: Distinct component models "linked" together in such a manner that the linked data sources so not lose the indent or integrity by being so linked.
5. Level of Development (LoD): LoD describes the level of completeness to which a Model Element is developed.
6. Model Element: Is a portion of the BIM representing a component system or assembly within a building or building site.
7. Model Element Author: The party responsible for developing the content of a specific Model Element to the LoD for a particular phase of the Project.

**1.04 BIM REFERENCE STANDARDS**

- A. Refer to the DEN BIM Design Standard Manual (DSM) for the proposed minimum requirements of the BIM Execution Plan. The execution plan shall be further developed jointly with DEN and the Contractor to specifically address the administrative steps necessary to provide comprehensive BIM system before during and after construction.

**1.05 CONVENTIONS**

**A. Specifications Format:**

1. In order to standardize the location of information in the Contract Documents, the specifications generally are organized in one or more of the following formats:
  - a. The "MASTERFORMAT" 2011 Edition published by the Construction Specifications Institute.
  - b. The Standard Specifications for Road and Bridge Construction published by CDOT.
  - c. The alphanumeric system as published by the FAA.

**B. Organization of Drawings and Specifications:**

1. Organization of the specifications into divisions and sections, and arrangement or numbering of drawings is intended solely for the convenience of the Contractor in the Contractor's responsibilities to divide the Work among subcontractors or to establish the extent of work to be performed by any trade.
2. Neither the City nor the DEN Project Manager assume any liability arising out of jurisdictional issues or claims advanced by trade organizations or other interested parties based on the arrangement or organization of drawings or specifications.

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**C. Gender and Number:**

1. For convenience and uniformity, parties to the Contract, including the City, Contractor, and DEN Project Manager, and their subcontractors, suppliers, installers, consultants or other interested parties are referred to throughout the Contract Documents as if masculine in gender and singular in number. Such reference is not intended to limit the meaning of the Contract Documents to the masculine gender or singular number.

**D. Singular vs. Plural:**

1. Materials, products, equipment, or other items of work referred to in the singular shall be construed as plural where applicable by the intent of the Contract Documents and shall not limit quantities to be provided by the Contractor.

**E. Imperative Mood:**

1. Specifications and notes on the drawings or elsewhere in the Contract Documents are generally written in the imperative mood as instructions to the Contractor, whether the Contractor is specifically addressed or not.

**F. References to Subcontractors or Trades**

1. References to subcontractors, trades or other entities, which are not parties to the Contract, shall be construed as meaning the Contractor whose responsibility it shall be to divide the Work among subcontractors or trades. Such references are used as a matter of convention, and are not intended to preclude or direct the Contractor's responsibility to divide the Work.

**G. Abbreviations**

1. A list of abbreviations used in the Contract Documents is included in Technical Specifications Section 014220 "Abbreviations and Symbols"; an abridged list of abbreviations used on the drawings is included with the drawings.
2. Abbreviations are believed to be those in general use in the construction industry. Contact the DEN Project Manager for clarification of abbreviations for which the meaning is not clear.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 014230**



**SECTION 014510****CONTRACTOR QUALITY CONTROL****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. This Section identifies the Quality Control activities to be performed during all phases of the Contract by the Contractor.
- B. The Contractor shall have in place a Quality Control Program as necessary to ensure that all materials and work are completed in compliance with Contract Documents. The Contractor is solely responsible for Quality Control and shall provide the necessary quality control personnel to ensure that all materials, workmanship, and tests are in conformance with the Project documents with the exception of those tests and/or audits that may be conducted by the City as defined in the contract documents.
- C. Test schedules and/or testing requirements for materials used on this project are included in the technical specifications. Laboratory and field-testing identified in the specifications shall be conducted by a Testing Agency retained by the Contractor; hereafter is referred to as the Contractor Testing Agency (CTA).
- D. The City or the City's consultant will employ a testing agency to perform all the required Quality Assurance and Special Inspection Testing of material and Inspection of workmanship required by the Contract Documents and the Building Official to fulfill the code and the regulatory authority's requirements. The Contractor must schedule these tests and provide access to the City inspectors and testers to perform these tests and inspections on behalf of the City. The performance of the tests by the City does not relieve the Contractor of the responsibility to deliver a fully functional building meeting all the requirements of the Contract Documents and their intent. The Contractor must develop its own testing program for processing, acceptance from the subcontractor or suppliers at a frequency defined by the contractor for its own process control and to assure delivery of the intended acceptable workmanship. All time impacts of testing and retesting shall be accounted for in the updated schedule and any mitigation of time impacts shall be the responsibility of the Contractor.

**1.03 SUBMITTALS**

- A. Refer to Section 013300 "Submittals" and Section 013325 "Submittal Procedures" for submittal requirements.
- B. Quality Control Plan: Within ten (10) days after Notice to Proceed, the Contractor shall submit a Quality Control Plan for review and acceptance. The Quality Control Plan shall be accepted by the DEN Project Manager prior to any Work or materials being incorporated into the Project. Acceptance by the DEN Project Manager does not relieve the Contractor of its responsibility to comply with the Contract Requirements. The Contractor Quality Control Plan shall address the following as a minimum:
  - 1. A general description of Quality Control monitoring to be performed until final acceptance by DEN. Include monitoring activities of Work and the work site during

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times that no construction activity is scheduled to take place.

- a. No work requiring QC inspection and testing shall take place without QC inspection and testing staff on site.
2. An individual designated by the Contractor and approved in writing by the DEN Project Manager whose [sole] responsibility is Quality Control Management. This individual shall be highly qualified in all phases of construction as it relates to this Project and shall have the authority to direct work changes required to bring the Work into conformance with Contract requirements, including stopping non-conforming work in progress. A detailed resume of the proposed Quality Control Manager including applicable education, experience, and certifications shall be included in the Quality Control Plan.
  - a. At the discretion of the DEN Project Manager, for Small Projects, Early Work Packages and Task Orders all of value less than \$1,000,000 or a duration which is less than three (3) months, the Contractor may assign one of the Contractor's staff, i.e. Contractor's Superintendent, Office Engineer, Field Engineer, or Contractor's Project Manager as Quality Control Manager. The assigned person must be on site while work requiring QC inspection and testing is being completed and available to discuss quality issues, manage all aspects of the Project Quality Control Plan, coordinate all required Special Inspection and Quality Assurance testing, and provide proposed solutions on all quality issues at any time as to not cause any delay to the project. Any delays caused in part or in all due to defective or no conforming work shall be borne by the Contractor.
3. Quality Control inspection staff as needed to assist the Quality Control Manager with implementation of the Quality Control Program. Duties of the Quality Control Inspectors shall be limited strictly to inspection of the ongoing work. Sampling and testing of materials shall be performed by Quality Control personnel other than Quality Control Inspectors. Quality Control Inspectors shall inspect only those work elements for which they are qualified. Resumes of the proposed Quality Control Inspectors including applicable education, experience and certifications shall be included in the Quality Control Plan.
4. An Organization Chart identifying all Quality Control staff by name and function. The chart shall indicate the total staff required to implement all elements of the Quality Control Program, including inspection and testing for each item of work including tests performed by the CTA or DTA. If necessary, different Quality Control staff can be utilized for specific inspection and testing functions for different items of work. The chart shall show that the Quality Control Manager, Quality Control Inspectors, and Quality Control testing personnel are outside of the production staff with clear lines of authority for Quality Control.
5. The City will employ a DTA. If the Project Management Team for the project is a consultant of the City, then the City's consultant may employ a DTA. The Contractor's testing and inspection shall be performed for the processing, preparation and to request City's inspection and as necessary to produce the required product as specified in the Contract Documents. The Contractor shall meet the minimum inspection and testing frequencies specified in the contract documents. When the contract documents do not specify minimum inspection and testing frequencies the Contractor shall propose in writing to the DEN Project Manager a QC inspection and testing frequencies that meet or exceed industry standards for the material and work being placed or conducted.
6. Any test performed by any agency on the Project shall be recorded and show a passing re-test of all failing tests.
  - a. All test results shall be made available for inspection by the DEN Project Manager. This includes tests that are above the QC testing frequency required.
7. Any tests submitted by the Contractor for basis of acceptance, or payment reduction

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when performed by the Contractor or on its behalf, must meet all standards and must be certified to have followed approved procedure, processed in a certified lab by properly certified or licensed personnel by properly certified testers and on calibrated and certified equipment. Authentications of tests must be preapproved and cannot be selectively submitted. All tests shall be recorded in the field witnessed by DEN's inspector in order to be accepted as a record test of the material in question. Any failing tests could be the sole basis for rejecting the material.

8. Each technical specification division's requirements for quality control identifying each item requiring submittal and approval/acceptance prior to installation of work, all inspections to be performed during work and prior to acceptance of work, each item of work requiring testing by the independent testing agency or the City provided testing agency, and the testing frequency.
  9. The plan shall address all elements of special inspection required by the statement of special inspection as approved by the Building Official. All special inspections and tests will be performed by agencies employed by the City.
  10. The Contractor is responsible for the complete record of inspection file including but not limited to all manufacturer certificates, certificates of material compliance, Certificates of Material Testing Record, successful re-inspection of all deficiency items, proper deposition of design related Non-Conformance reports (NCR), Structural Engineers' observation reports, certification letters from the DTA, Building Inspectors' records of approvals, permit cards, fire suppression and fire- alarm tests records as witnessed by the authorities of jurisdiction and any record necessary to achieve a certificate of occupancy.
  11. The Contractor must keep track of all logs of discrepancies and submit periodic updates, as required by the DEN Project Manager, of all open issues and track the closure of open items in a timely manner.
  12. Establish controls and documentation format to ensure that items or materials that have been accepted through receiving inspection are used or installed. Identification and traceability shall be provided throughout all inspections, test activities, and records. For stored items, provisions shall be made for the control of item/material identification, consistent with the expected duration and type of storage.
  13. A methodology of monitoring, testing, and exercising of all equipment, valves, and/or assemblies to ensure the Work installed is in proper working order.
  14. A list of suppliers and subcontractors. This list shall include items to be supplied by each supplier and/or subcontractor and shall identify work to be performed by each subcontractor. The list shall be updated and resubmitted as required.
  15. All approvals related to Special Inspection are subject to the acceptance or approval of the Building Official.
  16. Emergency contact information including name, company, title, work phone number, home phone number, and other means of contact. The Emergency Contact list shall include at least four individuals. The Emergency Contact list shall be maintained on a daily basis. In the event there is any change in any of the information, the Contractor shall forward the updated list to the DEN Project Manager and to DEN Maintenance Control (303-342-2800). The Emergency Contact list shall include the project number, project title, and date of issue.
- C. The Contractor shall transmit the following daily reports to the DEN Project Manager electronically PRIOR TO THE CLOSE OF BUSINESS ON the following workday:
1. CM-13 Contractors Daily Construction Report. The Foreman may add sheets of information to this form as needed.
  2. CM-07 Daily Quality Control Inspection Report and all CTA test results performed that

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day.

3. CM-08 Daily DEN Time and Materials Report

- D. Deficiency List: The Quality Control Manager shall establish a deficiency list including the minimum information for each deficiency item; description, date, location, drawings reference, detail reference, specification reference, and superseding document NCR, date of expected solution date repaired date inspected by City representative and accepted.

**1.04 DOCUMENTATION**

- A. The Contractor shall not change or alter approved submittals, procedures, specifications, drawings/MODELS, or other pertinent documentation without the DEN Project Manager's written authorization.
- B. All records and documents that are related to quality control or assurance shall be prepared, identified and maintained by the Contractor and shall be made available to DEN upon request. Records shall be protected from damage, deterioration, or loss. A copy of the records and documents shall be maintained at the Work site at all times unless the DEN Project Manager has approved other locations in writing. Retention time for all quality records shall be not less than six (6) years from date of Final Acceptance of the Contract.
- C. The Contractor is responsible for the complete record of inspection file including but not limited to all manufacturer certificates, certificates of material compliance, Certificates of Material Testing Record, successful re-inspection of all deficiency items, proper deposition of design related NCRs, Structural Engineers' observation reports, certification letters from the DTAs, Building Inspectors' records of approvals, permit cards, fire suppression and fire-alarm tests records as witnessed by the authorities of jurisdiction and any record necessary to achieve a Certificate of Occupancy.
- D. The Contractor shall maintain records at the actual worksite and at Contractor's office to show the inspection status of materials and items installed in order to ensure that the required inspections and tests have been performed in a timely and correct manner.
- E. The Contractor must keep a record of all deficiency issues and show positive evidence of closure (passing re-inspection or re-test) to every issue.

**1.05 INSPECTIONS AND TESTS**

- A. Inspections, tests and system shut down requests, conducted by persons or agencies other than the Contractor, shall not in any way relieve the Contractor of the responsibility and obligation to meet all specifications and the referenced standards. The Contractor's designated Quality Control Representative shall inspect the work and shall ensure the Work complies with the Contract requirements prior to any requests for inspection or testing.
- B. When the specifications, laws, ordinances, rules, regulations or orders of any public agency having jurisdiction require the DEN Project Manager's surveillance of inspections or tests, the Contractor shall notify the DEN Project Manager, in writing, of the place, date and time 48 hours prior to the inspection and/or test. The Contractor shall be responsible for notifying and requesting inspection by other agencies including but not limited to the Denver Building Inspection Division, Denver Fire Department, and Denver Water Department. Prior to request for other agency inspections, the Contractor shall meet and plan inspection times with the DEN Project Manager.
- C. Special inspections or tests may be required by the technical specifications, City, State and/or Federal Agencies in addition to those tests already performed. The Contractor shall notify the DEN Project Manager, in writing, at least 48 hours in advance of the additional

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inspections or tests.

- D. Quantities will be verified as defined in the Pre-Work Meetings.

## **1.06 INSPECTION PLAN**

- A. The Contractor shall utilize the following six-point inspection plan to ensure the conformance of the Work performed by the Contractor meets the requirements of the Contract Drawings and specifications, the referenced codes and standards and the approved submittals:
1. Pework Coordination: Prior to the start of construction work on the Contract and prior to the start of Work under each separate specification section and prior to the start of Work where a change in a construction operation is contemplated by the Contractor, and prior to a new subcontractor starting work, a coordination meeting to ensure that the Contractor's personnel have no misunderstandings regarding their safety and quality procedures as well as the technical requirements of the Contract will be held with the Contractor's superintendent, Quality Control and Safety representatives, and DEN Project Manager. Supervisory, Safety and Quality Control, representatives of all applicable subcontractors will also attend. Prior to the meeting, the Contractor's Quality Control Manager shall provide the DEN Project Manager with a meeting agenda for review. The Contractor's Quality Control Manager shall conduct the meeting and distribute the approved agenda. The Quality Control Manager shall develop and electronically distribute finalized meeting minutes within one business day upon completion of the meeting. The following items shall be presented and reviewed by the Contractor:
    - a. Contract requirements and specifications.
    - b. Shop drawings, certifications, submittals, models, and as-built drawings.
    - c. Testing and inspection program and procedures.
    - d. Contractor's Quality Control program.
    - e. Familiarity and proficiency of the Contractor's and subcontractor's workforce to perform the operation to required workmanship standards including certifications of installers.
    - f. Safety, security, and environmental precautions to be observed.
    - g. Any other preparatory steps dependent upon the particular operation.
    - h. The Contractor's means and methods for performing the Work.
  2. Initial Inspection: Upon completion of a representative sample of a given feature of the Work and no later than two weeks after the start of a new or changed operation, the DEN Project Manager and/or the DEN Project Manager's designated representatives will meet with the Contractor's Quality Control representative and applicable subcontractor's supervisor and their Quality Control representatives to check the following items, as a minimum:
    - a. Workmanship to established quality standards.
    - b. Conformance to Contract Drawings, specifications and the accepted shop drawings.
    - c. Adequacy of materials and articles utilized.
    - d. Results of inspection and testing methods.
    - e. Adequacy of as-built drawings/MODELS maintained daily.
    - f. Once accepted, the representative sample will become the physical baseline by which ongoing work is compared for quality and acceptability. To the maximum practical extent, approved representative samples of work elements shall remain visible until all work in the appropriate category is complete. Acceptance of a sample does not waive or alter any Contract requirements or show acceptance of any deviation from the Contract not approved in writing by the DEN Project

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Manager.

3. Follow-up Inspection: The Contractor's Quality Control representative will monitor the Work to review the continuing conformance of the Work to the workmanship standards established during the preparatory and initial inspections.
4. Completion Inspection: Forty-eight (48) hours prior to the completion of an item or segment of work and prior to covering up any work, the Contractor shall notify the DEN Project Manager, in writing, who will verify that the segment of work is substantially complete, all inspections and tests have been completed and the results are acceptable. The purpose of this inspection is to allow further corrective work upon, or integral to, the completed segment of work. **THIS IS NOT AN ACCEPTANCE INSPECTION.** If any items are determined to be deficient, need correction or are non-conforming, a Deficiency List will be prepared and issued to the respective Contractor for correction, repair, or replacement of any deficient or non-conforming items. The DEN Project Manager and Contractor's Quality Control representative will verify the correction of the deficient and/or non-conforming items prior to the start of the next operation.
5. Pre-Final Acceptance Inspection: Prior to requesting a Pre-Final Acceptance Inspection by DEN, all work and operational systems to be inspected shall be satisfactorily completed and tested by the Contractor. The Contractor's written request for this inspection shall be made seventy-two (72) hours in advance. With the request shall come a list of any known deficiencies and when they will be corrected. If the list is too large or contains too many significant items, in the opinion of the DEN Project Manager, no inspection will be held because of the incompleteness of the Work.
6. The DEN Project Manager will schedule the Pre-Final Acceptance Inspection and will prepare a list of deficient items (punch list) discovered during the inspection. If during the inspection, the list becomes too large or too many significant items are on the list, the inspection will be canceled by the DEN Project Manager. After the inspection is completed, the Deficiency List will be transmitted to the Contractor for correction of the deficient items.
7. Final Acceptance Inspection: After the Contractor has completed all items on the Deficiency List (generated from the Pre-Final Acceptance Inspection), he shall request a Final Acceptance Inspection. The request shall be made in writing at least seventy-two (72) hours in advance of the inspection. All areas must be cleaned and ready for turnover prior to this inspection. The DEN Project Manager, the design consultant, a representative of the funding agency (if applicable) and other interested parties will inspect the subject Work to ensure that all deficiencies have been satisfactorily attended to and that no new deficiencies have appeared and that all systems are completely functional. Any outstanding or additional deficient items will be noted and handled per the requirements of the Pre-Final Acceptance Inspection noted above until the Work is acceptable to the DEN Project Manager.

**1.07 CONTRACTOR SUBMITTAL OF PROPOSED CONTRACTOR'S TESTING AGENCIES**

- A. Refer to Section 014525 - Material Testing Agency

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 REQUIREMENTS**

- A. All materials required for the Contract shall be new except where specified otherwise. The DEN Project Manager may elect to perform additional inspections and/or tests at the place

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of the manufacture, the shipping point or at the destination to verify conformance to applicable specifications. Inspections and tests performed by DEN shall not relieve the Contractor from the responsibility to meet the specifications, nor shall such inspections/tests be considered a guarantee for acceptance of materials that will be delivered at a later time.

- B. Materials accepted based on a Certificate of Compliance may be sampled and inspected/tested by DEN or its designer at any time. The fact that the materials were accepted based on such certification shall not relieve the Contractor of the responsibility to use materials that conform to the specifications.
- C. The Contractor shall impose upon suppliers the same quality control requirements, including inspection and test procedures, as imposed upon him by the specifications and referenced standards. The Contractor shall apply appropriate controls, designed to ensure that all materials supplied meet the requirements and specifications.

### **3.02 NONCONFORMING WORK AND MATERIALS**

- A. Non-conformance Report (NCR)
  - 1. The Project Manager will issue an NCR to the Contractor whenever there are violations of the terms of the contract that cannot be immediately brought back into conformance, including materials received and/or items of the work found not to be in conformance with contract requirements. When issued, a Non-conformance Report will preclude payment for elements noted and will remain in effect until corrective actions have been submitted, approved, and performed.
  - 2. The NCR will describe the nature and extent of nonconforming elements and will include space for the Contractor's corrective action proposal, the designer's review of the Contractor's proposal, reinspection and/or verification of approved corrective rework and a space for the Project Manager's disposition of the nonconformance matter. Copies of the NCR, at each step of its processing (i.e., initial issuance to Contractor through final disposition), will be sent to the Contractor.
  - 3. The NCR will be signed by the DEN Project Manager, and Contractor must acknowledge and sign the NCR within (10) days.
  - 4. The Project Manager will make the disposition of nonconforming items/materials.
  - 5. Failure to list any nonconforming work on an NCR does not relieve the contractor of responsibility for completing the Work in accordance with all contract requirements.
  - 6. The contractor cannot submit change requests associated with any portion of work under an NCR.
- B. The Contractor is obligated to correct any item deem deficient.

## **PART 4 - MEASUREMENT**

### **4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

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**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 014510**



**SECTION 014525****MATERIAL TESTING AGENCY****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. The Contractor shall employ the services of a Material Testing Agency; hereafter referred to as the Contractor Testing Agency (CTA). This Section identifies the requirements for the Contractor to employ a Material Testing Agency and identifies the required activities of the Material Testing Agency.
- B. Laboratory and field-testing requirements to be conducted by the CTA for materials and construction methods used on this project are included in the appropriate technical specifications. Where the Specifications reference the CDOT Standard Specifications for Road and Bridge Construction, the references shall also mean CDOT Field Materials Manual for schedule of tests unless otherwise stated. As a minimum, the CTA described in this Section shall perform all applicable tests listed in the manual including the independent assurance sampling and testing. In the event of such a conflict between the schedule and a specification in these technical provisions, the more comprehensive testing shall govern unless otherwise noted.
- C. Inspections and tests conducted by the CTA shall not in any way relieve the Contractor of the Contractor's responsibility and obligation to meet all specifications and referenced standards. Employment of the CTA does not relieve the Contractor of providing the required Quality Control program.
- D. When inspections or tests by the CTA prove that the item or material does not meet all applicable specifications and requirements, the cost incurred for the re-testing or re-inspection shall be borne by the Contractor as per this Section.
- E. Samples will only be considered if taken at random. The Contractor shall permit representatives of the City to witness the selection of samples. Inspection or tests of items or materials that fail shall be sufficient cause to terminate further inspections/tests of the same brand, make or source of that product.
- F. The Contractor is obligated to correct any item deemed deficient at no additional cost to DEN.

**1.03 SUBMITTALS**

- A. All submittals shall comply with requirements of Sections 013300 "Submittal Procedures" and 013325 "Shop and Working Drawings, Product Data and Samples" for submittal requirements.

**1.04 CONTRACTOR SUBMITTAL OF PROPOSED TESTING AGENCIES**

- A. The Contractor shall employ the services of a CTA that has been accredited by AASHTO or CCRL or an approved equal to perform the tests required in the Contract. The CTA may

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also provide technicians to perform the required inspections. However, inspection and testing cannot be performed simultaneously by the same technician. The Contractor shall receive written acceptance from the DEN Project Manager of the CTA prior to any permanent work being installed or tested.

- B. The Contractor shall not submit for acceptance to the DEN Project Manager any testing agency or laboratory utilized in the design or construction document preparation or presently employed by DEN as part of DEN Quality Assurance, Material Testing, or special inspection agencies.
- C. For consideration of acceptance, the Contractor shall submit to the DEN Project Manager the following items received from the CTA:
  - 1. Affidavit of current accreditation from a national certification and/or accreditation program(s).
  - 2. Evidence that the CTA Laboratory is accredited to perform the testing required in the Contract Documents.
  - 3. Resumes and evidence of professional engineer registration and licensing in the State of Colorado for the personnel reviewing and signing test reports.
  - 4. Resumes and current certifications verifying that CTA management and supervisory personnel, laboratory staff, field testing technicians, and inspecting technicians are qualified in accordance with ASTM C 1077, D 3666, D 3740, and E 329 requirements to perform the Work. NICET, ACI, WAQTC, LabCAT, CDOT, NRMCA, PCA, AWS, ASNT certifications or a degree in a related engineering field with construction field experience that can demonstrate qualifications. A list summarizing all management, supervisory, laboratory, field testing, and inspection personnel assigned to the Project including the testing and/or inspection each individual will be performing, certifications held by each individual, and the expiration date of each certification.
  - 5. A matrix indicating each technical specification section, paragraph, quantity and type of sampling and/or testing required.
  - 6. Copies of all laboratory, field testing, and inspection report forms.

**1.05 SUBMITTAL OF REPORTS**

- A. Test results shall be submitted by the Contractor to the DEN Project Manager after completion of inspections/tests by the CTA and prior to incorporation of the items into the Work unless the test or inspection must be done during or after installation.
- B. All field test results including but not limited to fresh concrete properties and in-place moisture-density shall be reported in legible draft form to the DEN Inspector immediately at the test site. Any failing test shall be reported separately to the DEN Inspector or DEN Project Manager. The draft test results shall also be attached to the Daily Quality Control Inspection Report (reference Section 014510 "Contractor Quality Control") and transmitted to the DEN Project Manager the next workday.
- C. Typed test reports shall be provided to the DEN Project Manager as specified in the "Weekly Reports" Article in this Section. The test reports shall be numbered sequentially in chronological order. Individual tests shall be numbered sequentially. The reports and tests shall also be organized per specification section. All test results must be reviewed and signed by a registered licensed engineer in the State of Colorado. The signature represents that the test procedures used are in strict conformance with the applicable testing standard, the calculated data are true and accurate, the tools and equipment used were in calibration, the sample was not contaminated and the persons running the test were qualified.

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- D. Reports of inspections and test activities are record documents and shall be maintained in a manner that provides integrity of item identification, acceptability, and traceability. Reports shall identify the following:
1. Contractor's name.
  2. DEN Contract number and title.
  3. Material Testing Agency name.
  4. Name of items inspected/tested including a physical description and, as applicable, model and make.
  5. Quantity of items.
  6. Inspection/test procedure used. If national standards are used, any deviation from these standards.
  7. Date the sample was taken and the date the test was made.
- E. Location (by coordinates, building grid or station number and elevation) of where tests and/or samplings were performed including environmental condition where applicable. Include plan drawing indicating location of test, lot size and location and work item sampled or tested.
1. Name of inspector/tester.
  2. In the event the testing or sampling is a re-test or re-sampling, reference the previous respective testing or sampling report.
  3. Specified requirements in the Contract that the item must meet. Include reference to technical specification section and paragraphs.
  4. Acceptability.
  5. Deviations/nonconformance.
  6. Evaluation of results.
  7. All information required for the specific test as specified in the applicable ASTM standard.
  8. Signature of authorized evaluator.

**1.06 WEEKLY SUMMARY REPORTS**

- A. The CTA and Quality Control Manager shall prepare and submit to the DEN Project Manager a weekly summary report each week, which summarizes by specification section all work activities and results for the quality control tests and inspections conducted during that period. The weekly summary report shall be submitted within two (2) weeks from the end of the reporting period. At a minimum, the weekly summary report shall identify all inspections, test types, test locations, testers, test results, specifications, whether the test passed or failed, quantity of materials placed and the number of tests performed for each material, and the material supplier, installer and Contractor. Re-tests shall be identified in a fashion that easily correlates to the failing test. Any failed tests that have not been corrected when the report is published shall be highlighted and noted in the cover letter of the report.
- B. The weekly report shall be submitted per Sections 013300 requirements.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

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**3.01 REMOVAL OF NONCONFORMING MATERIAL**

- A. The Contractor is obligated to correct or remove nonconforming materials, whether in place or not. If necessary, the DEN Project Manager will send written notification to the Contractor to correct or remove the defective materials from the project. If the Contractor fails to respond, the DEN Project Manager may order correction, removal, and/or replacement of defective materials by others, in which case the Contractor shall bear all costs incurred related to correcting, removing, and/or replacing the defective materials.

**3.02 PERFORMANCE**

- A. If the DEN Project Manager determines that the CTA or its personnel are not effectively enforcing or performing the testing and documentation requirements specified in the Contract, the DEN Project Manager will require, in writing, the Contractor to remove and replace the CTA or such personnel at no cost to DEN.

**3.03 CONTROL OF MEASURING AND TEST EQUIPMENT**

- A. The CTA shall select measuring and test equipment in such a manner as to provide proper type, range, accuracy, calibration, and tolerance for determining compliance with specified requirements. Measuring and test devices shall be calibrated, adjusted and maintained at prescribed intervals prior to use based upon equipment stability and other conditions affecting measurement. Provisions shall be made for the proper handling and storage of equipment. Calibration shall be accomplished using certified standards that have a known traceable relationship to the National Institute of Standards and Technology. Every calibrated measuring and test device shall show the current status, date of last calibration and the due date for the next calibration. Calibration records shall be maintained onsite as quality records and shall be made available for inspection upon the DEN Project Manager's request.

**PART 4 - MEASUREMENT****4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT****5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 014525**

**SECTION 015050****MOBILIZATION****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.
- B. Section 012910 "Schedule of Values"

**1.02 SUMMARY**

- A. The Work specified in this Section consists of preparatory work and operations including, but not limited to the following:
  - 1. Those necessary for the movement of personnel, equipment, supplies, and incidentals to the work site.
  - 2. For the establishment of all offices, buildings and other facilities necessary for the Work on the Project.
  - 3. For all other work and operations that must be performed or costs incurred prior to beginning work on the various Contract items on the work site.

**1.03 SUBMITTALS**

- A. Refer to Section 013300 "Submittal Procedures" and Section 013325 "Shop and Working Drawings, Product Data and Samples" for submittal procedures.
- B. Submit a Mobilization Schedule a minimum of fourteen (14) days prior to first billing for mobilization.

**1.04 DELIVERY**

- A. Delivery to the work site of construction tools, equipment, materials, and supplies shall be accomplished in conformance with all local governing regulations.

**PART 2 - PRODUCTS****2.01 PRODUCTS**

- A. Provide construction tools, equipment, materials, and supplies of the type and quantities that will facilitate the timely execution of the Work.

**PART 3 - EXECUTION****3.01 EXECUTION AND REMOVAL**

- A. Provide personnel, products, construction materials, equipment, tools, and supplies at the work site at the time they are required and scheduled to be installed or utilized.

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**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 015050**

**SECTION 015210****TEMPORARY FACILITIES****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Requirements:
1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.
  2. Project Special Provisions.

**1.03 DESCRIPTION**

- A. The Work specified in this Section consists of furnishing, installing, operating, maintaining, and removing temporary construction barriers, enclosures, and field facilities including the Contractor's construction offices, staging areas, yards, storage areas, electrical power, telephone, water, fire protection, and sanitary service.
- B. Construction Offices, Construction Yards and Storage Areas:
1. The Contractor's offices, construction yards and laydown and storage areas shall be located as shown on the Contract Drawings and/or as designated by the DEN Project Manager. All construction offices, staging areas, and material storage areas are to occur within these areas. The DEN Project Manager may but is not required to approve the Contractor to use office, laydown areas and storage areas at DEN but not designated specifically for this Project.
  2. Any activity that is expected to result in disturbance of the ground surface equal to or greater than one acre or part of a larger project that is expected to disturb equal to or greater than one acre, is required to be identified in their Erosion Control permit. These areas include, but are not limited to, laydowns, borrow areas, stockpiles, and storage areas regardless of the location.
  3. All areas of ground disturbance are required to be stabilized in accordance with State, local, and airport rules and regulations prior to permit termination and/or closure of the Contract.
  4. The Contractor shall restore any area on DEN property that becomes contaminated as a result of its operations in accordance with Airport Rule and Regulation 180. Restoration shall be either to applicable standards under Federal and State law or to such other levels as may be required by the Manager of Aviation, at the Manager's sole discretion.
  5. All temporary facility sites must be inspected prior to Contract closeout.
    - a. The DEN Project Manager or authorized representative shall conduct an inspection of contractor areas used during the life of the project. These areas include but are not limited to, staging areas, laydown areas, borrow areas, and

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contractor yards and offices.

6. The DEN Project Manager will ensure these areas have been properly stabilized in accordance with DEN Rules and Regulations and required permits. Site must be restored to the condition in which the City initially provided to the Contractor. A representative from DEN Environmental Services shall be present during the final walk through.
7. Contractor materials shall be managed in accordance with all applicable Environmental Regulations.
8. Temporary facilities which the Contractor desires to locate in secondary laydown and staging areas adjacent to the Work or within the project limits are subject to approval by the DEN Project Manager. If approved, these areas must also be included as part of the erosion control permit.
9. Access to and security of the Contractor's construction offices, yard, temporary facilities, and storage areas shall be as shown on the Contract Drawings or as specified in the Contract Special Conditions.
10. Contractor Field Office:
  - a. The Contractor shall acquire all necessary permits for installation and construction work related to the Contractor's field office and fencing.
11. In accordance with Denver Fire Department Requirements, all Temporary Facilities shall have signage that lists the following information:
  - a. Company Name
  - b. Contact Telephone Number
  - c. Facility Address

**C. Electrical Service**

1. Provide lighting and power for field offices, storage facilities and other construction facilities and areas.
2. Provide power centers for electrically operated and controlled construction facilities including tools, equipment, testing equipment, interior construction lighting, heating, cooling and ventilation equipment.
3. Provide night security lighting at secured areas within construction limits at offices, storage facilities, temporary facilities and excavated areas.
4. Provide battery operated or equivalent emergency lighting facilities at construction areas where normal light failures would cause employees to be subjected to hazardous conditions. Test such facilities monthly and maintain a record of these tests for the DEN Project Manager's review.
5. Contractor shall bear all costs of temporary electric service permits, fees, and deposits required by the governing authorities, and connection charges and temporary easements including installation, maintenance, and removal of equipment.

**D. Water Service:**

1. The Contractor shall make all connections and extensions required and shall make use of water in direct support of the Work. The Contractor shall install an approved Water Department tap at the City's water source prior to obtaining any water. The Contractor shall arrange and pay for its supply/distribution system from the City's point of connection. The location and alignment of the Contractor's temporary supply/distribution system must be approved by the DEN Project Manager prior to its installation. The Contractor shall leave in place all above ground and underground water distribution facilities unless otherwise directed by the DEN Project Manager.



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2. The Contractor shall not use in place fire hydrants or standpipes as sources for construction water or potable water.
  3. Comply with requirements of Division 22 Sections.
- E. Fire Protection:
1. Furnish, install, and maintain temporary portable fire protection equipment throughout the construction period at all buildings (including the project site), maintenance shops, and fuel storage on all large construction equipment and at the location of any flammable materials or construction materials.
  2. Comply with requirements of Division 21 Sections.
- F. Sanitary Service:
1. Furnish, install, and maintain temporary sanitary facilities and services throughout the construction period.
  2. Ensure that separate or single user toilets shall be provided to ensure privacy between the sexes.
  3. Provide general washing facilities adequate for the number of employees.
  4. Provide special washing facilities adequate for the number of employees engaged in the application of paints, coating, and other volatile or hazardous materials.

#### **1.04 SUBMITTALS**

- A. Refer to Section 013300 "Submittal Procedures" and Section 013325 "Shop and Working Drawings, Product Data and Samples" for submittal procedures.
- B. Submit a shop drawing within five (5) days of the Notice to Proceed that shows the following:
  1. Temporary facilities equipment and materials (include manufacturer's literature).
  2. Details and layout of temporary installations including fences, roads, parking, buildings, storage areas, signage, and drainage plans.
  3. Lighting plan showing temporary lighting facilities, electrical service panel location, electrical circuit diagram, and anticipated light level on the working roadway, pathway, or construction surface.
  4. As-built description of any temporary underground utilities referenced to the Airport grid and benchmark system within five (5) days of completion of the installation.
  5. Copies of all permits for all temporary facilities.

#### **1.05 QUALITY CONTROL**

- A. Provide products for, and the execution of, the Work of this Section that will satisfy the requirements of all applicable codes. Provide products that satisfy the requirements of the applicable codes.

### **PART 2 - PRODUCTS**

#### **2.01 ELECTRICAL SERVICE**

- A. Provide temporary power and lighting equipment consisting of fixtures, transformers, panel boards, groundings, lamps, switches, poles, conduits and wiring sized and capable of continuous service and having adequate capacity to ensure a complete operating system.

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Comply with NEMA and Division 26 requirements.

**2.02 TELEPHONE/COMMUNICATIONS SERVICE**

- A. Provide equipment that is compatible with that of the current DEN service provider and the telephone exchange to which the Contractor connects.

**2.03 POTABLE WATER SERVICE**

- A. Provide sanitary materials and equipment that satisfies the requirements of codes and regulations pertaining to temporary water systems. Bottled products may be used if those products comply with codes. Clearly label portable containers having a dispensing tap and used only for drinking water. Provide single service disposable cups and a sanitary container for dispensing cups. A trash receptacle shall be provided and maintained beside each portable water supply.
- B. If paints, coatings and other volatile or hazardous materials injurious to humans will be applied as part of the Contract, provide washing facilities with warm water of approximately 120 degrees F.

**2.04 FIRE PROTECTION**

- A. Fire extinguishers shall be UL rated and shall comply with the International Fire Code with City of Denver amendments.

**2.05 SANITARY SERVICE**

- A. Provide materials and equipment adequate for the intended purposes, which will neither create unsanitary conditions nor violate the codes applicable to temporary sanitary facilities. Enclosures for toilet and washing facilities shall be weatherproof, sight proof, ventilated and sturdy, and shall be maintained in clean conditions.
- B. Provide portable type toilet facilities that satisfy the requirements of OSHA.
- C. Provide washing facilities as needed. Furnish soap, single-service paper towels, towel dispenser, and towel receptacle.

**PART 3 - EXECUTION**

**3.01 ELECTRICAL SERVICE**

- A. The approximate location of primary power lines is shown on the Construction Drawings. The Contractor shall locate electrical service where it will not interfere with equipment, storage spaces, traffic, and prosecution of the Work or the work of others. Installation shall present a neat and orderly appearance and shall be structurally sound. Maintain service in a manner that will ensure continuous electrical service and safe working conditions.
- B. Comply with requirements of Division 26 Sections.

**3.02 TELEPHONE/COMMUNICATION SERVICE**

- A. Install temporary telephone service in a neat and orderly manner, and make structurally and electrically sound to ensure continuous service. Modify, relocate, and extend, as work progress requires. Place conduit and cable where those products will not interfere with traffic, work areas, materials, handling equipment, storage areas, and the work of other contractors. Service lines may be aerial.

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**3.03 WATER SERVICE**

- A. Install the systems in a neat and orderly manner. Make them structurally and mechanically sound. Provide continuous service. Modify, relocate, and extend the systems as the Work progresses.
- B. Comply with requirements of Division 22 Sections.
- C. Locate systems where they will be convenient to work stations, sanitary facilities, and first aid station but will not interfere with traffic, work areas, materials handling equipment, storage areas, or the work of other contractors.
- D. Provide sanitary bubbler drinking fountains if potable water service is available. Disinfect water piping before using for the potable water service.
- E. Install vacuum breakers, backflow preventers, and similar devices in a manner and location that will prevent temporary water from returning to the water mains.
- F. Do not incorporate any part of temporary water distribution system into the permanent water distribution system.

**3.04 FIRE PROTECTION**

- A. Install products in conformance with the requirements of the applicable Denver Fire Department and OSHA regulations.
  - 1. Provide functional, approved fire extinguishers that are clearly identified for fire and an accessible supply of water during the period of construction. These fire extinguishers shall remain in place until permanent fire protection systems are functional.
- B. Instruct construction personnel as to location and use of temporary fire protection equipment.
- C. Comply with requirements of Division 21 Sections.

**3.05 SANITARY SERVICE**

- A. Place temporary sanitary and washing facilities in a neat and orderly manner within the limits of the Work and convenient to the workstations. Make these facilities structurally and mechanically sound. Modify, relocate, and extend the facilities as required by progress of the Work.
- B. Service toilets at those time intervals that will minimize the accumulation of wastes and prevent creation of unsanitary conditions, but not less than once a week.
- C. The waste from the sanitary and wash facilities shall be disposed of in accordance with all applicable rules, regulations, and laws and with the least environmental impact.

**3.06 FENCING**

- A. Contact all utility service companies prior to planning fence location and post locations for certification of current utilities. Locate pothole posts planned within five (5) feet of known utilities.

**3.07 SIGNAGE**

- A. Contractor shall not provide any signage for temporary facilities without prior approval from

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the DEN Project Manager.

**3.08 REMOVAL**

- A. The Contractor shall locate all temporary facilities including the underground utilities so they can be completely removed without damaging permanent work or the work site of other contractors.

**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 015210**

**SECTION 015525****TRAFFIC CONTROL****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. The Work specified in this Section consists of furnishing plans and designs for traffic control and haul routes, implementing these plans with all necessary personnel and equipment. Installation may require but not be limited to signage, cones, flaggers, signal lights, lighting and temporary roads.
- B. All Work must be in conformance with the "Manual of Uniform Traffic Control Devices for Streets and Highways" (MUTCD) and CDOT Standard Plans regarding traffic control.
- C. The Contractor must coordinate the Contractor's proposed traffic control needs with the needs of other contractors on the airport construction site in writing through the DEN Project Manager.
- D. Refer to Article 805 – Protection of Street and Road System in the General Contract Conditions, Current Edition.

**1.03 QUALITY CONTROL**

- A. Temporary signal work shall conform to CDOT Standard Plans and the current version of the CDOT Standard Specifications.
- B. Designate a qualified person to inspect and test traffic control devices daily and to ascertain that those devices are continuously operating, serviceable, in place, and clean.
- C. Provide certified personnel who will be responsible for design, implementation, and inspection of traffic control needs.

**1.04 SUBMITTALS**

- A. Refer to Technical Specifications Sections 013300 "Submittals" and 013325 "Shop and Working Drawings, Product Data and Samples" for submittal procedures.
- B. Submit a Traffic Control Plan (TCP) that includes, at a minimum, the following list of items for approval before starting Work. Submit an updated TCP when necessary to modify traffic operation or undertake a construction activity that creates a different traffic pattern:
  - 1. Traffic blockade and reductions anticipated to be caused by construction operations.
  - 2. Temporary detours.
  - 3. A Method of Handling Traffic (MHT) must be submitted and approved by the DEN Project Manager, which at a minimum will show and describe proposed location, dates, hours, and duration of detours, vehicular traffic routing, and management, traffic control devices for implementing detours and details of barricades.

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- C. Submit Haul Route Plan for both on- and off-site hauls. The Haul Route Plan shall be submitted 30 days prior to hauling any permanent material. The Plan shall be updated as the Contractor's plans change.
- D. Specific Traffic Considerations: The DEN Project Manager may require the Contractor to revise the Traffic Control Plan to address traffic considerations not included in the Contractor's plan.
- E. Shutdown requests for any impact to traffic must be submitted for approval a minimum of five days before the intended shutdown. These requests will be made through the DEN Project Manager.

**PART 2 - PRODUCTS****2.01 TRAFFIC CONTROL DEVICES**

- A. Devices including signs, delineators, striping, barriers, barricades, and high-level warning devices shall conform to the latest revision of the MUTCD and the latest revision of the Colorado Department of Transportation Standard Plans.

**PART 3 - EXECUTION****3.01 TEMPORARY TRAFFIC CONTROL DEVICES**

- A. Place temporary control devices in a manner that allows for the smooth flow of traffic at the posted speed limit, limiting hazards or abrupt changes in direction.
- B. Place traffic cones or delineators as directed by the MUTCD. Operate warning lights between sunset and sunrise.
- C. Place control devices so that approaching traffic is alerted to hazards and variances to normal traffic patterns.
- D. Clean and repair damaged devices or replace them with new devices within 24 hours, and provide flaggers or other mitigation as required to maintain safe traffic control until devices have been replaced.

**3.02 TEMPORARY TRAFFIC STRIPING AND PAVEMENT MARKINGS**

- A. Full-compliance striping is required at all times per the MUTCD.
- B. Temporary signs must be replaced with permanent signing within three days per the MUTCD.

**3.03 FLAGGERS**

- A. Furnish flaggers where required for safety and by the MHT.

**3.04 CONSTRUCTION VEHICULAR TRAFFIC**

- A. Restrict construction vehicles to approved haul routes.
- B. Any contractor requests for revisions or modifications to the approved airfield haul routes in the contract documents, or for airfield haul routes not otherwise depicted in the contract documents, must follow the change management process.

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**3.05 CONTROLLING VEHICULAR AND PEDESTRIAN FLOW ADJACENT TO WORK SITE**

- A. Ensure that construction operations will not impede normal traffic. Where work is in the area of pedestrian or occupant activity, the Contractor shall detail a plan for managing pedestrian traffic safely. Refer to Title 8 - Protection of Persons and Property, Section 801.1 in the General Contract Conditions, Current Edition.

**3.06 SIGNS**

- A. Refer to Title 8, Article 802 - Protective Devices and Safety Precautions in the General Contract Conditions, Current Edition.
1. The Contractor must contact the DEN Project Manager a minimum of five (5) working days in advance of construction for installation, relocation, or removal of regulatory parking signs.
- B. Coordinate and pay any expense associated with the furnishing and installation of all parking regulatory signs, such as "No Stopping Any Time," etc., at the work site.
- C. Furnish and install any necessary advance detour or guidance signing.
- D. Authorize, modify, and install regulatory parking controls and vehicle turn restrictions.
- E. Implement those traffic control modifications outside of the traffic control zone that are necessary to manage diverted traffic.
- F. Clean and repair damaged signage or replace with new signage within 24 hours, and provide mitigation as required to maintain site safety until signage has been installed.

**PART 4 - MEASUREMENT****4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT****5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price bid items, work order or lump sum bid item.

**END OF SECTION 015525**

**SECTION 015719****TEMPORARY ENVIRONMENTAL CONTROLS****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Specifications Conditions and other Division 01 Specification Sections, apply to this Section.
- B. Title 8 - Protection of Persons and Property in the General Contract Conditions, 2011 Edition, specifically the following articles:
  - 1. Article 806 - Protection of Drainage Ways
  - 2. Article 807 - Protection of Environment
  - 3. Article 808 - Hazardous and Explosive Materials or Substances
  - 4. Article 809 - Archaeological and Historical Discoveries
- C. Denver Municipal Airport System Rules and Regulations, Part 180-Environmental Management.
- D. DEN Environmental Management System (EMS)

**1.02 SUMMARY**

- A. The Work specified in this Section consists of identifying, and avoiding or mitigating adverse environmental impacts to air, water, soil, and other natural resources caused by construction activities.
  - 1. The Contractor, in conducting any activity on airport property or in conducting work for an airport project not on airport property, shall comply with all applicable airport, local, state, and federal rules, regulations, statutes, laws, and orders.
  - 2. Work shall not commence on any project until all FAA approvals have been received, applicable permits have been issued and signed by permittee, and all inspection requirements have been satisfied in accordance with State and local permitting requirements.

**1.03 SUBMITTALS**

- A. Refer to Section 013300 "Submittal Procedures" and Section 013325 "Shop and Working Drawings, Product Data and Samples" for submittal procedures.
- B. Within ten (10) days after Notice to Proceed on a task order, the Contractor shall submit the following if applicable, unless waived by the DEN Project Manager:
  - 1. Submittals pertaining to water quality management:
    - a. Construction Activities Stormwater Discharge Permit
      - 1) City and County of Denver
        - a) Sewer Use & Drainage Permit (SUDP)
        - b) Construction Activities Stormwater Discharge Permit (CASDP)
      - 2) Colorado Department of Public Health and Environment (CDPHE) Colorado Discharge Permit System (CDPS) Authorization to Discharge (Contractor need not submit a copy of the general permit or the general permit rationale)



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- a) CDPS General Permit for Stormwater Discharges Associated with Construction Activities
  - b) CDPS General Permit for Associated with Non-Extractive Industrial Activity
  - c) CDPS General Permit for Construction Dewatering Discharges (Prior to obtaining a CDPS General Permit for Construction Dewatering Discharges permit, the Contractor shall submit a draft permit application and the final permit application for DEN review and approval PRIOR to submittal to CDPHE. The Contractor need not submit a copy of the general permit or the general permit rationale.
- 3) Upon request the contractor shall provide the following documentation
  - a) Stormwater Management Plan (SWMP)
  - b) CASDP Inactivation Request
  - c) CDPS Notice of Termination
  - d) Permit Transfer Application
  - e) Modification Application
  - f) Discharge Monitoring Reports (DMRs)
  - g) A copy of the well permit from the state Division of Water Resources for every new well that diverts or for the monitoring of groundwater. (A draft copy of the Notice of Intent for any borehole structure filed with the state Division of Water Resources).
  - h) Section 404 related permitting (Prior to obtaining a permit issued by the US Army Corps of Engineers, the contractor shall submit a draft copy of the application and coordinate with efforts DEN Environmental Services).
- 4) Revisions or amendments to the CASMP by the Contractor: At the completion of the Project, after final stabilization has been achieved and accepted in accordance with CASDP requirements, the Contractor shall submit a copy of the CASDP Inactivation Request.
2. Submittals pertaining to sewage holding tanks associated with buildings and trailers: For purposes of this Section, the generic term “sewage holding tank” means “onsite wastewater treatment system (OWTS),” “individual sewage disposal system (ISDS),” “privy vault,” “septic tank,” or “septic system”:
  - a. Draft copy of the permit application for a sewage holding tank.
  - b. Copy of the Sewer Use & Drainage Permit issued by the Denver Department of Public Works.
  - c. Copy of the OWTS permit issued by the Denver Department of Environmental Health.
3. Submittals pertaining to air quality management:
  - a. Copy of any permit issued by the CDPHE Air Pollution Control Division (APCD)
4. Submittals pertaining to storage tanks and containers:
  - a. Copy of the approved application issued by the State of Colorado, Department of Labor and Employment, Division of Oil and Public Safety, for installation of petroleum, or other regulated substances, storage tanks located on airport property and used for the Project.
  - b. Copy of permits issued by the Denver Fire Department for storage tank installations, storage tank removals, and hazardous materials use/storage.
  - c. Copy of Spill Prevention, Control, and Countermeasure (SPCC) Plan for petroleum storage tanks and containers with capacity of 55 gallons of oil or greater located on airport property and used for the Project.
5. Copies of any other plans, permits, permit applications, correspondence with regulatory agencies, including violations, waste manifests, results of laboratory analyses, or other environmental documentation required for the Project not

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previously identified herein.

## **1.04 RELATED DOCUMENTS**

- A. Code of Federal Regulations (CFR) Publications, including, but not limited to, the following:
  - 1. 33 CFR 323 - Permits for discharges of dredged or fill materials into waters of the United States.
  - 2. 40 CFR - Protection of Environment.
  - 3. 49 CFR 171-180 Hazardous Materials Transportation Regulations.
- B. Colorado Revised Statutes, including, but not limited to, the following:
  - 1. Water Quality Control, Title 25, Article 8.
  - 2. Air Quality Control, Title 25, Article 7.
  - 3. Hazardous Waste, Title 25, Article 15.
  - 4. Noise Abatement, Title 25, Article 12.
  - 5. Petroleum Storage Tanks, Title 8, Article 20.5.
  - 6. Liquefied Petroleum Gas (LPG) Storage Tanks, Title 8, Article 20, Part 4.
  - 7. Solid waste regulations.
- C. City and County of Denver Executive Orders, including, but not limited to, the following:
  - 1. Executive Order No. 115 - Required Use of Denver-Arapahoe Disposal Site (Landfill).
  - 2. Executive Order No. 123 - Office of Sustainability and Citywide Sustainability Policy.
  - 3. Denver Revised Municipal Code, Title II, Sections 48-44 and 48-93 - Solid Waste.
  - 4. Denver Revised Municipal Code, Title II, Section 4-43 – Idling Restriction.
- D. City and County of Denver Construction Activities Stormwater Manual.
- E. Any other applicable rules, regulations, ordinances, and guidance must be followed as applicable.
- F. Refer to Section 013300 "Submittal Procedures" and 013325 "Shop and Working Drawings, Product Data and Samples" for submittal procedures.
- G. Refer to Section 017419 "Construction Waste Management" for waste management requirements

## **PART 2 - PRODUCTS**

### **2.01 PRODUCTS**

- A. Products required for the Work shall meet all Environmental Requirements.
- B. At a minimum, products for erosion and sediment control must conform to the technical requirements contained in the City and County of Denver "Construction Activities Stormwater Manual" and the current version of the "Mile High Flood District's Urban Storm Drainage Criteria Manual, Volume 3: Best Management Practices".

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**PART 3 - EXECUTION**

**3.01 AIR POLLUTION CONTROLS**

- A. The Contractor shall use appropriate control measures to comply with applicable air quality permit requirements. Additionally, the Contractor must be aware of the following procedures and techniques while conducting construction activities on DEN property. NOTE: Application of dust control measures should be discussed and outlined in the Dust Control Plan.
1. Apply water as needed to the construction site haul roads, disturbed surface areas and public access roads as needed to suppress dust. The use of chemical stabilizer can be requested by the Contractor. The type of stabilizer to be used and locations of use must be included in the Dust Control Plan, which must be approved by the DEN Project Manager prior to application.
  2. The Contractor shall suspend all earthmoving activities if wind speed exceeds 30 mph. For purposes of this Section, the generic term “earthmoving” means clearing, grubbing, excavation, topsoil removal, backfilling, embankment work, grading, trenching, drilling, and installation of borings. Contractors are expected to check wind speeds with the airport’s ramp tower to demonstrate compliance with this requirement. In addition, the Project may be shut down if two of three of the Runway Visual Range (RVR) instruments read visibility of 2,400 feet or less. The instruments are used by FAA Control Tower personnel to ensure safe aircraft operations. Costs for shutdowns due to wind velocities or RVR readings shall not be grounds for delay or extra cost claims.
- B. Burning of materials is strictly prohibited on DEN property.

**3.02 WATER POLLUTION CONTROLS**

- A. The Contractor shall conduct construction activities in accordance with all applicable permit requirements. In addition, the Contractor shall comply with the following procedures and requirements while conducting activities on DEN property:
1. Water encountered during construction cannot be discharged to the stormwater system or placed onto the ground surface without a permit AND prior written approval by the DEN Project Manager. If groundwater or stormwater is anticipated to be encountered and the Contractor desires to discharge it to the stormwater system or onto the ground surface, then the Contractor must obtain an appropriate CDPS discharge permit in advance of the discharge unless this activity is specifically authorized under the CDPS Construction Stormwater Permit.
  2. If water is encountered and the Contractor desires to discharge these waters to the sanitary sewer system, then the Contractor must obtain approval from DEN Environmental Services in advance of the discharge.
  3. The Contractor shall ensure that stormwater that comes in contact with storage areas does not become impacted and discharged to the stormwater sewer system or to an impervious surface. Furthermore, any materials in storage areas shall not be stored directly on the ground.
  4. The Contractor shall not operate any valves, sluice gates or other drainage appurtenances related to any DEN sewer system without the prior approval of both the DEN Project Manager and DEN Environmental Services. Any violation of this directive may result in the payment of a financial penalty by the Contractor if the State of Colorado assesses such a penalty.

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**3.03 EROSION CONTROL AND SEDIMENTATION CONTROL**

- A. This Work consists of constructing, installing, maintaining and removing, if required, temporary and permanent control measures during the life of the Contract (and possibly afterward) until the Contractor achieves final stabilization of the site to prevent or minimize erosion, sedimentation, and pollution of any state waters in accordance with all Environmental Requirements.
- B. The Contractor is responsible for compliance with all requirements in accordance with the CASDP, the City and County of Denver Construction Activities Stormwater Manual, the approved CASMP, and CDPS-issued permits.
- C. Temporary facilities, including but not limited to storage areas, laydowns, borrow areas, and contractor offices and work yards, shall be managed in accordance with Section 015210 "Temporary Facilities".
- D. Clean soil fill may be stockpiled in any area that has been previously approved and signed off by the DEN Section Manager of Construction, Design and Planning, and Environmental Services. Soil stockpiles are considered a potential pollutant source and must be addressed in the CASMP and/or SWMP.
- E. Make immediately available, upon the DEN Project Managers request, all labor, material, and equipment judged appropriate by the DEN Project Manager to maintain suitable erosion and sediment control features. These actions requested by the DEN Project Manager take precedence over all other aspects of project construction that have need of the same labor, material and equipment, except those aspects required to prevent loss of life or severe property damage.

**3.04 CONSTRUCTION OF CONTROL MEASURES FOR EROSION AND SEDIMENTATION**

- A. The Contractor must install control measures in accordance with the most recent version of the "Mile High Flood District's Urban Storm Drainage Criteria Manual, Volume 3: Best Management Practices and the City and County of Denver Construction Activities Stormwater Manual".
  - 1. Deviations from these two documents are allowed with written consent from the City and County of Denver CASDP Inspector.

**3.05 STORAGE OF OIL, FUELS, OR HAZARDOUS SUBSTANCES**

- A. The Contractor shall prevent oil or other hazardous substances, as defined in federal and state regulations, from entering the ground, drainage or local bodies of water, and shall provide containment, diversionary structures, or equipment to prevent discharged oil from reaching a watercourse and take immediate action to contain and clean up any spill of oily substances, petroleum products, or hazardous substances. The Contractor shall provide one or more of the following preventive systems at each petroleum storage site:
  - 1. Dikes, berms, or retaining walls capable of containing at least 100% of the volume of the largest single tank and equipped with sufficient freeboard to contain precipitation events. The secondary containment must be "sufficiently impermeable" to prevent a release to the environment.
  - 2. Culverting, curbing, guttering, or other similar structures capable of containing at least 100% of the volume of the largest single tank and freeboarding from precipitation.
- B. The provision of such preventive systems shall be subject to acceptance by the DEN Project Manager prior to tank installation and shall follow the SPCC regulations (40 CFR Part 112).

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- C. Prior to bringing any containers of 55-gallon or above capacity onto DEN property for storage of oil, fuel, or other petroleum substances, the Contractor may be required to prepare an SPCC Plan that conforms to 40 CFR Part 112. The plan must include a certification either from a Professional Engineer or self-certification, if applicable, as well as management approval from the legally responsible Contractor representative.

### **3.06 SPILL RESPONSE AND NOTIFICATION**

- A. The Contractor is responsible for all spills that may result from its activities. For ANY suspected or confirmed release or spill of oil, fuel, solid waste, hazardous waste, unknown materials, lavatory waste, or miscellaneous chemicals, etc., that occurs as the result of the Contractor's activities on DEN property, the Contractor is required to take immediate action to mitigate the release or spill and report it to the DEN Project Manager and to the DEN Communications Center at (303) 342-4200.
- B. The Contractor is responsible for notifying the appropriate regulatory agency in the event suspected and/or confirmed releases are identified, in accordance with regulatory requirements.

### **3.07 SITE REMEDIATION AND RESTORATION**

- A. The Contractor shall be required to perform any necessary site assessment and remediation activities required by applicable regulatory agency.
- B. During routine construction activities, the Contractor is required to manage soils using typical construction techniques. The Contractor must differentiate between soils and wastes, including contaminated soils versus clean soils, and determine those materials that can remain on DEN property and those that must be transported off site for disposal.
- C. During all construction activities that require the management of soils, the Contractor must notify the DEN Project Manager and DEN Environmental Services (ES) that soils being managed may be impacted by industrial activities conducted at the airport. "Process knowledge" pertaining to previous use and/or impact for the locations under construction can be used to determine whether impacted soils are probable. Also, common indices such as soil staining and odor can be used as a determination for the probable condition. If probable contamination conditions are suspected, the Contractor will notify the DEN Project Manager and DEN ES immediately. At that time, which may be before the Work is initiated where indicative conditions exist, all work will cease until a sampling and analysis approach is determined and implemented by the proper responder.
- D. If the site conditions warrant based on evidence of spillage or contamination, process knowledge, and/or visual or olfactory observations, the Contractor may be required to conduct sampling and analysis to confirm that no remedial action is required. Prior to conducting any removal activities, the Contractor must provide a Scope of Work to the DEN Project Manager describing the proposed site assessment activities.
- E. The impacted project will modify its operation to include a segregation area where probable impacted soils can be placed, stored, and sampled for characterization. Should the soil materials be determined to exceed the applicable standards, the DEN Project Manager, in conjunction with DEN ES, will be responsible for the proper disposal of these materials. Materials that are determined to contain contamination levels below the applicable standards can be considered clean soils and placed back into the excavation or reused elsewhere on DEN property. In accordance with Part 3 of this Section, materials removed that are suitable for recycling will be placed within areas designated on DEN to store these materials.

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**TECHNICAL SPECIFICATIONS**  
**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 015719 - TEMPORARY ENVIRONMENTAL CONTROLS**

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- F. The Contractor shall restore any area on the Airport that becomes contaminated as a result of its operations. Restoration shall be either to applicable standards under federal and state law or to such other levels as may be required by the Manager of Aviation, at the Manager's sole discretion. Such restoration shall be completed at the earliest possible time, and the Contractor's restoration shall be subject to inspection and approval by the Manager of Aviation or duly authorized representative. See DEN Rules & Regulations - Part 180.

**PART 4 - MEASUREMENT****4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT****5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 015719**

**SECTION 015810****TEMPORARY SIGNS****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Section includes requirements for the following:
  - 1. Construction signage visible to the public.
  - 2. Temporary directional, informational, or regulatory signage.
- B. Related Requirements:
  - 1. Section 015210 "Temporary Facilities" for requirements for temporary facilities.

**1.03 SUBMITTALS**

- A. Submit temporary sign finishes, materials and paint, etc., for review and approval by DEN Project Manager prior to any fabrication.

**1.04 QUALITY CONTROL**

- A. Construction and other temporary signage visible to the public must be commercial grade quality, professionally fabricated, and installed based on the location of the sign. The Contractor is responsible to maintain this signage until it is no longer needed, and to remove signage from the site.

**PART 2 - PRODUCTS****2.01 GENERAL**

- A. Interior signs that are visible and not physically accessible to the public may be made of rigid board, such as "Gator Board", with vinyl messages. All edges must be finished and all fasteners concealed.
- B. Interior signs that are visible and physically accessible by the public must be vandal-proof. Acceptable examples of vandal-proof signs are messages applied second surface with concealed tamperproof fasteners.
- C. Exterior signs must be vandal-proof and fabricated of weatherproof materials.

**PART 3 - EXECUTION****3.01 HARDWARE**

- A. Interior Signs: Attach with suitable adhesive and/or tape which may be removed without damage to finishes.

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- B. Exterior Signs: Must be secured to withstand site conditions and varying weather conditions.

**3.02 SIGN FINISHES, MATERIALS, AND PAINT**

- A. Provide temporary signage to reflect permanent sign design and/or as directed by the DEN Signage Design Project Manager. Submit temporary sign finishes, materials and paint, etc., for review and approval prior to any fabrication.

**3.03 MAINTENANCE**

- A. The Contractor shall maintain temporary signage until it is no longer needed, as determined by DEN Project Manager.

**3.04 REMOVAL**

- A. The Contractor shall remove all temporary signs, and clean and refurbish affected areas to their original, or intended, condition.

**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price bid item, work order or lump sum bid item.

**END OF SECTION 015810**



## **SECTION 016000 - PRODUCT REQUIREMENTS**

### **PART 1 - GENERAL**

#### **1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

#### **1.02 SUMMARY**

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Requirements:
  - 1. Section 012300 "Alternates" for products selected under an alternate.
  - 2. Section 012510 "Substitutions" for requests for substitutions.
  - 3. Section 014225 "Reference Standards" for applicable industry standards for products specified.

#### **1.03 DEFINITIONS**

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
  - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
  - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
  - 3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

#### **1.04 SUBMITTALS**

- A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number, title, and Drawing numbers and titles.
  - 1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
  - 2. DEN Project Manager's Action: If necessary, DEN Project Manager will request additional information or documentation for evaluation within one week of receipt of a comparable product request. DEN Project Manager will notify Contractor[ through Construction Manager] of approval or rejection of proposed comparable product request within 15 days of receipt of request, or seven (7) days of receipt of additional information or documentation, whichever is later.
    - a. Form of Approval: As specified in Section 013300 "Submittal Procedures."

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**TECHNICAL SPECIFICATIONS**  
**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 016000 - PRODUCT REQUIREMENTS**

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- b. Use product specified if DEN Project Manager does not issue a decision on use of a comparable product request within time allocated.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 013300 "Submittal Procedures." Show compliance with requirements.

### **1.05 QUALITY ASSURANCE**

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.
  - 1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
  - 2. If a dispute arises between contractors over concurrently selectable but incompatible products, DEN Project Manager will determine which products shall be used.

### **1.06 PRODUCT DELIVERY, STORAGE, AND HANDLING**

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
  - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
  - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
  - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
  - 4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:
  - 1. Store products to allow for inspection and measurement of quantity or counting of units.
  - 2. Store materials in a manner that will not endanger the Project, including the structure.
  - 3. Store products that are subject to damage by the elements under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
  - 4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
  - 5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
  - 6. Protect stored products from damage and liquids from freezing.
  - 7. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

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**1.07 PRODUCT WARRANTIES**

- A. Refer to Title 18 - Warranties, Guarantees and Corrective Work of the General Contract Conditions, 2011 Edition.
- B. Submittal Time: Comply with requirements in Section 017720 "Contract Closeout."

**PART 2 - PRODUCTS**

**2.01 PRODUCT SELECTION PROCEDURES**

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged, and unless otherwise indicated, are new at time of installation.
  - 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
  - 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
  - 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
  - 4. Where products are accompanied by the term "as selected," DEN Project Manager will make selection.
  - 5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
  - 6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures:
  - 1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
  - 2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
  - 3. Products:
    - a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered unless otherwise indicated.
    - b. Nonrestricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.
  - 4. Manufacturers:
    - a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience [will] [will not] be considered[ unless otherwise indicated].

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- b. Nonrestricted List: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.
- 5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
- C. Visual Matching Specification: Where Specifications require "match DEN Project Manager's sample", provide a product that complies with requirements and matches DEN Project Manager's sample. DEN Project Manager's decision will be final on whether a proposed product matches.
  - 1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 012510 "Substitutions" for proposal of product.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by DEN Project Manager from manufacturer's full range" or similar phrase, select a product that complies with requirements. DEN Project Manager will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

## **2.02 COMPARABLE PRODUCTS**

- A. Conditions for Consideration: DEN Project Manager will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, DEN Project Manager may return requests without action, except to record noncompliance with these requirements:
  - 1. Evidence that the proposed product does not require revisions to the Contract Documents that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
  - 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
  - 3. Evidence that proposed product provides specified warranty.
  - 4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
  - 5. Samples, if requested.

## **2.03 MATERIALS**

- A. General: Comply with requirements specified in other Sections.
  - 1. For projects requiring compliance with sustainable design and construction practices and procedures including but not limited to the requirements of Executive Order 123, use products for patching that comply with requirements in Section 018113.13 "Sustainable Design Requirements - LEED for New Construction and Major Renovations," Section 018113.16 "Sustainable Design Requirements - LEED for

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Commercial Interiors," Section 018113.19 "Sustainable Design Requirements - LEED for Core and Shell Development."

- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
  - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to DEN Project Manager for the visual and functional performance of in-place materials.

**PART 3 - EXECUTION (NOT USED)**

**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 016000**

**SECTION 016610****STORAGE AND PROTECTION****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. The Work specified in this Section consists of providing storage and protection of the materials, products and supplies which are to be incorporated into the construction and indicating such storage areas on the working drawings with the location and dates when such areas will be available for each purpose.
- B. Related Requirements:
- C. Section 015210 "Temporary Facilities" for requirements for temporary facilities.

**1.03 SUBMITTALS**

- A. Refer to Technical Specifications Sections 013300 "Submittal Procedures" and 013325 "Shop and Working Drawings, Product Data and Samples" for submittal procedures. Submit concurrently with submittals required in Section 013223 "Construction Layout, As-built and Quantity Surveys".
- B. Submit working drawings showing locations of storage areas not indicated on the Contract Drawings.
- C. Submit descriptions of proposed methods and locations for storing and protecting products.

**PART 2 - PRODUCTS****2.01 MATERIALS**

- A. Materials required for the storage and protection of the items specified shall be durable, weatherproof and either factory finished or painted to present an appearance acceptable to the DEN Project Manager and the City. Storage facilities shall be uniform in appearance with similar materials used to the maximum extent possible.

**PART 3 - EXECUTION****3.01 GENERAL REQUIREMENTS OF EXECUTION**

- A. Palletize materials, products, and supplies that are to be incorporated into the construction immediately so they are stored off the ground. Material and equipment shall be stored only in those areas that are indicated as storage areas on the Contract Drawings and on the reviewed and accepted working drawings.
  - 1. Store these items in a manner which will prevent damage and facilitate inspection.

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2. Leave seals, tags, and labels intact and legible.
  3. Maintain access to products to allow inspection.
  4. Protect products that would be affected by adverse environmental conditions.
- B. Periodically inspect stored products to ensure that products are being stored as stipulated and that they are free from damage and deterioration.
1. Any damaged or deteriorated materials must be replaced immediately to avoid delays in the project schedule.
- C. Do not remove items from storage until they are to be incorporated into the Work.
- D. The Contractor shall ensure that all protective wrappings and coverings are secure and ballasted to prevent any items from deterioration and/or subsequent dislodgment. All items on the work site that are subject to becoming windborne shall be ballasted or anchored.

### **3.02 HANDLING AND TRANSPORTATION**

- A. Handling:
1. Avoid bending, scraping, or overstressing products. Protect projecting parts by blocking with wood, by providing bracing or by other approved methods.
  2. Protect products from soiling and moisture by wrapping or by other approved means.
  3. Package small parts in containers such as boxes, crates, or barrels to avoid dispersal and loss. Firmly secure an itemized list and description of contents to each container.
- B. Transportation:
1. Conduct the loading, transporting, unloading, and storage of products so that they are kept clean and free from damage.

### **3.03 STORAGE**

- A. Store items in a manner that shall prevent damage to DEN's property. Do not store hydraulic fluids, gasoline, liquid petroleum, gases, explosives, diesel fuel, and other flammables in excavations. Petroleum products and chemicals must be stored in closed containers within secondary containment.
- B. Provide sheltered weather-tight or heated weather-tight storage as required for products subject to weather damage.
- C. Provide blocking, platforms or skids for products subject to damage by contact with the ground.
- D. All material shall be stored according to the manufacturer's recommendations. Any material that has to be stored within specified temperature or humidity ranges shall have a 24-hour continuously written recording made of the applicable condition. Should the recording show that the material was not stored within the recommended ranges the material shall be considered defective and in nonconformance. If a certification from the manufacturer's engineering design representative is provided stating that the actual variations are acceptable and will in no way harm the material or affect warranties, then the deficiency will be considered corrected.
- E. Store hazardous material separately, with all material marked with a label showing the hazard and how to treat exposure to the material. Store incompatible materials separately.

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- F. Extra materials that are left over at the completion of the Work shall be removed from the Project site by the Contractor unless they are required to be delivered to DEN as per Contract Document requirements for maintenance stock.

**3.04 LABELS**

- A. Flammable and combustible substances shall be stored in flammable storage cabinets that conform to OSHA requirements and shall be labeled "FLAMMABLE - KEEP FIRE AWAY" and "NO SMOKING".

**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 016610**



**SECTION 017330****CUTTING AND PATCHING****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.
- B. Refer to Article 316, Cutting and Patching the Work in the General Contract Conditions, 2011 Edition

**1.02 SUMMARY**

- A. Section Includes:
  - 1. Project information.
  - 2. Work covered by Contract Documents.
  - 3. Phased construction.
  - 4. Work by DEN.
  - 5. Work under separate contracts.
  - 6. Future work.
  - 7. Purchase contracts.
  - 8. DEN-furnished products.
  - 9. Contractor-furnished, DEN-installed products.
  - 10. Access to site.
  - 11. Coordination with occupants.
  - 12. Work restrictions.
  - 13. Specification and drawing conventions.
  - 14. Miscellaneous provisions.
- B. Related Requirements:
  - 1. Section 015210 "Temporary Facilities" for limitations and procedures governing temporary use of DEN's facilities.
  - 2. Section 015719 "Temporary Environmental Controls" for environmental control requirements.
  - 3. Section 024119 "Selective Demolition" for selective demolition of structures and other elements.
  - 4. Section 099123 "Interior Painting" for interior painting of areas of cutting and patching.
- C. Alternates: Refer to Division 01 Section 012300 "Alternates" for description of Work in this Section affected by Alternates.

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**1.03 DEFINITIONS**

- A. Cutting: Removal of existing construction to permit installation of or to perform other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

**1.04 SUBMITTALS**

- A. Refer to Section 013300 "Submittal Procedures" and Section 013325 "Shop and Working Drawings, Product Data and Samples" for submittal procedures.
- B. Cutting and Patching Proposal: Submit a proposal describing procedures at least thirty (30) calendar days before the time cutting and patching will be performed, requesting approval to proceed. Obtain approval of the cutting and patching proposal by DEN Project Manager before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work or repair of other work damaged by unsatisfactory work. The proposal shall include at least the following information:
  - 1. Identification of the Contract and the Contractor's name.
  - 2. Description of proposed work:
    - a. Scope of cutting, patching, alteration, or excavation.
    - b. The necessity for cutting or alteration.
    - c. Drawing showing location of the requested cutting or alteration, along with radar or x-ray report.
    - d. Trades that will execute the work.
    - e. Products proposed to be used.
    - f. Extent of refinishing to be done.
    - g. Alternatives to cutting and patching.
  - 3. Changes to Existing Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
  - 4. Utilities: List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out of service. Indicate how long service will be disrupted and proposed dates of interruption of service. Additionally, verify and locate anything in or behind the area prior to cutting.
  - 5. Proposed Dust Control and Noise Control Measures: Submit a statement or drawing that indicates the measures proposed for use, proposed locations, and proposed time frame for their operation. Identify options if proposed measures are later determined to be inadequate.
  - 6. Effect on the work and other surrounding work or on structural or weatherproof integrity of Project.
  - 7. Written concurrence of each contractor or entity whose work will be affected.
  - 8. Cost proposal, when applicable.

**1.05 QUALITY CONTROL**

- A. Operational Elements: Do not cut and patch ANY operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance, decreased operational life or safety unless approved by the DEN Project Manager. Operations elements may include, but are not limited to the following:

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1. Primary operational systems and equipment.
  2. Air or smoke barriers.
  3. Fire protection systems.
  4. Control systems.
  5. Communication systems.
  6. Conveying systems.
  7. Electrical wiring systems.
  8. Operating systems of special construction as described in Divisions 13 and 26.
  9. HVAC systems.
- B. Miscellaneous Elements: Do not cut and patch ANY of the following elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or those results in increased maintenance, decreased operational life or safety unless approved by the DEN Project Manager. Miscellaneous elements may include, but are not limited to the following:
1. Water, moisture, or vapor barriers.
  2. Membranes and flashings.
  3. Exterior curtain wall construction.
  4. Equipment supports.
  5. Piping, ductwork, vessels and equipment.
  6. Noise control and vibration control elements and systems.
  7. Stud walls.
  8. Roofing system
- C. Visual Elements: Do not cut and patch ANY construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would reduce, in DEN's sole opinion, the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactorily manner.
1. If possible, retain the original installer or fabricator to cut and patch exposed Work listed below. If it is impossible to engage the original installer or fabricator, engage another recognized, experienced, and specialized firm as approved by the DEN Project Manager. Visual elements may include, but are not limited to:
    - a. Stonework and stone masonry.
    - b. Ornamental metal.
    - c. Matched-veneer woodwork.
    - d. Preformed metal panels.
    - e. Firestopping.
    - f. Window wall systems.
    - g. Terrazzo.
    - h. Flooring.
    - i. Wall coverings and finishes.
    - j. HVAC enclosures, cabinets, or covers.
- D. Cutting and Patching Conference: Before proceeding, meet at the Project site with all parties involved in cutting and patching, including mechanical and electrical trades. Review

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areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

## **1.06 WARRANTY**

- A. Existing Warranties: Remove, replace, patch and repair materials and surfaces cut or damaged during cutting and patching operations by methods and with materials so as not to void existing warranties.
  - 1. All effort shall be made to engage the original installer or fabricator to patch the exposed Work listed below that is damaged during selective demolition. If it is impossible to engage the original installer or fabricator, engage another recognized, experienced and specialized firm as approved by the DEN Project Manager:
    - a. Processed concrete finishes.
    - b. Stonework and stone masonry.
    - c. Ornamental metal.
    - d. Matched-veneer woodwork.
    - e. Preformed metal panels.
    - f. Firestopping.
    - g. Window wall systems.
    - h. Terrazzo.
    - i. Flooring.
    - j. Wall coverings and finishes.
    - k. HVAC enclosures, cabinets, or covers.

## **1.07 MATERIALS**

- A. General: All patching material shall be of the type specified for the material being patched. Comply with requirements specified in other specifications Sections.
- B. Existing Materials: Use materials identical to existing materials. For exposed surfaces, use materials that visually and texturally match existing adjacent surfaces to the fullest extent possible.
  - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of existing materials as approved by the DEN Project Manager.:

## **PART 2 - PRODUCTS (NOT USED)**

## **PART 3 - EXECUTION**

### **3.01 EXAMINATION**

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
  - 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers. Provide additional substrates or materials if required to achieve desired final results of patching work.
  - 2. Immediately notify the DEN Project Manager, in writing, of unsuitable, unsafe, or unsatisfactory conditions.

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3. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.
4. Proceed with patching only after construction operations requiring cutting are complete and inspected by the DEN Project Manager.

### **3.02 PREPARATION**

- A. Temporary Support: Provide temporary support of Work to be cut to ensure structural value or integrity.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Existing Services: Where existing services are required to be removed, relocated, or abandoned, bypass such services before cutting to avoid or minimize interruption of services to occupied areas. Do not interrupt services in without approval from the appropriate authority. Refer to the appropriate Shutdown specification/procedures for applicable services.

### **3.03 POLLUTION CONTROLS**

- A. Dust Control: Use water mist, temporary enclosures, and other suitable methods to limit the spread of dust and dirt. Comply with governing environmental protection regulations. Reference Section 015719 "Temporary Environmental Controls" for requirements.
  1. Do not use water when it may damage existing construction or create hazardous or objectionable conditions such as ice, flooding, and pollution.
  2. Wet mop floors to eliminate trackable dirt and wipe down walls and doors of demolition enclosures. Vacuum carpeted areas. Professionally clean carpeted areas if required.
  3. For outdoor concrete saw cutting operations, slurry waste must be vacuumed up immediately to prevent migration off-site to pervious surfaces, surface waters or drains.
- B. Disposal: Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
  1. Concrete slurry waste must be disposed of properly in accordance with applicable airport, local and state rules and regulations.
- C. Cleaning: Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to the condition existing before selective demolition operations began.

### **3.04 PERFORMANCE**

- A. General: Employ skilled workers to perform cutting and patching. Execute cutting and demolition by methods that will prevent damage to other work and will provide a proper surface to receive patching.
  1. Cut existing construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore

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- surfaces to their original condition.
2. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerance, and finishes.
  3. Restore work that has been cut or removed; install new products to provide complete work in accordance with requirements of the Contract Documents.
  4. Fit work airtight and fire safe to pipes, sleeves, ducts, conduit, and other penetrations through surfaces as required by the Contract Documents.
- B. Cutting: Cut existing construction by sawing, drilling, breaking, chipping, grinding, and other similar operations, including excavation, using methods least likely to damage elements retained to adjoining construction. If possible, review proposed procedures with original installer and comply with original installer's written recommendations.
1. In general, use ground fault hand or small power tools designed (to short if metal is hit) for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to the size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  2. Existing Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
  3. Concrete: Use a cutting machine such as an abrasive saw or a diamond-core drill.
  4. Proceed with patching after construction operations requiring cutting are complete.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other specification Sections.
1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
  2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing. For continuous surfaces, refinish entire unit to the nearest break line. For an assembly, refinish entire unit.
  3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
    - a. Where patching occurs on a painted surface, apply primer and intermediate paint coats over the patch and apply the final coat over the entire unbroken surface containing the patch. Provide additional coats until the patch blends with adjacent surfaces.
  4. Ceilings: Patch, repair or re-hang existing ceilings as necessary to provide an even-plane surface of uniform appearance.
- D. Fire Rated Construction: Where rated elements are cut, reconstruct to approved designs to provide original fire rating.

### **3.05 CORE DRILLING**

- A. The Contractor shall execute sufficient x-rays or ground penetrating radar (GPR) at each location planned for core drilling prior to submittal to the DEN Project Manager and to utility representatives for approval for core drilling. The request for approval shall be submitted a

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minimum seven (7) days before Core Drilling. The request for approval shall indicate on the x-ray or radar information regarding alternate locations or core drilling to avoid structural members and any embedded conduit. Embedded conduit may be metallic or plastic. The x-ray or radar system shall be capable of detecting both types of conduit.

- B. Core drilled “cores” and the core-drilled opening shall be inspected by DEN Project Manager Representatives prior to installation of any systems in new openings.

**PART 4 - MEASUREMENT****4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT****5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 017330**

**SECTION 017419****CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.2 SUMMARY**

- A. This section describes the requirements for the disposal, recovery, reuse or recycling of **non-hazardous** and **non-asbestos** containing construction and demolition waste for LEED, Envision and other projects. Note that LEED and Envision projects may have additional requirements.
- B. Waste materials shall be managed in accordance with all local, state, and federal regulations.
- C. Related Requirements:
1. Section 013300 "Submittal Procedures" for submittal procedures.
  2. Section 013325 "Shop and Working Drawings, Product Data and Samples" for submittal procedures.
  3. Section 015719 "Temporary Environmental Controls" for environmental control procedures.

**1.3 SECTION 016610 "STORAGE AND PROTECTION" FOR REQUIREMENTS RELATED TO MATERIALS STORAGE AND PROTECTION.DEFINITIONS**

- A. Solid Waste: means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, air pollution control facility, or other discarded material; including solid, liquid, semisolid, or contained gaseous material resulting from industrial operations, commercial operations or community activities. Solid waste does not include any solid or dissolved materials in domestic sewage, or agricultural wastes, or solid or dissolved materials in irrigation return flows, or industrial discharges which are point sources subject to permits under the provisions of the "Colorado Water Quality Control Act", Title 25, Article 8, CRS or materials handled at facilities licensed pursuant to the provisions on "Radiation Control Act" in Title 25, Article 11, CRS. Solid waste does not include:
1. Materials handled at facilities licensed pursuant to the provisions on radiation control in Article 11 of Title 25, C.R.S.
  2. Excluded scrap metal that is being recycled.
  3. Shredded circuit boards that are being recycled.
- B. Salvaged Materials: Defined as materials that exist on the site that can be reused, either on site or by another entity
- C. Recyclable Materials: Defined as materials that exist on site or are generated during the construction process that can be recycled and/or remanufactured into another material. Recyclable waste includes, but is not limited to, the following:



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1. Concrete.
  2. Asphalt
  3. Ferrous and non-ferrous metals.
  4. Untreated wood, engineered wood.
  5. Gypsum wallboard.
  6. Corrugated cardboard, paper goods.
  7. Plastic.
  8. Glass, insulation.
  9. Carpet.
  10. Paints, fabric.
  11. Rubber.
  12. Stone and brick.
- D. Hazardous Waste: Per 6 CCR 1007-3, those substances and materials defined or classified as such by the Hazardous Waste Commission pursuant to 25-15-302, C.R.S., as amended. Also, see hazardous waste definition per 40 CFR 261.3.
- E. Asbestos Containing Materials: Per 5 CCR 1001-10: Regulation No. 8, The Control of Hazardous Air Pollutants, Part B The Control of Asbestos- material containing more than 1% asbestos

**1.4 SUBMITTALS**

- A. Prior to the start of construction activities, the Contractor shall submit a list of materials and products used with Safety Data Sheets (SDS). Examples include chemicals, solvents, fuels, building materials, etc.
1. An electronic copy or link to the SDS for all materials and products used, if applicable.
  2. Identify storage methods for materials, including measures to segregate incompatible materials.
- B. Prior to the start of any waste generating activities, the Contractor shall submit a Waste Management Plan to the DEN Project Manager and DEN Environmental Services. Minimum Waste Management Plan requirements include the following:
1. A list of all waste streams generated by the project
    - a. For each construction activity, the Contractor shall identify the waste stream that will be generated, waste handling and transportation method, disposal method, and identify the disposal facility utilized.
    - b. If the Contractor anticipates generation of hazardous waste, the Contractor shall provide its EPA Generator Identification Number.
  2. Pollution Prevention Measures
    - a. Describe best practices that will reduce waste. For example, waste reduction measures, requiring vendors to deliver materials in reusable packaging, etc.
  3. Waste Management Plan Training.
  4. Storage of materials.
  5. Spill response and Training
- C. Approval of Contractor's Waste Management Plan does not relieve the contractor of

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responsibility for compliance with applicable environmental regulations.

1. The contractor shall maintain a record of the amounts of construction and demolition waste generated, recycled, reused, salvaged, or disposed of, in pounds for review.

The Contractor shall submit at the end of the project a summary of these records.

The summary should include at a minimum the type of waste, quantity, method of disposal, date and location of disposal, and calculation of the waste diversion rate.

Waste diversion rate is calculated as the amount of material (in tons) diverted from landfill or incineration divided by the total material generated. Diverted materials can include all material that is recycled, composted, chipped, or in any way used in a higher and better use than landfilling or incineration.

**PRODUCTS****1.5 DOCUMENTS**

- A. A list of all materials and products used. Examples include chemicals, solvents, fuels, curing compounds, etc.
  1. An electronic copy or link to SDSs for all materials and products used.
  2. Identify storage methods, including measures to segregate incompatible materials.
  3. Refer to the Waste Management Plan

**PART 2 - EXECUTION****2.1 REQUIREMENTS**

- A. The Contractor shall not wash down equipment in such a manner as to flush grease, oils, detergents, and other contaminants onto the project site or onto airport property unless the waste is properly contained, treated, and disposed of.
- B. DEN maintains two dry concrete and asphalt recycling yards used for the accumulation and crushing of asphalt and concrete. The South Yard is located on 71st Ave just east of Jackson Gap Street. The North Yard is located on the south side of 110th, west of Queensburg Street.
- C. Concrete washwater cannot be discharged to surface waters or to storm sewer systems. Colorado Discharge Permit System (CDPS) coverage conditionally authorizes discharges to the ground of concrete wash water from washing of tools and concrete mixer chutes when appropriate best management practices (BMPs) are implemented.
  1. A bermed containment area that allows discharge water to infiltrate or evaporate;
    - a. Alternatives to bermed containment areas include portable concrete washout bins, and industrial washout containment systems where the accumulated waste is removed from the site and disposed of properly.
  2. Use of the washout site should be temporary (less than one year);
  3. The washout site should not be located in an area where shallow groundwater may be present, such as near natural drainages, springs, or wetlands
  4. Upon termination of the washout site, accumulated solid waste, which includes concrete waste and contaminated soils, must be removed from the site and disposed of properly.
- D. Rejected loads and/or other wet concrete or asphalt materials are PROHIBITED on DEN property. These materials must be returned to the facility of origination or other permitted

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facility for proper disposal.

- E. Concrete slurry generated from sawcutting activities is accepted at the DEN North and South Concrete and Asphalt Recycle Yards at designated areas only. Prior notification and approval is required.
- F. Any wastewater generated from construction activities may not be disposed of anywhere on DEN property, except as allowed by any permit (e.g. dewatering permit). These materials must be properly disposed of offsite.
- G. Soil or water that is determined to be contaminated with materials not formally designated as hazardous must have specific waste management practices identified and included in the Waste Management Plan. This includes but is not limited to petroleum products and per- and polyfluoroalkyl substances (PFAS).
- H. Unknown or questionable materials encountered during construction activities must be immediately reported to the DEN Communications Center at (303) 342-4200 and the DEN Project Manager.

**PART 3 - MEASUREMENT****3.1 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 4 - PAYMENT****4.1 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 017419**

**SECTION 017420****CLEANING****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. The Work specified in this section consists of maintaining a clean, orderly, hazard free work site during construction, and final cleaning for the City's Final Acceptance. Failure to maintain the work site will be grounds for withholding monthly payments until corrected to the satisfaction of the DEN Project Manager.
- B. Refer to Article 325, Cleanup During Construction in the General Contract Conditions, 2011 Edition

**1.03 SUBMITTALS**

- A. Washing Plan: The Contractor shall prepare a plan describing the specific procedures and materials to be utilized for any equipment, vehicle, etc., washing activities. The plan must be submitted to the DEN Project Manager and approved by the DEN Project Manager and Environmental Services.
  - 1. Outdoor washing at DEN is not allowed unless the materials will be collected or managed in a manner to ensure that they will not enter the municipally owned separate storm sewer system (MS4). The materials can only be disposed at a location pre-approved by DEN Environmental Services (refer to DEN SWMP). Failure to comply with this requirement would result in the discharge of non-stormwater.
    - a. Outdoor wash materials that contain soaps or other cleaning chemicals must be collected and disposed of off site
  - 2. Indoor washing must be conducted in accordance with the Best Management Practices (BMPs) detailed in the DEN SWMP. Refer to Section 015719 "Environmental Controls". In addition, all indoor washing must be conducted in a manner that ensures that there are no prohibited discharges to the sanitary sewer system.
    - a. All wash-water that will be disposed of into the sanitary sewer must comply with City and County Denver rules and regulations pertaining to prohibited discharges.

**PART 2 - PRODUCTS****2.01 CLEANING MATERIALS**

- A. Utilize the type of cleaning materials recommended by the manufacturer for the surfaces to be cleaned.
- B. Maintain current Safety Data Sheets (SDS) on site for all chemicals. DEN Environmental Services must approve the chemicals used prior to discharge to the sanitary sewer system.

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- C. Ensure proper disposal of all wastes generated from the use of these materials. The Contractor must ensure compliance with all environmental regulations. No wastes can be disposed of on DEN property.

## **PART 3 - EXECUTION**

### **3.01 INTERIM CLEANING**

- A. Clean only when dust and other contaminants will not precipitate upon newly painted surfaces.
- B. Cleaning shall be done in accordance with manufacturer's recommendation.
- C. Cleaning shall be done in a manner and using such materials as to not damage the Work.
- D. Clean areas prior to painting or applying adhesive.
- E. Clean all heating and cooling systems prior to operations. If the Contractor is allowed to use the heating and cooling system, it shall be cleaned prior to testing.
- F. Clean all areas that will be concealed prior to concealment.
- G. Dispose of all fluids according to the approved Washing Plan.

### **3.02 FINAL CLEANING**

- A. Refer to Article, Clean-up Upon Completion in the General Contract Conditions, 2011 Edition. Additionally, the Contractor, shall at a minimum, complete the following:
  - 1. Inspect interior and exterior surfaces, including concealed spaces, in preparation for completion and acceptance.
  - 2. Remove dirt, dust, litter, corrosion, solvents, discursive paint, stains, and extraneous markings.
  - 3. Remove surplus materials, except those materials intended for maintenance.
  - 4. Remove all tools, appliances, equipment, and temporary facilities used in the construction.
  - 5. Remove detachable labels and tags. File them with the manufacturer's specifications for that specific material for the City's records.
  - 6. Repair damaged materials to the specified finish or remove and replace.
  - 7. After all trades have completed their work and just before Final Acceptance, all catch basins, manholes, drains, strainers and filters shall be cleaned; roadway, driveways, floors, steps and walks shall be swept. Interior building areas shall be vacuum cleaned and mopped.
  - 8. Final cleanup applies to all areas, whether previously occupied and operational or not.
  - 9. Dispose of all fluids according to the approved Washing Plan.

## **PART 4 - MEASUREMENT**

### **4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

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**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 017420**

**SECTION 017720****CONTRACT CLOSEOUT****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Special Sections, apply to this Section.

**1.02 SUMMARY**

- A. Work specified in this Section includes procedures required prior to Final Acceptance of the Work in addition to those specified in Title 20 – Final Completion and Acceptance of The Work in the General Contract Conditions, 2011 Edition, and Technical Specification Section 017840 "Contract Record Documents."
- B. This Section also includes procedures and penalties to ensure prompt completion of the Project Closeout.
- C. Related Sections:
  - 1. Title 20 of the General Contract Conditions, 2011 Edition.
  - 2. Section 017840 "Contract Record Documents" for required record documents.
  - 3. Form CM-75, Closeout Checklist.
- D. SUBMITTALS
  - 1. Submit written Certification to the DEN Project Manager that, in the opinion of the Contractor, the Work is complete.
  - 2. Submit final survey within 60 days after issuance of Substantial Completion.
  - 3. Submit a Final Statement of Accounting to the DEN Project Manager.

**PART 2 - PRODUCTS (NOT USED)****PART 3 - EXECUTION****3.01 PREPARATION FOR FINAL INSPECTION**

- A. Before requesting inspection for Final Acceptance of the Work by the City, the Contractor shall inspect, clean, and repair the Work as required.
- B. The Contractor shall ensure that all items on the Closeout Checklist have been addressed and accepted by the DEN Project Manager.

**3.02 FINAL INSPECTION**

- A. The Contractor shall submit written certification to the DEN Project Manager when, in the opinion of the Contractor, the Work is complete. Such communication shall certify that:
  - 1. The Work has been inspected by the Contractor for conformance with the Contract Documents.

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2. The Work has been completed in conformance with the Contract Documents, including all punchlist items.
  3. The Work is ready for final inspection by the City.
  4. All as-built documents have been submitted and accepted.
  5. All damaged or destroyed real, personal, public, or private property impacted by the Work has been repaired or replaced.
  6. All Warranties and Bonds have been completed, executed, submitted, and accepted.
  7. All personnel badges and vehicle permits have been returned to DEN Airport Security.
- B. The DEN Project Manager will inspect the Work in accordance with the Section 2002.1 of the City and County of Denver's Department of Aviation's General Contract Conditions.
- C. If the DEN Project Manager finds incomplete or defective Work:
1. The DEN Project Manager may, at the DEN Project Manager's sole discretion, either terminate the inspection, or prepare a punchlist and notify the Contractor in writing, listing the incomplete or defective Work.
  2. The Contractor shall take immediate steps to remedy all identified deficiencies and resubmit a written certification to the DEN Project Manager that Work is complete.
  3. The DEN Project Manager will then re-inspect the Work.

### **3.03 REINSPECTION FEES**

- A. Should the DEN Project Manager be required to perform re-inspections of the Work due to the Contractor prematurely claiming the status of the Work to be complete:
1. The Contractor shall compensate the City for such additional services, on a time and materials basis, for the time spent by the DEN Project Manager on re-inspection and related work, with a minimum charge of \$2500:

<b>Position</b>	<b>Rate</b>
Project Manager	\$150
Quality Assurance Inspector	\$125
Commissioning Agent	\$125

2. The City shall deduct the amount of such compensation from the final payment to the Contractor.

### **3.04 FINAL SURVEY FEES**

- A. The Contractor shall complete and submit the final survey within 60 days after issuance of Substantial Completion. If the Contractor fails to complete and submit the final survey within this time frame it is understood that DEN will arrange for a qualified surveying company to complete this work at the Contractor's expense. All costs associated with DEN arranging for and completing the final survey will be deducted from the final payment including compensation due the City for the DEN Project Manager's time to manage this work.
1. The DEN Project Manager's rate of compensation shall be set at \$150.00 per man-hour.
  2. Survey submittals needing to be revised may extend the 60-day time frame at the DEN Project Manager's discretion.
  3. Costs, including the DEN Project Manager's, for the review of the resubmitted survey shall be deducted from the final payment.



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**3.05 LATE CLOSEOUT FEES**

- A. Within 100 days after issuance of substantial completion, all documentation required by this Contract to achieve Project Closeout shall be submitted. Failure to submit all required documentation shall result in fees to compensate the City for project management work while the project remains open. These shall be assessed if no liquidated damages are provided or and paid for late completion.
  - 1. Fees at the rate of \$450 per day to compensate for additional DEN Project Manager, consultant, and other personnel's work.
  - 2. The resubmittal of required documents may extend the 100-day time frame at the DEN Project Manager's discretion.

**3.06 FINAL ADJUSTMENT OF ACCOUNTS**

- A. Submit a Final Statement of Accounting to the DEN Project Manager.
- B. The Final Statement of Accounting shall reflect all adjustments to the Contract amount and shall include the following:
  - 1. The original Contract Value.
  - 2. Additions and deductions resulting from the following:
    - a. Approved Change Orders.
    - b. Allowances.
    - c. Final quantities for unit price items, including required backup for the quantities.
    - d. Deductions for corrected work.
    - e. Penalties.
    - f. Deductions for liquidated damages.
    - g. Deductions for re-inspection payments.
    - h. Other adjustments.
  - 3. Total Contract Value, as adjusted.
  - 4. Previous payments.
  - 5. Sum remaining due.
- C. If required, the DEN Project Manager will prepare a final Change Order, reflecting the approved adjustments to the Contract Value that were not included in previously issued Change Orders.

**3.07 FINAL APPLICATION FOR PAYMENT**

- A. The Contractor shall submit the final application for payment in accordance with the procedures and requirements detailed in Article 2003, Final Settlement in the General Contract Conditions, 2011 Edition.
- B. Subcontractor Payment Verification
  - 1. The contractor shall submit a full report of subcontractor work performed, payments made, and outstanding payments due. This report shall include, at minimum, the following information.
    - a. Project name
    - b. Project number
    - c. Date
    - d. Name of Contractor

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- e. Name of all subcontractors, of all tiers, as listed in the bid as well as any subsequently submitted CM-02 forms, including the following information for each subcontracted firm:
- 1) Total value of work performed
  - 2) Total amount paid to date
  - 3) Date of last payment
  - 4) Balance due
  - 5) Payment Terms
  - 6) Remaining balance to be paid
  - 7) Planned payment date

**PART 4 - MEASUREMENT****4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT****5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 017720**

**SECTION 017835****WARRANTIES AND BONDS****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. The Work specified in this Section consists of preparing and submitting warranties and bonds required by the Contract and these Specifications.

**1.03 SUBMITTALS**

- A. Refer to Technical Specifications Section 013300 "Submittal Procedures" and Section 013325 "Shop and Working Drawings, Product Data and Samples" for submittal procedures.
1. All warranties shall be executed or transmitted to the City and County of Denver.
  2. Photocopies or reproductions of stock manufacturer's warranties will not be accepted, although electronic copies are acceptable when the manufacturer's warranty is contained in the O&M manual.
- B. Submit samples of warranties and bonds for review by the City prior to execution of Work. Do not submit final warranties until sample warranties have been approved by the City.
1. Submit the warranties and bonds required by the Contract Documents.
  2. Prepare and submit a list of all warranties and bonds on the following forms:
    - a. CM-10: Contractor Warranty
    - b. CM-11: Contractor/Sub-Contractor Warranty
- C. Submit executed warranties and bonds.

**PART 2 - PRODUCTS (NOT USED)****PART 3 - EXECUTION****3.01 WARRANTIES AND BONDS**

- A. Submit executed warranties and bonds required by the Contract Documents, as detailed in Title 15 - Performance and Payment Bonds and Title 18 - Warranties, Guarantees, and Corrective Work in the General Contract Conditions, 2011 Edition.
1. Prepare and submit a list of all warranties and bonds on the following forms:
    - a. CM-10, Contractor Warranty
    - b. CM-11, Contractor/Sub-Contractor Warranty

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**TECHNICAL SPECIFICATIONS  
DIVISION 01 – GENERAL REQUIREMENTS  
SECTION 017835 - WARRANTIES AND BONDS**

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**DENVER INTERNATIONAL AIRPORT  
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**PART 4 - MEASUREMENT**

**4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT**

**5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 017835**

**SECTION 017840****CONTRACT RECORD DOCUMENTS****PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. The Work specified in this Section consists of maintaining, marking, recording, and submitting Contract Record Documents that include shop drawings, warranties, and contractor records. Creating and providing to DEN these documents are part of the Work and become part of the Contract Documents.
- B. Refer to DEN Building Information Modeling (BIM) Design Standards Manual (DSM) and Approved BIM execution for data format and file types acceptable for different type of data.
- C. Related Requirements:
1. Section 013100 "Project Management and Coordination".
  2. Section 013223 "Construction Layout, As-built and Quantity Surveys".
  3. Section 013300 "Submittal Procedures".
  4. Section 013325 "Shop and Working Drawings, Product Data and Samples".
  5. Section 017720 "Contract Closeout".
  6. Section 017825 "Operation and Maintenance Data".

**1.03 SUBMITTALS**

- A. Each submittal of record documents shall contain the following information:
1. Date.
  2. Project title and numbers.
  3. Contractor's name and address.
  4. Title and number of each record document.
  5. Certification that each document as submitted is complete and accurate.
  6. Signature of the Contractor or the Contractor's authorized representative.
- B. At the completion of this Contract, deliver all record documents including the following:
1. As-built shop drawings, diagrams, illustrations, schedules, charts, brochures and other similar data.
  2. Warranties, guarantees, and bonds.
  3. Contract Documents.
  4. Contractor records.

**TECHNICAL SPECIFICATIONS**  
**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 017840 - CONTRACT RECORD DOCUMENTS**

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- C. As-built Contract Drawings shall be submitted with each monthly progress payment application, and a complete set shall be submitted prior to final payment.
  - 1. The Contractor shall provide a single electronic copy of each Contract drawing sheet which has been used to produce work during the payment period or work that payment is being requested on, which records the current as-built conditions of work, including the posting of any change orders or change directives not shown on the Contract Documents at the time of Contract signing.
    - a. The Contractor must show as-built work completed through the payment application date including but not limited to utilities, empty conduit, conduit for actual electrical lines, plumbing, HVAC, location of anchor bolts and support points for use by others.
    - b. The Contractor shall be liable for any costs incurred by the City or a third party due to errors or lack of information provided on the as-built drawings.
    - c. All markings on drawings shall be legible to identify the portion of work completed.
    - d. For projects utilizing BIM system by the Contractor or a consultant of the Contractor, all data formats shall be compatible and as approved by the BIM execution plan as required in the DEN BIM DSM.

**1.04 QUALITY CONTROL**

- A. Submit electronically scanned copies of all documents required by Chapter 17 “Special Inspection and Testing” of the International Building Code 2009 as amended by City and County of Denver 2011. Keep scale and clarify dimension where electronic copies are not as originally scaled and dimensioned.
- B. For projects utilizing BIM for Revit, follow approved BIM execution plan and DEN BIM DSM for record documents, formats, and quality control and assurance procedures.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.01 MAINTENANCE OF DOCUMENTS**

- A. The Contractor must follow all the procedures established in the Contract Documents and DEN BIM DSM.
- B. The Contractor shall maintain at the work site on a current basis one (1) record copy of all drawings, specifications, addenda, change orders, approved shop drawings, working drawings, product data and samples in good order and marked currently to record all changes made during construction.
- C. Maintain at the field office one copy of the following record documents:
  - 1. Contract Documents:
    - a. Contract Drawings with all clarifications, requests for information, directives, changes, and as-built conditions clearly posted.
    - b. Contract Specifications with all clarifications, requests for information, changes, directives and record of manufacturer actually used along with product trade name.
    - c. Reference Standards in accordance with Section 014225 "Referenced Standards".
    - d. Affirmative Action Plan and documents.

**TECHNICAL SPECIFICATIONS**  
**DIVISION 01 – GENERAL REQUIREMENTS**  
**SECTION 017840 - CONTRACT RECORD DOCUMENTS**

**DENVER INTERNATIONAL AIRPORT**  
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- e. One (1) set of drawings to record the following:
  - 1) Horizontal and vertical location of underground utilities affected by the Work.
  - 2) Location of internal utilities; include valves, controls, conduit, duct work, switches, pressure reducers, size reducers, transitions, crosses, tees, filters, motors, heaters, dampers, regulators, safety devices, sensors, access doors and appurtenances that are concealed in the construction shall be shown with dimensions given from a visible and recognizable reference to the item being located in all three dimensions. The drawings shall also reference the applicable submittal for the item being located.
  - 3) Field changes of dimensions and details including as-built elevations and location (station and offset).
  - 4) Details not on original Contract Drawings but obtained through requests for information or by other communications with the City.
- 2. Contractor Records:
  - a. Daily Quality Control Reports.
  - b. Certificates of compliance for materials used in construction.
  - c. Completed inspection list.
  - d. Inspection and test reports.
  - e. Test procedures.
  - f. Qualification of personnel.
  - g. Approved submittals.
  - h. Material and equipment storage records.
  - i. Safety Plan
  - j. Erosion, sediment, hazardous and quality plans.
  - k. Hazardous material records.
  - l. First report of injuries.

### **3.02 RECORDINGS**

- A. Label each document page or article "PROJECT RECORD" in two-inch high letters.
- B. Keep record documents current daily.
- C. Legibly mark copies of the Contract Drawings to record actual construction.
- D. Legibly mark up each Section of the specifications and Contract Drawings to record:
  - 1. Manufacturer, trade name, catalog number and supplier of each product and item actually installed
  - 2. Changes made by change orders, requests for information, substitutions, and variations approved by submittals.

### **3.03 DOCUMENT MAINTENANCE**

- A. Follow all the required processes of the approved BIM Execution Plan as approved by DEN for this specific project or in formats acceptable to DEN BIM management system.
- B. Do not use record documents for construction purposes.
- C. Make documents available for inspection by the DEN Project Manager and any others having jurisdiction.

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**TECHNICAL SPECIFICATIONS  
DIVISION 01 – GENERAL REQUIREMENTS  
SECTION 017840 - CONTRACT RECORD DOCUMENTS**

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**3.04 MONTHLY REVIEW**

- A. Prior to any application for payment, the DEN Project Manager or the DEN Project Manager's designated representative will inspect the record documents to ensure that they are being maintained and contain the most current correct data with particular attention to as-built drawings.
- A. If, during the inspection, the DEN Project Manager determines that the documents are not being maintained and kept current so they reflect as-built conditions, an amount may be withheld from the payment request and deducted from the Contract value to cover the City's cost of collecting, creating, and recording the as-built data. This cost will be determined based on \$100.00 per man-hour of effort.

**PART 4 - MEASUREMENT****4.01 METHOD OF MEASUREMENT**

- A. No separate measurement shall be made for work under this Section.

**PART 5 - PAYMENT****5.01 METHOD OF PAYMENT**

- A. No separate payment will be made for work under this section. The cost of the work described in this section shall be included in the applicable unit price item, work order or lump sum bid item.

**END OF SECTION 017840**



2023

DIVISION 02

# PROJECT SPECIFICATIONS

DENVER INTERNATIONAL AIRPORT – GUN CLUB ON-RAMP TO  
PEÑA BOULEVARD

MARCH 22, 2023



PROJECT SPECIFICATIONS  
DIVISION 02

DENVER INTERNATIONAL AIRPORT  
GUN CLUB ON-RAMP TO PEÑA BOULEVARD  
CONTRACT NO. **2020366978**

Traffic Control Plan—General  
Utilities

(Feb 16, 2023) 99-101

(Feb 16, 2023) 102-107

APPENDIX A – Geotechnical Pavement Design Memorandum

PROJECT SPECIFICATIONS  
DIVISION 02

DENVER INTERNATIONAL AIRPORT  
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### CDOT STANDARD SPECIAL PROVISIONS

<b>Name</b>	<b>Date</b>	<b>No. of Pages</b>
Revision of Section 105 – Control of Work	(October 1, 2022)	1
Revision of Section 208 – As-Constructed Survey	(April 26, 2022)	2
Revision of Section 601 – Class DF Concrete	(October 1, 2022)	1
Revision of Section 601 – Concrete Mix Designs	(October 1, 2022)	1
Revision of Section 601 – Sulfate Mitigation	(December 9, 2022)	1
Revision of Sections 612 and 713 – Delineators and Reflectors	(December 9, 2022)	4
Revision of Section 630 – Traffic Control Management	(October 1, 2022)	1

## GENERAL PROVISIONS

### PART 1: GENERAL

- A. Work described elsewhere in the technical specifications, contract drawings, or Part I of the contract documents shall be done in accordance with the Colorado Department of Transportation (CDOT) **2022 Standard Specifications for Road and Bridge Construction** (except as noted below) and the latest edition of the **Colorado Standard Plans (M&S Standards)**.
- B. The Colorado Department of Transportation General Provisions consisting of Sections 100 through 109 of the above referenced “Standard Specifications” are NOT applicable to this Contract and are hereby deleted, except where specifically added in. In place of the deleted, the Denver International Airport (DEN) Division 01 Specifications shall be made part of the contract.

The following sections shall apply as noted:

- 1. Section 101 Definitions and Terms
- 2. Section 104.07 VECP by the Contractor
- 3. Section 105 Control of Work with the following exceptions:
  - a. If there are any conflicts with the Denver International Airport (DEN) Division 01 Specifications and this section, those documents will take precedence.
  - b. Any references to incentives shall be disregarded. No incentives will be paid on this project. References to disincentives, corrective work or removal and rejection of work and/or materials shall apply.
  - c. Sections 105.21 Acceptance shall not apply.
  - d. Sections 105.22 through 105.24 shall not apply.
- 4. Section 106 Control of Material
- 5. Section 107.02 Permits, Licenses, and Taxes
- 6. Section 107.25 Water Quality Control
- 7. Section 109.01 Measurement of Quantities

### PART 2: REFERENCES

- A. All references to “CDOT” or “the Department” shall be changed to “City and County of Denver” unless otherwise noted.
- B. All references to the CDOT Project Engineer and CDOT Regional Transportation Director shall mean DEN Project manager and DEN Manager of Construction.
- C. All references to incentives or positive pay factors within any documents pertaining to this contract shall not apply. NO incentives or increased pay factors will be paid on this project. References to disincentives, negative pay factors, corrective work or removal and rejection of work and/or materials shall apply.

### PART 3: APPLICABLE PUBLICATIONS

The Colorado Department of Transportation Standard Specifications and Standard plans are available on CDOT's webpage.

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## **REVISION OF SECTION 101 DEFINITION AND TERMS**

Technical Specifications related to construction materials and methods for the work embraced under this Contract shall consist of the "Colorado Department of Transportation, Standard Specifications for Road and Bridge Construction" dated 2022 along with the City and County of Denver specifications, as indicated.

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

**101.28 Department.** Denver International Airport (DEN)

**101.29 Engineer.** The Denver International Airport Project Manager or designated representative.

**101.39 Laboratory.** Denver International Airport or their designated representative.

**101.51 Project Engineer.** The Project Manager, Denver International Airport or designated representative.

**101.76 State.** Denver International Airport (where applicable)

**END OF SECTION REVISION**

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**REVISION OF SECTION 105  
COOPERATION BETWEEN CONTRACTORS**

**Section 105 of the Standard Special Specifications is hereby revised for this project as follows: Subsection 105.12 shall include the following:**

Other contractors will be working within or near the project limits. The Contractor for this project shall coordinate the work with these contractors as required, insuring an orderly completion of work. The Contractor shall contact all contractors working within the project limits and assign contact personnel between them. The Contractor shall notify DEN in writing of these contacts and of what arrangements have been made.

Projects that may require coordination include, but are not limited to, the following:

- Toll Plaza Decommissioning
- Annual Landside Pavement Rehabilitation
- Water Supply Improvements (Southwest quadrant of 75<sup>th</sup> and Gun Club)
- 75<sup>th</sup> & Gun Club Site Readiness

**END OF SECTION REVISION**

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**REVISION OF SECTION 106  
CONTROL OF MATERIAL**

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

**In subsection 106.03, delete the third paragraph and replace with the following:**

DEN Quality Assurance (QA) sampling and testing will be done in accordance with the IA Frequency Guide Schedule and procedures contained in the CDOT Field Materials Manual and will be used for acceptance of materials on the project. The Contractor will be responsible for process control testing and sampling, Quality Control (QC), in accordance with the OA Frequency Guide Schedule and procedures contained the CDOT Field Materials Manual.

**In subsection 106.03, delete the first sentence of paragraph 5.**

**In subsection 106.03, delete the second sentence of paragraph 5 and replace with the following:**

DEN QA sampling and testing will be made by and at the expense of DEN. Contract QC sampling and testing will be at the Contractor's expense.

**END OF SECTION REVISION**



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**REVISION OF SECTION 107  
PERFORMANCE OF SAFETY CRITICAL WORK****Section 107 of the Standard Specifications is hereby revised as follows:****Subsubsection 107.06 shall include the following:****Performance of Safety Critical Work.** The following work elements are considered safety critical work for this project:

- (1) Overhead structure construction or repair
- (2) Work requiring the use of cranes or other lifting equipment

The Contractor shall submit, for record purposes only, an initial detailed construction plan that addresses safe construction of each of the safety critical elements. When the specifications already require an erection plan or a bridge removal plan, it shall be included as a part of this plan. 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. Work that cannot be completed in time for the roadway to be reopened to traffic
  - D. Replacement of workers who don't perform the work safely
  - E. Equipment failure
  - F. 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.

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

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. Required pre-erection conferences or bridge removal conferences may be included as a part of this 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 final construction plan shall be stamped "Approved for Construction" and signed by the Contractor.

The Contractor's Engineer shall be on site to inspect and provide written approval of safety critical work for which he provided stamped construction details. The Contractor's Engineer 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.

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. This shall be done in accordance with subsection 108.06 when applicable, and at any time when ordered by the Engineer.

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.

**END OF SECTION REVISION**

**REVISION OF SECTION 107  
TEMPORARY PLANT SITE**

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

**Subsection 107.02 shall include the following:**

The Contractor may elect to erect a temporary plant at the site as identified in the SWMP. The Contractor will be responsible for submitting and obtaining all associated permits and requirements necessary, including but not limited to: State permitting requirements; CCD Building construction review and permits for all foundations proposed on site, and electrical permit for source to structures. Additionally:

- Engineered designs are required for all foundations, occupied structures, and stormwater control features.
- Engineered designs typically include structural calculations, site plan depicting structure locations, hydrant layout, emergency access, electrical power supply (calculations and one-lines), temporary toilet maintenance contracts.
- Denver Water requirements for water supply
- If power is being provided on site at all by generators, the generators need to be included in the electrical plans, on site-constructed structural support needs to be included in the foundation plans,
- Specifications need to be provided for fuel tank size and secondary spill containment.
- Occupied structures like office trailers and control rooms need to have foundation designs (may just be tie downs) in accordance with the temporary building policy.
- Unoccupied intermodal containers used only for nonhazardous miscellaneous storage do not need permits at this time but their location needs to be field-approved by Denver Fire prior to installation.
- Construction permits for office (including “construction”) trailers can only be issued to Denver A- and B-licensed general contractors or a Denver “D/Temporary Prefabricated Mobile Building Installer” license holder.
- Construction permits for concrete foundations are typically only issued to Denver A- and B- licensed general contractors or a Denver “D/Concrete and Foundations” license holder. ROW license holders may also be permitted to install batch plant and control room foundations.
- Prefabricated occupied structures like trailers and modular control rooms have to be State- certified; CCD will reviews and permits the structural set up and electrical hookup – additional requirement apply if plumbing or sanitary service is provided for these.
- Structural observations and special inspections in accordance with IBC Chapter 17 are required, but will be performed by DEN Quality Assurance at no expense to the Contractor.

Temporary plant site will be paid for under the Force Account “F/A Temporary Plant Site.” The Contractor shall refer to the Force Account portion of the Project Special Provisions for further information for payment under this item.

**END OF SECTION REVISION**

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**REVISION OF SECTION 202  
REMOVAL AND DISPOSAL OF CONCRETE AND ASPHALT****Section 202 of the Standard Specifications is hereby revised for this project as follows:****DESCRIPTION****Subsection 202.01 shall include the following:**

Concrete and asphalt shall be disposed of at the DEN South Recycle Yard as outlined in the following paragraphs. All other material or waste shall be disposed of at the Denver Arapahoe Disposal Site (DADS) in accordance with Division 01 Section 015719, and the City and County of Denver Executive Order No. 115. All materials or waste disposals shall be as approved by the DEN Project Manager.

**CONSTRUCTION REQUIREMENTS****Subsection 202.02 paragraph six is hereby deleted and replaced with the following:**

The areas of concrete pavement to be removed shall be isolated in both the longitudinal and transverse directions by double saw cut method of sawing in accordance with FHWA's publication entitled, "Guide for Full-Depth Repairs." Sawing shall be accomplished with the use of a diamond blade saw or approved equivalent. Sawing of the concrete pavement shall be done to a true line, with a vertical face, unless otherwise specified. Sawing shall be full depth and shall go through the existing tie-bars and dowel bars, leaving free vertical edges at the limits of removal.

After sawing has been completed, the deteriorate concrete shall be lifted vertically from its position unless otherwise approved by the Engineer. Pavement breakers or jackhammers shall be used in the removal process where lifting is not possible. All loose material shall be removed from the repair area.

After concrete pavement is removed, the underlying material will be evaluated by the Engineer. Unsuitable material shall be removed in accordance with Subsection 206.03 and replaced with excess Unclassified Excavation Material at the depth specified in the plans.

The subsequent Unclassified Excavation material shall be placed with moisture and density control in accordance with Section 304.

**Subsection 202.02 shall include the following:**

The existing asphalt mat and concrete pavement sections are unknown and may vary (see Geotechnical Pavement Memo). Removal shall be done in a manner that minimizes impact to the underlying material. The removed material shall be stockpiled at the DEN South Recycle Yard.

*DEN South Recycle Yard*

Asphalt millings, concrete pavement, and concrete slurry may be applied or disposed at the DEN South Recycle Yard at the direction of the DEN Project Manager. All disposals shall be coordinated with DEN a minimum of 48 hours in advance.

DEN Recycle Yard managers will designate an area for this Project within the Recycle Yard to stockpile concrete and asphalt disposal.

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## REVISION OF SECTION 202 REMOVAL AND DISPOSAL OF CONCRETE AND ASPHALT

All material shall be free of debris, including steel reinforcement, and shall be sized to 2-foot minus. The Contractor may size material either at the project site, or at a designated area within the Recycle Yard. All material must be sized within 30 days of its disposal, or as requested or approved by the DEN Project Manager.

DEN reserves the right to reject material that is deemed unclean, contaminated or containing debris. If after being disposed of at the Recycle Yard, material is found to be unclean, contaminated or containing debris, it will be the responsibility of the Contractor to clean and remove all debris, at the Contractor's expense.

### *DADS*

The Contractor may also dispose of material at the DADS facility in accordance with Division 01 Section 015719, and the City and County of Denver Executive Order No. 115. DADS is located at 3500 E Gun Club Rd. in Aurora. Use of DADS shall be coordinated with the DEN Project Manager 24 hours prior to disposal to obtain DEN disposal tickets.

### **Subsection 202.11 shall include the following:**

Sawcutting will not be measured and paid for separately, but shall be included in the work.

### **Subsection 202.12 shall include the following:**

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Removal of Concrete Pavement	Square Yard
Removal of Asphalt Mat	Square Yard

Unless otherwise specified in the Contract, the removal, disposal, and sizing of items or their use in other locations on the project will not be measured and paid for separately but shall be included in the work.

**END OF SECTION REVISION**

PROJECT SPECIFICATIONS  
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## **REVISION OF SECTION 202 REMOVAL OF LIGHTING**

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

### **CONSTRUCTION REQUIREMENTS**

**Subsection 202.02 shall include the following:**

Removal of light standards and light standard foundations will be completed by Xcel Energy. The Contractor shall coordinate with Xcel Energy for the removal of the existing lighting system. The conductors and all materials owned by Xcel Energy from the streetlights to the transformer shall be removed by Xcel Energy forces. The contractor shall coordinate with Xcel so that work will be accomplished within the project schedule.

Installation of temporary lighting will be performed by the Contractor prior to removal of existing lighting by Xcel. The Contractor shall provide Xcel at least 30 days' notice for removal of existing lighting.

Upon completion of the final grading, the Contractor shall provide Xcel 30 days' notice for installation of new street lighting as shown in the plans. The Contractor may only remove temporary lighting after new installations are complete.

**END OF SECTION REVISION**

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

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

**BASIS OF PAYMENT**

**Subsection 202.12 shall include the following:**

<b>Pay Item</b>	<b>Pay Unit</b>
Removal of Tree	Each
Removal of Inlet	Each
Removal of Embankment Protector Type 5	Each
Removal of Ditch Lining	Linear Foot
Removal of Delineator	Each
Removal of Concrete Median Cover Material	Square Yard
Removal of Curb	Linear Foot
Removal of Curb and Gutter	Linear Foot
Removal of Pavement Marking	Square Foot
Removal of Ground Sign	Each
Removal of Sign Panel	Each
Removal of High-Tension Cable Barrier	Linear Foot
Clean Inlet	Each

Payment includes all labor, equipment, and materials necessary to complete the work.

**END OF SECTION REVISION**

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**REVISION OF SECTION 202  
REMOVAL OF TRAFFIC SIGNAL EQUIPMENT**

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

**CONSTRUCTION REQUIREMENTS**

**Subsection 202.04 shall include the following:**

Removal of Traffic Signal Equipment shall include signal poles, pedestal poles, footings / caissons (removed full depth), span wire cable, traffic signal controller and cabinet, pedestrian push buttons, cabinet footings, all attachment hardware, attached signs, and all incidental equipment, except as noted on plans. All existing foundations and pull boxes shall be removed and backfilled. All wiring shall be removed from existing conduit, and the conduit shall be abandoned in place.

**BASIS OF PAYMENT**

**Subsection 202.12 shall include the following:**

<b>Pay Item</b>	<b>Pay Unit</b>
Removal of Traffic Signal Equipment	Lump Sum

Payment includes all labor, equipment, and materials necessary to complete the work.

**END OF SECTION REVISION**



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GUN CLUB ON-RAMP TO PEÑA BOULEVARD  
CONTRACT NO. 2020366978

**REVISION OF SECTION 202  
REMOVAL OF CONCRETE FOOTING**

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

**DESCRIPTION**

**Subsection 202.01 shall include the following:**

This work consists of the removal of all remaining elements of the advertising sign with variable gas prices located at the intersection of 77<sup>th</sup> Ave and Gun Club Road after the 18' x 6'-1" sign assemblage has been salvaged as part of the 210 Reset Sign Panel (Special) item. All below grade elements shall be removed to a depth of at least two (2) feet below finished grade.

**BASIS OF PAYMENT**

**Subsection 202.12 shall include the following:**

Payment will be made under:

**Pay Item**

Removal of Concrete Footing

**Pay Unit**

Each

This pay item shall include removal of the two masonry pedestals and the concrete grade beam, including protruding steel pipes, to a depth at least two feet below finished grade. It shall also include the placement of backfill and compaction up to finished grade.

**END OF SECTION REVISION**

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**REVISION OF SECTION 203  
EXCAVATION AND EMBANKMENT****Section 203 of the Standard Specifications is hereby revised for this project as follows:****DESCRIPTION****Subsection 203.01 shall include the following:**

Excavated soil, aggregate base course, much, rock, and other materials may be disposed of at the DEN South Soil Stockpile, which is located south of Pike's Peak Lot on N Elk Street. The specific area for disposal will be as designated by the DEN PM. All disposals will be at the direction of the DEN PM and shall be coordinated with DEN a minimum of 48 hours in advance of disposal. All material shall be clean and free of debris and trash. DEN reserves the right to reject material that is deemed unclean, contaminated, or containing debris. The DEN Soil Stockpile is a State and local-permitted facility that is under DEN's responsibility and control. The Contractor will be requested to address common erosion control measures for these facilities, depending on their usage (typically, street sweeping, vehicle tracking control, dust control), at no cost to the project.

**MATERIALS****Subsection 203.03 shall include the following:**

The onsite materials may be reused, provided they meet the requirements in this section. The following table presents material types and acceptable locations for placement:

Fill Designation	Materials	Acceptable location for placement
On-Site Fill	On-site native clay and clayey soil fill materials and borrow materials (AASHTO A-2-6, A-6 and A-7) from approved stockpile sources may be reused as new engineered fill.	Below pavement and flatwork areas
Free Draining Gravel	Imported granular material or recycled concrete meeting ASTM C33, No. 67 gravel	Free draining gravel around drains
Aggregate Base Course	Imported material meeting CDOT Class 6 requirements	In pavement section

- Controlled, compacted fill shall consist of approved materials that are free of organic matter and debris. Frozen material shall not be used, and fill shall not be placed on a frozen subgrade. Results of laboratory testing on each material type shall be submitted to the geotechnical engineer for evaluation.
- Care shall be taken during the fill placement process to place uniform zones of similar fill types.

**CONSTRUCTION REQUIREMENTS****Subsection 203.04 shall include the following:**

The excavations and embankments shall be graded to create a relatively level surface to receive fill and provide for a relatively uniform thickness of new engineered fill beneath the proposed pavements and structures. All exposed areas that will receive new engineered fill shall be scarified to a minimum depth of 12 inches, conditioned to the moisture content range as shown below and compacted as shown below.

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**REVISION OF SECTION 203  
EXCAVATION AND EMBANKMENT**

- AASHTO A-2-6, A-6 and A-7 Soil: Moisture content of 0 to +3% of the optimum moisture content with an average daily moisture content; at least 95% of maximum dry density determined per AASHTO T 99 as modified by CP 23.
- AASHTO A-1, A-2-4, A-2-5 and A-3 Soil: Moisture content of -2 to +2% of the optimum moisture content; at least 95% of maximum dry density determined per AASHTO T 180 as modified by CP 23

The Contractor shall take measures to protect prepared materials from moisture loss.

Soil reconditioning to a depth 30” below the aggregate base course shall be required in accordance with Section 304.

The Contractor shall thoroughly proof roll prepared subgrade with a loaded tandem axle dump truck prior to final grading and paving. The geotextile fabric and aggregate base shall be placed on the prepared subgrade within 24 hours of passing a proof roll, or another means or method of preventing subgrade moisture loss shall be implemented as approved by the Engineer.

Areas where unsuitable conditions existed, the Contractor shall repair by removing and replacing the affected areas with approved materials.

All grades must be adjusted to provide position drainage away from structures and edge of pavements during construction and maintained throughout the life of the proposed project. The Contractor shall protect and promptly dewater and recondition all excavations from water regardless of source.

**Subsection 203.07 shall include the following:**

Unless otherwise indicated on the plans, the density requirements for embankment material shall be as determined in accordance with AASHTO T-99 and as follows:

Fills at below a depth of 10 feet.....	98%
Fills at or less than 10 feet in depth .....	95%

**Subsection 203.11 (d) and (f) shall be deleted and replaced with the following:**

Proof rolling, blading, and dozing will not be measured and paid for separately but shall be included in the cost of the work.

**Subsection 203.12 shall include the following:**

Haul and disposal will not be measured and paid for separately but shall be included in the cost of the work.

**END OF SECTION REVISION**

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**REVISION OF SECTION 208  
EROSION CONTROL**

**Section 208 of the Standard Construction Specifications is hereby removed in its entirety and replaced with the following:**

**DEFINITIONS**

**208.01** Definitions used for this Section shall consist of those listed in Title 1 of the City and County of Denver “Standard Specifications for Construction, General Contract Conditions”, 2011 edition.

Definitions used for this Section hereby incorporate those identified within the City and County of Denver Construction Activities Stormwater Manual (CASM).

Additional Definitions applicable to this Section are listed heretofore:

**Basis of Payment:** The terms under which “Work” is paid, as a designated “Pay Item” in accordance with the quantity measured and the “Pay Unit.”

**Best Management Practices (BMPs):** Schedules of activities, prohibitions of practices, installation of devices, maintenance procedures, and other management practices deployed to stabilize the construction site to prevent or reduce the pollution of State Waters (see definition below). Stormwater BMPs can be classified as "structural" (i.e., devices installed or constructed on a site) or "non-structural" (procedures, such as modified landscaping practices).

**Colorado Department of Health and Environment (CDPHE):** State of Colorado, Water Quality Control Division responsible for issuance of State Construction Stormwater Permit.

**Construction Activities Stormwater Discharge Permit (CASDP):** Permit issued by the City for compliance with City & County of Denver Revised Municipal Code and Department of Public Works Rules & Regulations concerning the discharge of pollutants in storm generated runoff from construction sites to Municipal Separate Storm Sewer System (MS4, see definition below) or State Waters, via the Municipal Separate Storm Sewer System (MS4).

**Construction Activities Stormwater Manual (CASM):** City and County of Denver Construction Activities Stormwater Manual (CASM), 2010 edition.

**Colorado Department of Transportation (CDOT):** State agency that has published standards for Erosion Control with accompanying Erosion Control Supervisor certification courses.

**Erosion Control Supervisor (ECS):** The Erosion Control Supervisor is assigned by the Contractor to perform duties as described in this Section. The ECS shall be properly trained in BMPs per requirements of Part V below, and shall be under the direction of a Professional Engineer licensed in the State of Colorado when performing any modifications to the Project Stormwater Management Plan (SWMP), as required by CDPHE.

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**REVISION OF SECTION 208  
EROSION CONTROL**

**Final Stabilization:** Point of construction when all ground surface disturbing activities at the site have been completed and uniform vegetative cover has reached 70% of pre-disturbance vegetative cover (as judged by comparison to nearest fallow vegetation), or equivalent permanent features have been employed. At this point, all temporary BMPs can be removed, all construction and equipment maintenance wastes have been disposed of properly; and all elements of the Stormwater Management Plan have been completed.

**Major SWMP Modification:** Changes to the original SWMP that removes or adds additional area to the Project, or modifies the hydrology or drainage of the Project. A Major SWMP Modification requires the submission of revised Stormwater Management Plan (SWMP) elements to the Permit Authority for review and approval. Any adjustments to a SWMP must be performed either by or under the direction of a Professional Engineer licensed in the State of Colorado.

**Minor SWMP Modification:** Modification to the SWMP that does NOT increase the scope or change hydrology of the Project but: modifies/improves specific BMPs in use at site, indicates progression in phasing of the Project, or specifies relocation of previously approved BMPs within the Project. Any adjustments to a SWMP must be performed either by or under the direction of a Professional Engineer licensed in the State of Colorado.

**Municipal Separate Storm Sewer System (MS4):** A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- a) owned or operated by a State, city, town, county, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of stormwater or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under Section 208 of the Federal Clean Water Act that discharges to State Waters;
- b) designed or used for collecting or conveying stormwater;
- c) which is not a combined sewer; and
- d) which is not part of a Publicly Owned Treatment Works (POTW).

**Permit Authority:** The Department authorized by the City to review and process CASDP Applications for Capital and/ or governmental sponsored Projects. The responsible City department serving as the Permit Authority is the Engineering, Regulatory and Analytics Office. As a clarification, the Development Services Department of the City serves as the point of intake and permit processing center.

**Permit Enforcement Authority:** The Department authorized by the City to inspect and enforce CASDP Rules and Conditions for all construction Projects within the City's MS4 Boundary. The responsible City department serving as the Permit Enforcement Authority is the Wastewater Management Division of the Department of Public Works.

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**REVISION OF SECTION 208  
EROSION CONTROL****Colorado Discharge Permit System (CDPS)-Stormwater Discharges Associated with Construction Activity**

**Permit:** Colorado Revised Statutes require that all construction sites/development Projects, which, by definition, disturb one or more acres in area, shall be covered by a State issued general permit for construction activities. Information on the application requirements for the State permit can be obtained by phone at 303-692-3500; or by visiting their offices located at 4300 Cherry Creek Drive South, Denver, CO 80246 – 1530. or on the Web at: <https://www.colorado.gov/pacific/cdphe/news/water-quality-permits>

**State Waters:** Any and all surface waters which are contained in or flow in or through this State, not to include waters in sewage systems, waters in treatment works of disposal systems, waters in potable water distribution systems, and all water withdrawn for use until use and treatment have been completed.

Examples of State Waters include, but are not limited to, perennial streams, intermittent or ephemeral gulches and arroyos, ponds, lakes, reservoirs, irrigation canals or ditches, wetlands, stormwater conveyances (when they discharge to a surface water), and groundwater.

**Stormwater Management Plan (SWMP):** The Stormwater Management Plan contains the requirements necessary to accomplish all the following:

The SWMP establishes a minimum standard to construct, install, maintain, and remove required BMPs during the life of the Contract to prevent or minimize pollution of stormwater due to erosion, sediment transport, and construction related pollutant generated during all phases of the Project. A SWMP consists of the following elements:

- (i) CASDP Narrative Worksheet with Narrative Report. The Narrative Report and supporting documents should fully address the methods to be used to prevent sediment, debris, and other pollutants from entering the MS4 and/ or State Waters in and around the Project area. Proposed structural and non-structural BMPs should be described with sufficient implementation detail to insure that the logical phases of the proposed construction Project meet the performance standards listed in the CASM.
- (ii) Proposed site drawings and Best Management Practice (BMP) installation details as they apply to the site conforming to the Urban Storm Drainage Criteria Manual, Vol. 3, "Best Management Practices", most current version as issued by the Urban Drainage and Flood Control District (UDFCD), or those established by the City's Department of Public Works. If erosion control drawings were included within the bid documents for the Project, they shall be used for bid purposes and initial planning/ deployment of BMPs on the Project. If provided drawings are signed/ sealed by a Professional Engineer, they have been pre- approved by the Permit Authority and may be used without revision for purposes of submitting for CASDP. If provided drawings do not have signature/ seal of Professional Engineer licensed by the State of Colorado, they will require revision by the Contractor with Professional Engineer signature/ seal prior to submission to the City and County of Denver for CASDP.
- (iii) Supporting documentation related to proposed BMPs that are not currently identified in UDFCD Vol. 3 or as otherwise published by the City.

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**REVISION OF SECTION 208  
EROSION CONTROL**

Any preparation of or adjustments to a SWMP must be performed either by or under the supervision of a Professional Engineer licensed in the State of Colorado. SWMP elements submitted to the City shall also meet currently established criteria of the CDPHE as the SWMP must meet all local, State and Federal requirements.

**Substantial Completion of Erosion Control:** Point of construction when permanent BMPs have been installed, initial growth is in place, and the site is waiting for vegetative cover to reach 70% of pre- disturbance vegetative cover.

**DESCRIPTION**

**208.02** This Work shall consist of constructing, installing, maintaining, and removing when required, BMPs during the life of the Contract until Final Stabilization to prevent or minimize erosion, sedimentation, and pollution of any waters including storm, drainageways, MS4, State Waters, and/ or wetlands. Work under this Section includes the Contractor obtaining required Permits, utilizing SWMP elements provided in the Contract, and/ or SWMP elements specifically prepared by the Contractor as defined herein. The work shall also consist of providing on-going maintenance and monitoring of the SWMP as may be necessary due to the specific and/or dynamic needs of the Project as well as meet all requirements set forth within the CASM.

The Contractor shall coordinate the construction of temporary BMPs with the construction of permanent BMPs to assure economical, effective, and continuous erosion and sediment control and water pollution prevention throughout the construction period until Final Stabilization is achieved.

When a provision of this Section or an order by the Permit Enforcement Authority requires that an action be immediate or taken immediately, it shall be understood that the Contractor shall at once begin effecting completion of the action and pursue it to completion in a manner acceptable to the Permit Enforcement Authority, and in accordance with applicable Permitting requirements.

**MATERIALS**

**208.03** The materials to be used for BMPs shall conform to Colorado Department of Transportation (CDOT) Materials specification section 208.02. The following is a summary of stormwater BMP nomenclature that may be used interchangeably.

DEN does not allow the use or placement of straw or hay products on their projects due to concerns with wildlife interaction. Wherever erosion control, seeding, soil conditioning, mulching, or soil retention specifications contain a reference to straw or hay products, please propose an alternate to the Project Manager for approval.

<b>CDOT BMP Name</b>	<b>SWMP Site Map and City Specifications</b>
Concrete Washout Structure	Concrete Washout Area
Vehicle Tracking Pad	Vehicle Tracking Control
Erosion Control Log	Sediment Control Log / Erosion Log
Aggregate Bags	Rock Sock / Gravel Bags
Soil Retention Blankets	Erosion Control Blanket

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**REVISION OF SECTION 208  
EROSION CONTROL****EROSION CONTROL PERMIT STATUS**

**208.04** The current SWMP status for the Project is as follows:

An approved SWMP has been prepared and CASDP obtained by the City prior to bidding of the Project and as such must be properly transferred to the Contractor prior to the start of construction. The SWMP has been provided within the Bid Documents and shall be made a part of the Contract. The Contractor shall coordinate with the Project Manager and Permit Authority to perform the necessary transfer of CASDP from City to Contractor prior to the start of construction. The CASDP transfer form can be obtained at: <https://www.denvergov.org/content/dam/denvergov/Portals/711/documents/CASDP%20TRANSFER%20FORM.pdf> The Permit transfer will be performed at no cost to the Contractor.

Prior to transfer of CASDP, additional elements shall be completed by the Contractor before the CASDP will be transferred from City to Contractor:

- (i) Complete Sections B&E (Permittee & Site Supervisor) of the CASDP “Narrative Report Information Worksheet”.
- (ii) Prepare a complete SWMP including any required adjustments for proposed construction phasing, staging areas, or additional items necessary to address applicable project specific Permit requirements. This will require the Contractor to provide or retain a Professional Engineer or subcontract with the original Professional Engineer that prepared the Bid Documents.
- (iii) Complete the “Construction Scheduling” section of the “Narrative Report Information Worksheet”.
- (iv) Include specific methods and/or BMPs that the Contractor will implement to address hazardous spill prevention/ containment response.
- (v) Provide any “Additional Documentation and Correspondence” applicable to the Contractor as stated in the CASM. This will require the Contractor to provide or retain a Professional Engineer or subcontract with the original Professional Engineer that prepared the Bid Documents.

If deemed necessary, the Contractor may propose modifications to the approved SWMP once the CASDP has been transferred to the Contractor. Per CASDP requirements, the Contractor shall obtain the endorsement of a Professional Engineer licensed in the State of Colorado for any proposed Major or Minor SWMP Amendments. This may require the Contractor to provide or retain a Professional Engineer or subcontract with the original Professional Engineer of the “For reference only” erosion control drawings.

Per definition, a Major SWMP Modification requires the submission of revised SWMP elements to the Permit Authority for review and approval.

Prior to construction, the Contractor shall obtain the required State Construction Stormwater Permit(s) as applicable.



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**REVISION OF SECTION 208  
EROSION CONTROL****CONSTRUCTION REQUIREMENTS****A) SCHEDULES:**

At least 10 working days prior to the beginning of any construction work, the Contractor shall submit for approval a schedule for accomplishment of temporary and permanent BMPs shown in the SWMP. This schedule shall specifically indicate the sequence of clearing and grubbing, earthwork operations, and construction of temporary and permanent BMPs. The schedule shall include BMPs for all areas within the Project boundaries, including but not limited to, haul roads, borrow pits, and storage and other staging sites. Work shall not be started until the BMP schedule has been approved in writing by the Project Manager, and on site pre-construction inspection is performed and approved by CCD's NPDES inspector. Once the work has started, and during the active construction period, the Contractor shall update the schedule for all BMPs on a regular basis, and as required to keep the SWMP in compliance.

**B) CONSTRUCTION IMPLEMENTATION:** The Contractor shall incorporate into the Project all BMPs that are appropriate for the current phase of work, as outlined in the accepted schedule.**C) UNFORSEEN CONDITIONS:** The Contractor shall direct the ECS (under the supervision of a Professional Engineer licensed in the State of Colorado) to design and implement BMPs for correcting conditions unforeseen during design of the Project, or as possible for emergency situations, which arise during construction. The Project's SWMP, UDFCD Vol 3 standards and details, and CDOTs "Erosion Control and Storm-Water Quality Guide," and any approved modification to these documents as proposed by the Contractor, shall be used as reference documents for the purpose of designing appropriate BMPs. Measures and methods proposed by the Contractor to deal with unforeseen conditions shall be reviewed and approved in writing by the Permit Enforcement Authority and the Project Manager prior to implementation and construction.

In an emergency situation, the Contractor shall use best judgment for immediately responding to the emergency situation as it arises, and shall notify the Permit Enforcement Authority and ECS of the emergency situation and BMPs employed in response as soon as practical after installation.

**D) PERMITS:**

The Contractor shall obtain all required permits for the Project including those required by federal, state, and local agencies. The Contractor shall obtain (or transfer from the City when specified) required erosion control and water quality permits and shall be responsible for compliance with all requirements under any such permits.

**E) EROSION CONTROL SUPERVISOR:**

Contractor shall assign to the Project an employee or subcontractor to serve as Erosion Control Supervisor (ECS). The ECS shall be a person other than the Contractor's superintendent, foreman, or equivalent supervisory position. The ECS shall be experienced in aspects of BMP construction and have satisfactorily completed a Colorado DOT or equivalent ECS training program authorized by the City.

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EROSION CONTROL**

Proof that this requirement has been met shall be submitted to the Project Manager at least ten working days prior to the beginning of any soil disturbance work. A list of authorized ECS training programs is available from the City upon request. Additionally, per definition, the ECS shall be under the direction of a Professional Engineer licensed in the State of Colorado when performing any modifications to the Project Stormwater Management Plan (SWMP).

The ECS shall be responsible for oversight of the implementation, maintenance, and revision of the SWMP for the duration of the Project. CCD requires the ECS to fulfill responsibilities as outlined by CDPS such as having financial control and authority to implement BMPs. The ECS's responsibilities shall be as follows:

- 1) Ensure compliance with all water quality permits or certifications in effect during the construction work.
- 2) Supervise the installation, construction, and maintenance of all BMPs specified in the Contract and coordinate the construction of BMPs with all other construction operations.
- 3) Direct the implementation of suitable BMPs as necessary to correct unforeseen conditions or emergency situations. Direct the dismantling of those features when their purpose has been fulfilled due to completion of each Project phase unless the Permit Enforcement Authority agrees that the features be left in place.
- 4) Attend the preconstruction conference, erosion control preconstruction inspection, Project scheduling meetings, weekly construction/ field meetings, substantial completion and final stabilization inspections, and other meetings regarding construction that could impact water quality.
- 5) Evaluate all non-stormwater coming onto the site, such as springs, seeps, and landscape irrigation return flow. If such flow is identified, the ECS shall propose appropriate SWMP modifications to the Contractor to protect off-site water from becoming contaminated with sediment or other pollutants.
- 6) Coordinate with the Contractor to implement necessary actions to reduce anticipated or presently existing water quality or erosion problems resulting from construction activities.
- 7) Coordinate with the Contractor to ensure all labor, material, and equipment deployed to meet SWMP requirements is judged appropriately.
- 8) During construction, update and record the following items in the SWMP as changes occur:
  - (i) Construction boundaries (may require Major SWMP Modification)
  - (ii) Areas of disturbance (may require Major SWMP Modification)
  - (iii) Areas used for storage of construction materials, equipment, soils, or wastes.
  - (iv) Location of any dedicated asphalt or concrete batch plants.
  - (v) Location of construction offices and staging areas.
  - (vi) Location of work access routes during construction.
  - (vii) Location of borrow and waste.
  - (viii) Location of temporary and permanent stabilization

The ECS shall start a new site map before the current one becomes illegible. All site maps shall remain with the SWMP paperwork.

- 9) Amend the SWMP whenever there are: additions, deletions, or changes in locations of BMPs. SWMP revisions shall be recorded immediately. Items shall be dated and signed at time of occurrence. Specifically, amendments shall include the following:
  - (i) A change in design, construction, operation, or maintenance of the site which would require the implementation of new or revised BMPs; or
  - (ii) Changes when the SWMP proves to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activity.
  - (iii) Changes when temporary BMPs are no longer necessary from changes in Project phase and are removed. All inspection and maintenance activities or other repairs shall be documented.

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EROSION CONTROL**

All inspection and maintenance activities or other repairs shall be documented. The SWMP and documentation shall be kept on the Project site at all times.

- 10) Modify the site map with arrows to indicate direction of surface and storm water flowing across the Project site.
- 11) When adding or revising BMPs in the SWMP, amend the narrative to explain what, when, where, why, and how the BMP is being used, and add a detail to the SWMP.
- 12) If using existing topography, vegetation, etc. as a BMP, label it as such in the SWMP site map; amend the Narrative to explain when, why, and how the BMP is being used in the SWMP.
- 13) Record on the SWMP, and implement the approved plan for concrete and asphalt saw cutting, grinding, and milling containment and removal.
- 14) Update the potential pollutants list in the SWMP throughout construction meeting CASDP requirements.
- 15) Spills, leaks, or overflows that result in the discharge of pollutants shall be documented on the inspection form. The ECS shall record the time and date, weather conditions, reasons for spill, and how it was remediated. The ECS shall immediately report to the Contractor and Project Manager the following instances of noncompliance:
  - (i) Noncompliance which may endanger health or environment.
  - (ii) Spills or discharge of hazardous substance or oil which may cause pollution of the City MS4 or State Waters.
  - (iii) Discharge of stormwater which may cause an exceedance of a water quality standard.
- 16) Perform a thorough inspection of the stormwater management system at least every seven (7) days and within 24 hours after any precipitation or snowmelt event with the potential to cause surface erosion. If no land disturbing construction activities are present during a storm event, post-storm event inspections shall be conducted prior to commencing any new land disturbing construction activities, but no later than seventy-two (72) hours following the storm event. The inspection records shall be kept on-site in a written or previously approved format. Inspections shall be conducted during the progress of the work, during work suspensions, or until Final Stabilization of all disturbed areas is approved by Permit Enforcement Authority and shall include the following services at a minimum:
  - (i) The construction site perimeter, disturbed areas, and areas used for material storage that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. BMPs identified in the SWMP shall be observed to ensure that they are operating correctly.
  - (ii) The description of potential pollutant sources, and the BMPs identified in the SWMP, shall be revised and modified as appropriate based on the results of the inspection as soon as practicable after such inspection. Modification to the SWMP shall be implemented in a timely manner and in accordance with applicable Permit requirements.
  - (iii) The operator shall keep a record of inspections. Uncontrolled releases of sediment or polluted storm water or measurable quantities of sediment found off the site shall be recorded with a brief explanation as to the measures taken to prevent future releases as well as any measures taken to clean up the sediment that has left the site. Inspection records shall be made available to the City upon request. Note: documentation of uncontrolled releases at site DOES NOT alleviate any State or Federal requirements for reporting of discharges or upset conditions. Care shall be taken to ensure compliance with all regulatory requirements at site.

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**REVISION OF SECTION 208  
EROSION CONTROL**

- (iv) Seven (7) day inspections are required during construction and at all times until Final Stabilization has been achieved. Seeding and mulching of disturbed areas does NOT count as final stabilization until such time as 70% pre disturbed vegetative cover has been achieved. Sites with growth in place sufficient to deter erosion that have not yet achieved final stabilization may petition the City to grant an alternative inspection schedule while awaiting additional growth for final stabilization. These inspections must be conducted in accordance with the above paragraphs.

**F) APPLYING BMPs TO STABILIZE SITE:**

The duration of the exposure of incomplete construction to the effects of weather shall be as short as practicable. BMPs such as: seeding, surface roughening, mulching, applying tackifier, use of geotextiles and matting, permanent landscaping, or other selected BMPs shall be applied within fourteen (14) calendar days of completion of grading/soil disturbance activities to stabilize the construction site unless disturbed area is within 100 feet of an MS4 or State Waters or has slopes of 3 to 1 or greater in which case BMPs shall be implemented within seven (7) calendar days of completion of grading activities. Disturbed areas where work is temporarily halted shall be temporarily stabilized within seven (7) days after the activity ceased unless work is to be resumed within thirty (30) calendar days after the activity ceased.

Clearing and grubbing operations shall be scheduled and performed to minimize both the area of the Project disturbed at a given time and the amount of time that disturbed areas remain open. BMPs such as temporary seeding are required between successive construction stages when disturbed areas will not be stable or active for thirty (30) calendar days or more. No payment will be made for additional work required because the Contractor has failed to properly coordinate the BMP schedule, thus causing previously stabilized areas to be disturbed by operations that could have been performed prior to the stabilization.

Upon failure of the Contractor to coordinate the permanent BMPs with the grading operations in a manner to effectively control erosion and prevent water pollution, the Permit Enforcement Authority can suspend the Contractor's grading operations and the Project Manager can withhold monies due to the Contractor on current estimates until such time that all aspects of the work are coordinated in an acceptable manner.

- G) **WORK OUTSIDE LIMITS OF CONSTRUCTION:** Non-contiguous areas outside the limits of construction that are used by the Contractor that include, but are not limited to, borrow pits, haul routes, storage and disposal areas, field offices, maintenance, batching areas, etc., shall have appropriate BMPs implemented by the Contractor at the Contractor's expense. Should said areas meet applicable CASDP Permit criteria, the Contractor shall obtain a separate CASDP or amend existing CASDP for each area as applicable at no additional expense to the City.

- H) **MAINTENANCE:** The Contractor shall continuously maintain erosion and sediment control BMPs on a daily basis or as directed by the ECS so that they function properly during and after construction (including work suspensions) until Final Stabilization has been approved by the Permit Enforcement Authority. Maintenance includes, but is not limited to, the following items:

- (i) From the time seeding and mulching work begins until the date the Project has reached Substantial Completion of Erosion Control, the Contractor shall keep all seeded areas stabilized at all times. Any damage to seeded areas or to mulch materials shall be promptly repaired.
- (ii) All inspection sediment removal, and BMP maintenance activities to comply with all Federal, State & Local erosion control permit requirements until Final Stabilization is reached.
- (iii) All removal and replacement of existing BMPs due to damage to same suffered either by the contractor, outside agencies, the public, or acts of God.

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- (iv) All required mechanical and/ or manual street sweeping.
- (v) Discretionary changes required of any regulatory enforcement officer

If the Contractor fails to maintain the BMPs in accordance with the Contract, or as directed, the City may at the expiration of a period of 48 hours, after having given the Contractor written notice, proceed to maintain BMPs as deemed necessary. The cost thereof will be deducted from any compensation due, or which may become due to the Contractor under this Contract.

- I) GROUNDWATER CONTROL: For all excavations and caisson drilling operations the Contractor shall provide suitable equipment and labor to remove water, and he shall keep the excavation dewatered so that construction can be carried on under dewatered conditions. Water control shall be accomplished such that no damage is done to adjacent channel banks or structures. The 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 (AASHTO T99) except where replacement by other materials and/or methods are required.

The contractor shall conduct operations in such a manner that storm, 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 his 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 DEN.

Where perched groundwater conditions are encountered during excavation, temporary dewatering may be required. Perched groundwater seeping into excavation shall be controlled by measures that may include, but are not limited to, shallow trenches leading to a sump pit where water could be removed by pumping. The Contractor shall remove all temporary water control facilities when they are no longer needed or at the completion of the project.

Discharge of any groundwater must conform to the requirements of Colorado Department of Public Health and Environment permits and requirements of any other governing agencies. Contractor is responsible for obtaining and adhering to such permits at no additional cost to DEN.

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

The Contractor shall install adequate measures to maintain the level of groundwater below the foundation subgrade or the bottom of the utility trench elevation and maintain sufficient bearing capacity for all structures, pipelines, utilities, earthwork, and rock work. The Contractor shall also take adequate measures to remove groundwater from caisson holes during the drilling operation as required in Section 503 of the Standard Specifications.

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**REVISION OF SECTION 208**  
**EROSION CONTROL**

Such measures may include, but are not limited to, installation of perimeter subdrains, 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, settlement ponds or well points shall be restored following dewatering operations to reduce permeability in those areas as approved by the Engineer.

In areas outside the right-of-way that are used by the Contractor and which include, but are not limited to, borrow pits, haul roads, storage and disposal areas, maintenance, batching areas, etc., erosion and sediment control work shall be performed by the Contractor at the Contractor's expense.

Modifications to existing erosion and sediment control measures or the addition of new erosion and sediment control measures will depend on the Contractor's construction procedures, construction sequencing and phasing, and general approach to the project. Multiple mobilizations, and periodic removal, replacement or modifications of erosion and sediment control measures may be required to match the Contractor's work progress.

- J) MINOR SWMP MODIFICATIONS: Shall be made in the field by the Contractor and thoroughly documented in the Contractor's SWMP narrative and drawings. Should the Permit Enforcement Authority deem minor field modifications inadequate, the Contractor may be required to a) make specific modifications as requested by the Permit Enforcement Authority or b) return to the original approved design specifications. Minor SWMP Modifications are allowed, covered under the original CASDP, and required as part of standard maintenance and operation.
- K) MAJOR SWMP MODIFICATION: The City reserves the right to require changes in the Work or Project Limits that may require a Major Modification to the SWMP and/ or CASDP due to unforeseen circumstances. Should this occur, the Contractor will be responsible for the following (as applicable) and applying for CASDP amendment:
- (i) Make required revisions to comply with changing Federal or State rulemaking if it occurs within timeframe of the Project.
  - (i) Make required revisions due to unforeseen or unplanned conditions leading to deficient Drawings/ SWMP (hazardous materials encountered, landfills, expansion of work limits, etc.)
  - (ii) Prepare revised SWMP elements endorsed by a Professional Engineer licensed in the State of Colorado
- L) SUBSTANTIAL COMPLETION OF EROSION CONTROL: When a CASDP is required for the Project, Substantial Completion of the Project as defined by the City and County of Denver General Contract Conditions cannot be reached until Substantial Completion of Erosion Control has been granted. Granting of Substantial Completion of Erosion Control must be requested by the Contractor and be approved by the Permit Enforcement Authority in the form of a "Certificate of Substantial Completion of Erosion Control".
- M) FINAL STABILIZATION: Granting of Final Stabilization must be requested by the Contractor and be approved by the Permit Enforcement Authority. Other permanent soil stabilization techniques may be proposed, in writing, by the Contractor and used upon approval, in writing, by the Project Manager and Permit Enforcement Authority.

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**REVISION OF SECTION 208  
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The Contractor shall follow the following procedures for approval of Final Stabilization:

- (i) The Contractor shall file Inactivation Request for Construction Activities Stormwater Discharge Permit (available within CASDP guidance documents) with the Permit Enforcement Authority.
- (ii) The Contractor shall coordinate with the Permit Enforcement Authority to hold a Final Inactivation Inspection.
- (iii) If passing, the Permit Enforcement Authority transmits a letter of approval for Final Stabilization.
- (iv) If not passing, the Permit Enforcement Authority transmits a letter of denial for Final Stabilization with associated inspection report to Contractor.
- (v) Stabilization, inspection and maintenance requirements shall continue until confirmation of having met final closure requirements have been granted in writing by the Permit Enforcement Authority.  
When Final Stabilization has been reached, the Permit Enforcement Authority shall issue a "Certificate of Final Stabilization".
- (vi) Once the Inactivation request is approved by the City and County of Denver, the contractor can apply to close the State Stormwater Permit.

**N) FINAL ACCEPTANCE:**

CASDP obligations (including reaching Final Stabilization) may hinder the ability to reach Final Acceptance for the overall Project as defined in the City General Contract Conditions.

**CONSTRUCTION OF BMPs**

**208.06** BMPs shall be constructed so that they conform to all requirements as set forth within the Project SWMP. They shall meet all requirements set forth within each BMP detail and shall be installed and maintained so that they function in an effective and operable manner.

**METHOD OF MEASUREMENT**

**208.07** Erosion Control Supervisor (ECS) (paid under the item Erosion Control Management (ECM)) will be measured by 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 a half 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. Pay the total combined hours of ECM work exceeding eight hours in a day as one day.

Silt fence, silt berms, erosion logs, gravel bags, silt dikes, temporary berms, temporary diversions, temporary drains, and brush barriers will be measured by the actual number of linear feet that are installed and accepted. Stakes, anchors, connections and tie downs used for temporary slope drains will not be measured and paid for separately, but shall be included in the work.

Concrete Washout Structure will not be measured separately but will be paid for on a lump sum basis.

Storm drain inlet protection will be measured by the unit as specified in the Contract. Sediment trap and sediment basin quantities will be measured by the unit which shall include all excavation and embankment required to construct the item.

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**REVISION OF SECTION 208**  
**EROSION CONTROL**

Stabilized Staging Areas shall be paid for on a lump sum basis. All materials, equipment and labor required to provide stabilized staging areas for the project will not be measured and paid for separately but shall be included in this lump sum item.

Removal and disposal of sediment, concrete & trash that is or is not generated by construction activities will not be measured separately but shall be included in the work.

Any excavation required for the removal of sediment from traps, basins, areas adjacent to silt fences and erosion bales, and any other cleanout excavation of accumulated sediment, and removal of check dams or storm drain inlet protection will not be measured separately but shall be included in the work.

Groundwater Control will be measured by the lump sum item. All materials, equipment and labor required to control surface water and dewater all excavations during the course of the project will not be measured and paid for separately but shall be included in this lump sum item.

**BASIS OF PAYMENT**

**208.08** Work to furnish, install, maintain, replace (if not due to contractor negligence), remove, and dispose of BMPs specified in the Contract will be paid for at the contract unit price.

Payment will be made under in accordance with CDOT Standard specifications 203.14, 207.05, 208.12, 212.08 (except for Concrete Washout Structure), 213.05, 214.06, 216.05, 217.05, and 607.05.

Payment for each BMP item will be full compensation for all work, materials and equipment required to furnish, install, maintain, remove, and dispose of it. BMPs as deployed per the SWMP requiring replacement due to Contractor negligence and or carelessness shall be provided at the Contractor's expense.

Temporary BMPs required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the work as scheduled or for the Contractor's convenience, shall be performed at the Contractor's expense.

If the Contractor fails to complete construction within the approved contract time, payment will not be made for Section 208 pay items for the period of time after expiration of the approved contract time. These items shall be provided at the Contractor's expense.

The cost for any corrective actions required by the State or City due to contractor's failure to obtain or comply with applicable Permits will be borne by the Contractor, including fines and penalties. In the case of failures on the part of the Contractor in controlling erosion, sedimentation, and/or water pollution, the City may provide the necessary corrective actions. All corrective action costs, including Project engineering costs, will be charged to the Contractor, and appropriate deduction will be made from the Contractor's monthly pay estimate.

The sole remedy for additional costs associated with installation of BMPs as required by regulatory agencies to ensure compliance with local and State requirements shall be per unit BMP as provided in the Bid Schedule of this Contract. The Contractor however may submit a separate itemized Change Order for any required Major SWMP Modification proposed by the City during the course of the Project.



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**REVISION OF SECTION 208**  
**EROSION CONTROL**

Erosion Control Supervisor will be paid for by the item Erosion Control Management (ECM) and shall be full compensation for the Erosion Control Supervisor including all materials, labor and equipment necessary for the ECS to perform the work. Commute time will not be measured and paid for separately, but shall be included in the work. The ECM pay item shall include all labor, Professional Engineering (includes supervisory Professional Engineer licensed in the State of Colorado), and/ or design fees to prepare modifications to Stormwater Management Plan(s), revise or amend Permits, coordinate with State and Local agencies, design special erosion control plans for emergency situations that develop during construction or unexpected weather conditions.

Payment for stabilized staging area will be full compensation for all work, materials and equipment required to construct, maintain, and remove the staging area upon completion of the work. Aggregate and/or paving, perimeter controls, construction fencing, and Good Housekeeping practices related to materials storage and disposal will not be measured and paid for separately, but shall be included in the work.

Additional stabilized construction/ staging area proposed by the Contractor beyond the area included in the Bid shall be installed per requirements of the Permit Authority and Permit Enforcement Authority without any additional compensation.

Concrete Washout Structure, whether constructed or prefabricated, no matter the number used, and will be full compensation for all work and materials required to install, maintain, and remove the item regardless of the number washout structures placed or liners used. This includes, but is not limited to: excavation, embankment, liner, erosion bales, fencing, signing, and containment and disposal of concrete washout and all other associated waste materials including replacement and removal of liners, regard less of the number of liners used or washout structures placed

Silt berm spikes and dike staples will not be measured and paid for separately, but shall be included in the work.

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.

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**REVISION OF SECTION 208**  
**EROSION CONTROL**

Payment for Groundwater Control shall be made at the contract unit price and shall include full compensation for all labor, equipment, tools, and materials necessary to control surface water and provide dewatering operations in accordance with the plans specifications and conforming to the Colorado Department of Public Health and Environment permits. Payment for installed items shall include maintenance of the device for the entire time it is in place during construction at a given location. Replacement of the device as required to maintain its function, is included in the cost of the item.

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.

Surveying of permanent BMPs will not be measured and paid for separately, but shall be included in the work.

Payment for work under this section will be as identified in 208.08, as amended above and by other contract special provisions. For this project, the following pay items are tabulated in the plans:

<b>Pay Item</b>	<b>Pay Unit</b>
Erosion Log Type 1 (9 inch)	Linear Foot
Aggregate Bag	Linear Foot
Concrete Washout Structure	Each
Storm Drain Inlet Protection (Type 1)	Each
Storm Drain Inlet Protection (Type 3)	Each
Erosion Control Management	Day
Vehicle Tracking Pad	Each
Storm Drain Outlet Protection	Each
Stabilized Staging Area	Lump Sum
Temporary Berm	Linear Foot
Water Control	Lump Sum
Removal and Disposal of Sediment (Labor)	Hour
Removal and Disposal of Sediment (Equipment)	Hour
Sweeping (Sediment Removal)	Hour

**END OF SECTION REVISION**

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**REVISION OF SECTION 209  
WATERING AND DUST  
PALLIATIVES**

**Section 209 of the Standard Specifications is hereby revised for this project as follows:**

**METHOD OF MEASUREMENT**

**Subsection 209.07 paragraph 1 shall be deleted and replaced with the following:**

Water for moisture-density control, landscaping, pre-wetting, and for dust palliatives will not be measured and paid for separately but shall be included in the cost of the work.

**Subsection 209.08 paragraph 1 shall be deleted.**

**END OF SECTION REVISION**

**-1-****REVISION OF SECTION 210  
RESET SIGN PANEL (SPECIAL)**

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

**DESCRIPTION**

**Subsection 210.01 shall include the following:**

This work consists of salvaging and resetting the 18' x 6'-1" advertising sign assemblage with variable gas prices located at the intersection of 77<sup>th</sup> Ave and Gun Club Road. The Contractor shall verify that the sign is fully functional before commencing with any work and shall be responsible for making it fully functional again after completion of this item.

**CONSTRUCTION REQUIREMENTS**

**Subsection 210.07 shall include the following:**

The construction sequence shall include all necessary equipment and materials necessary to reset the existing advertising sign assemblage from the existing location to the proposed structure as shown on the Plans. Unless otherwise approved by the Engineer, the construction sequence shall follow, but not be limited to, the following steps:

1. Construct the caissons at the proposed location (measured and paid for per Section 503).
2. Form up and pour the concrete grade beam (measured and paid for per Sections 601 and 602).
3. Turn off power to the existing sign.
4. Excavate around the existing sign to fully expose the pipes that support the sign and the wiring conduit.
5. Untermine all wiring that extends out from the sign assemblage at the existing junction box, leaving the ends within the assemblage terminated.
6. Support the sign assemblage with a lifting mechanism and cut the upper 3.5" NPS pipes just above the fillet welds that connect them to the lower 4.0" NPS pipes.
7. Lift the sign assemblage away and carefully salvage it.
8. Drill holes in the grade beam to receive the proposed 4.0" NPS pipes (measured and paid for per Section 509). Place the 4.0" NPS pipes in the holes.
9. Construct the masonry pedestals, including the precast concrete top blocks (measured and paid for per Section 601).
10. Run flexible metal conduit / galvanized rigid conduit (GRC) to establish paths for the existing wiring from the sign assemblage to the proposed junction box (which is part of the Lighting Plans). If the existing conduit is salvable, it may be re-used. If not, it shall be provided new as part of this item.
11. Support the sign assemblage with a lifting mechanism and bring it into place over the new foundation. Slip the upper 3.5" NPS pipes into the lower 4.0" NPS pipes and place circumferential fillet welds to connect them.
12. With the sign assemblage still supported, place high strength grout around the lower 4.0" NPS pipes. Keep the sign assemblage supported until the grout has achieved sufficient strength to hold the sign assemblage in its final position.
13. Run the existing wiring that extends out from the sign assemblage through the new conduit paths and reterminate all wiring in the proposed junction box by splicing them to the proposed wiring that will come from the proposed pull box (which are part of the Lighting Plans).
14. Turn on power to the existing sign.

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**REVISION OF SECTION 210  
RESET SIGN PANEL (SPECIAL)**

15. Test the system to confirm functionally of the systems that allow Phillips 66 to change gas prices and illuminate the signs.
16. Troubleshoot, as necessary, until full functionality has been reestablished.

The contractor shall stage and perform work to minimize the duration the sign is out of service. Construction of the new sign shall be completed prior to the existing sign being taken out of service and the sign can be placed in its new location without the need for temporary storage. Maximum allowable time for signs to be out of service is seven (7) calendar days unless otherwise approved by the Engineer.

**BASIS OF PAYMENT**

**Subsection 210.13 shall include the following:**

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Reset Sign Panel (Special)	Each

This pay item shall include all work in the CONSTRUCTION REQUIREMENTS that is not specifically listed as being part of another pay item. It shall include the new wiring from the proposed pull box to the proposed junction box at the new sign location, along with all required untermination and retermination (splicing) work and materials. It shall also include the placement of backfill and compaction up to finished grade.

**END OF SECTION REVISION**

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## **REVISION OF SECTION 210 RELAY RIPRAP (SPECIAL)**

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

### **DESCRIPTION**

**Subsection 210.01 shall include the following:**

This work consists of removing, stockpiling, and replacing decorative rock as needed to perform the work.

### **CONSTRUCTION REQUIREMENTS**

**Subsection 210.02 shall include the following:**

The Contractor shall remove decorative rock adjacent to the pavement within the limits of the disturbed areas. Material that is found to be in good condition shall be stockpiled by the Contractor. Stockpiled material shall be kept clean from construction debris and other deleterious materials. Prior to relaying material, the Engineer shall perform a visual inspection of the material to determine whether it is suitable for replacement. Material deemed not suitable for replacement shall be replaced in-kind with similar material, approved by the Engineer, at the Contractor's expense.

### **METHOD OF MEASUREMENT**

**Subsection 210.12 shall include the following:**

The quantity for "relay riprap (special)" will be the number of cubic yards of material removed from the site and stored. Cubic yards will be measured based on the plan view area shown in the plans and an assumed depth of six (6) inches. A second payment will not be made for the replacement of the stored material.

### **BASIS OF PAYMENT**

**Subsection 210.13 shall include the following:**

Payment will be made under:

**Pay Item**

Relay Riprap (Special)

**Pay Unit**

Cubic Yard

### **END OF SECTION REVISION**

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## REVISION OF SECTION 212 SEEDING (NATIVE)

**Section 212 of the Standard Specifications is hereby revised for this project as follows:**

**Subsection 212.02(a) shall include the following:**

The Contractor shall submit the following for review and approval:

1. Certification from the seed supplier showing the comprehensive list of species present in the mix.
2. The purity analysis results from an accredited seed testing lab for each species listed on the mix certification (these purity analyses must show that there are no Colorado noxious weeds present).
3. Documentation showing that crop and weed seed percentages, for the entire mix, are both less than or equal to 0.01%

Seed mix should be as follows:

SPECIES		LBS PLS ACRE*	% OF MIX**
SCIENTIFIC NAME	COMMON NAME		
AGROPYRON CRISTATUM	CRESTED WHEATGRASS	3.75	25
SPOROBOLUS AIROIDES	ALKALI SACATON	0.75	5
PASCOPYRUM SMITHII	'ARRIBA' WESTERN WHEATGRASS	3.75	25
BOUTELOUA GRACILIS	BLUE GRAMA	1.5	10
BUCHLOE DACTYLOIDES	'NATIVE' BUFFALOGRASS	3	20
ELYMUS TRACHYCAULUS	'PRIMAR0.5' SLENDER WHEATGRASS	2.25	15
TOTAL:		15	100

\* PLS means Pure live seed, rates shown are for drill seeding.

\*\* Percent by seed number

**Subsection 212.06(c) shall include the following:**

*Seeding.* Broadcast seeding is not allowed on the project and shall not be performed.

## BASIS OF PAYMENT

**Subsection 212.08 shall include the following:**

**Pay Item**

Seeding (Native)

**Pay Unit**

Acre

Providing and installing barriers as directed by the Project Manager to protect seeded areas from damage from both pedestrian and vehicular traffic will not be paid for separately but shall be included in the work.

## END OF SECTION REVISION

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## **REVISION OF SECTION 304 AGGREGATE BASE COURSE**

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

### **MATERIALS**

**Subsection 304.02 shall include the following:**

Aggregate Base Course Class 6 will be furnished for the project by DEN, located at the DEN South Recycle Yard. Stockpile of available material shall be designated by the DEN PM, but shall be the Contractor's responsibility to delineate and secure upon Notice to Proceed, for exclusive use on this project. Delineation may include construction fencing, rope, signage, etc. at the Contractor's discretion.

The contractor must supply their own means of loading and hauling the designated material from the South Recycle Yard to the project site.

The Contractor must supply power to DEN's State-certified truck scale to be made fully operational. Minimum requirement for power is a 42 amp, Generac SD 010 10kW generator or approved equal. All material removed from the South Recycle Yard must be weighed for verification of material quantities.

DEN-furnished Aggregate Base Course Class 6 must adhere to all sampling and testing frequency and requirements outlined for Section 304 Aggregates, including gradation, density/compaction, resilient modulus, and R-value, as specified. The Aggregate base Course Class 6 must have a resistance value of at least 78 when tested by the Hveem Stabilometer method.

At the completion of the project, the Contractor shall return all areas within the DEN South Recycle Yard that were disturbed to their pre-construction condition.

**Access.** DEN South Recycle Yard gates will only be unlocked during scheduled loading/unloading visits. Access to the site is not allowed unless the visit has been appropriately scheduled in advance.

Normal Business Hours: 7:00am to 3:30pm Mon-Fri. DEN requires a minimum of 48 hours notice to guarantee access to the South Recycle Yard during normal business hours.

Nights and Weekends: 3:30pm to 7:00am Mon-Fri, All day Sat, Sun. DEN requires a minimum of 72 hours notice to guarantee access to the South Recycle Yard at night and during weekends.

### **BASIS OF PAYMENT**

**Subsection 304.08 shall include the following:**

Loading, hauling, and power supply for the scales will not be paid for separately but shall be included in the work.

### **END OF SECTION REVISION**



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## **REVISION OF SECTION 306 RECONDITIONING**

**Section 306 of the Standard Specifications is hereby revised for this project as follows:**

### **CONSTRUCTION REQUIREMENTS**

**Subsection 306.02 is hereby deleted and replaced with the following:**

**306.02** The top thirty (30) inches of existing subgrade shall be reconditioned through removal of existing subgrade soils and then replacement with moisture conditioning and compacting the soils according to the following requirements. The contractor shall remove the existing subgrade material to a depth of thirty (30) inches below the bottom of the proposed Aggregate Base Course. The existing onsite materials can be reused as engineered fill below pavements, provided the material meets the compaction and moisture treatment requirements presented in Section 203 of the CDOT *2021 Standard Specifications for Road and Bridge Construction* and any deleterious materials are removed. Some removal and replacement may be required if unsuitable or soft materials are exposed. The reconditioned surface shall not vary above or below the lines and grades staked by more than 0.08 foot. The surface shall be tested for smoothness and density before the application of any base course material. All irregularities exceeding the specified tolerances shall be corrected to the satisfaction of the Engineer at no additional cost to the project. The surface shall be satisfactorily maintained until base course has been placed.

### **METHOD OF MEASUREMENT**

**Subsection 306.03 is hereby deleted and replaced with the following:**

**306.03** Reconditioning will be measured by the square yard of subgrade, including auxiliary lanes, and shall include excavation, stockpiling and/or removal of excess excavation, embankment, blading, shaping, scarifying, compacting the subgrade, finishing, and maintenance of the finished surface.

If required, muck excavation in addition to the depth of reconditioning will be measured and paid for separately.

### **END OF REVISION**

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## REVISION OF SECTION 412 PORTLAND CEMENT CONCRETE PAVEMENT

**Section 412 of the Standard Specifications is hereby revised for this project as follows:**

### CONSTRUCTION REQUIREMENTS

**Subsection 412.03 shall be revised to include the following:**

Concrete for rigid pavements used on the project shall be CDOT Class P concrete and shall meet requirements in accordance with Section 601 of the Standard specifications. Mix designs must be submitted for approval by the Engineer prior to placement and shall be designed for the opening criteria specified in Section 412.22. Such mix designs shall be submitted in a timely manner so as not to delay the scheduled commencement of the project, taking into account time for testing of the mix by the Contractor's laboratory.

Concrete used on the project should be deposited by truck mixers or agitators and placed a maximum of 90 minutes from the time the water is added to the mix. All other construction requirements as outlined in the Standard Specifications shall govern.

**Subsection 412.13 shall include the following:**

Concrete pavement with thickness of greater than six (6) inches should have joint spacing of a maximum of 15 feet. Concrete pavement with thickness of six (6) inches or less should have joint spacing of a maximum of 12 feet. Construction of new rigid pavement, including acceleration/ deceleration lanes, will require epoxy-coated smooth dowel bars in the transverse joints for load transfer. Dowel should be sized in accordance to Reinforcing Size Table as shown below. Dowel should be placed at a depth of  $\frac{1}{2}$  the thickness of the concrete below the surface of the pavement. Concrete pavement joint details in accordance with CDOT M&S Standards M-412-1 shall also apply.

Reinforcing Size Table (20-year or Greater design Life)		
Pavement Thickness (T) (Inches)	Dowel Bar Diameter (Inches)	Minimum Concrete Cover (Inches)
$7 < T < 8$	1	2.5
$8 \leq T \leq 10$	1.25	3
$10 < T \leq 15$	1.50	3

Tie bars for longitudinal joints shall conform to AASHTO M 284 and shall be Grade 60, epoxy-coated, and deformed. Tie bar length shall be 30 inches and spaced at 36 inches on center. Tie bar size is No. 5 when pavement is placed on unbound bases.

### BASIS OF PAYMENT

**Subsection 412.24 shall include the following:**

Pay Item	Pay Unit
Concrete Pavement (10.5-inch)	Square Yard

**END OF SECTION REVISION**

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## **REVISION OF SECTION 503 DRILLED SHAFTS**

**Section 503 of the Standard Specifications is hereby revised for this project as follows:**

### **DESCRIPTION**

**Subsection 503.01 shall include the following:**

Unless otherwise specified in the plans, the drilled shafts for lighting and traffic signal foundations shall conform to the requirements of the City and County of Denver - Traffic Engineering Services – Traffic Signal Standards found at the following address:

[https://www.denvergov.org/content/dam/denvergov/Portals/705/documents/guidelines/PWES-009.0-Traffic\\_Engineering\\_Services\\_Signal\\_Sign\\_and\\_Marking\\_Standards.pdf](https://www.denvergov.org/content/dam/denvergov/Portals/705/documents/guidelines/PWES-009.0-Traffic_Engineering_Services_Signal_Sign_and_Marking_Standards.pdf)

### **BASIS OF PAYMENT**

**Section 503.09 shall include the following:**

<b>Pay Item</b>	<b>Pay Unit</b>
Drilled Shaft (24 Inch)	Linear Foot
Drilled Shaft (36 Inch)	Linear Foot

The unit price of drilled shaft (24 Inch to 36 Inch) shall be full compensation for making all excavations; hauling and disposal of excavated material; performing all necessary dewatering and pumping; furnishing and placing required concrete and anchor bolts and reinforcement steel, including the reinforcement projecting above the tops of the caissons necessary for splicing; all backfilling; removing casings; and for furnishing all tools, labor, equipment, and incidentals necessary to complete the work. No extra payment will be made for casing left in place.

**END OF SECTION REVISION**

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**REVISION OF SECTION 601  
MASONRY WALL**

**Section 601 of the Standard Specifications is hereby revised for this project to include the following:**

**DESCRIPTION**

**Subsection 601.01 shall include the following:**

This work consists of constructing concrete masonry pedestals on the proposed sign structure as part of the reset of the advertising sign assemblage with variable gas prices located at the intersection of 77<sup>th</sup> Ave and Gun Club Road. The pedestals shall be comprised of and hereby referred to as “walls” within this specification.

**MATERIALS**

**Subsection 601.03 shall include the following:**

- (a) *General.* References to the International Building Code (IBC) refer to the current edition as amended by the City and County of Denver. Laboratory technicians involved in masonry testing shall be certified by the National Concrete Masonry Association as a "Certified Laboratory Technician for Concrete Masonry". Technicians shall always possess records of certification when on site, during sampling of materials, preparation of test specimens, and while conducting tests.
- (b) *Concrete Masonry Units.* Concrete masonry units (CMU) shall conform to the requirements of ASTM C 90 and the following:
  1. Provide units that are Type II (moisture controlled), hollow, and normal weight.
  2. The compressive strength of CMU'S shall be as defined in ASTM C 90 or greater as required to attain f'm of 1,500 psi minimum.
  3. Units shall be integrally and uniformly colored to match the existing CMU pilasters at 77<sup>th</sup> Ave and Gun Club Road.
  4. Units shall be the size and surface texture that matches the above-mentioned CMU pilasters.
  5. Provide an approved water repellent additive in accordance with the manufacturer's recommendations.
  6. The Contractor shall sample and test CMU's in accordance with ASTM C 140 and provide the Engineer with complete test reports as outlined in Section 10 of C 140.
- (c) *Mortar.* Mortar for concrete masonry construction shall conform to the requirements of the ASTM C 270 and the following:
  1. Provide Type S in accordance with the Proportion Specifications for Portland Cement, lime, and sand. Masonry cement will not be allowed.
  2. Quantities of sand, cement, and lime shall be accurately measured, shovel counts shall not be used.
  3. Mortar shall be integrally and uniformly colored to match the CMU's.
  4. Provide an approved water repellent additive in accordance with the manufacturer's recommendations.
- (d) *Grout.* Grout shall conform to the requirements of UBC Standard 21-19 and the following:
  1. A 28-day compressive strength of 2,000 psi or greater as required to attain f'm. The Contractor shall sample and test the grout for every 5,000 square feet of wall as construction progresses in accordance with the requirements of ASTM C476. Test reports shall be submitted to the Engineer as outlined in ASTM C1019.
  2. Air is not required.
  3. Up to 20% by weight of the cement may be an approved fly ash.

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**REVISION OF SECTION 601  
MASONRY WALL**

4. Fine aggregate shall conform to the requirements of AASHTO M 6 as defined in Section 703.
  5. The coarse aggregate shall conform to the requirements of AASHTO M 43, Size 7 or 8, as defined in Section 703 and shall be a minimum of 50% of the total aggregate.
  6. Sufficient water (or a combination of water and water reducer) shall be added to the grout to attain a slump of 8 to 10 inches prior to placement.
  7. Provide an approved water repellent additive in accordance with the manufacturer's recommendations.
- (e) *Prism Testing.* The Contractor is responsible for providing a concrete masonry assemblage (a composite of CMU's, mortar, and grout) with a strength, f'm, of at least 2000 psi. Prism tests shall be conducted by the Contractor prior to starting and during construction to verify design compressive strength. Compressive strength of prisms shall be based on tests at 28 days and each set of prisms shall equal or exceed f'm. Compressive strength at seven days or three days may be used provided a relationship between seven-day and three-day and 28-day strength has been established for the project prior to the start of construction. Verification by masonry prism testing shall be as follows:
1. A set of five masonry prisms (grouted solid) shall be built and tested in accordance with ASTM E 447 prior to the start of construction. Materials used for the construction of the prisms shall be taken from those specified to be used for the project.
  2. A set of three prisms (grouted solid) shall be built and tested during construction in accordance with UBC Standard 21-17 for each 5000 square feet of wall area, but not less than one set of three masonry prisms for the project. Prisms shall be constructed from materials randomly selected on the project site.
  3. Test reports shall be submitted to the Engineer as outlined in ASTM E 447.
  4. Those portions of the wall represented by tested prisms that do not attain f'm shall be removed and replaced with a wall that meets the requirements of this specification at the Contractors expense.
- (f) *Masonry Reinforcement.* Reinforcing Steel (Deformed Bars) shall conform to the requirements of Section 602 and shall be Grade 60.
- Joint reinforcement shall be provided every other course or as shown on the plans and shall be hot dipped galvanized in accordance with ASTM A 153-Class B-2, ladder type with 9 gage side and cross rods. Lap splices for joint reinforcement shall be a minimum of 6 inches.
- (g) *Concrete Cap.* Reinforcing Steel shall conform to the requirements of Section 602 and shall be Grade 60. Concrete shall conform to the requirements of Section 601 and the following:
1. Concrete shall be Class DT with a minimum cement content of 565 pounds per cubic yard.
  2. Concrete shall be integrally and uniformly colored as defined in the plans.
  3. The concrete cap can be either precast or cast-in-place.
- (h) *Water Repellent.* An approved polymer water repellent shall be provided in all CMU's, mortar, and grout in accordance with the manufacturer's recommendations. The following polymer water repellent additives are approved:
1. Dry-Block by W.R. Grace.
  2. Addiment Block Plus.

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**REVISION OF SECTION 601  
MASONRY WALL****CONSTRUCTION REQUIREMENTS****Subsection 601.05 shall include the following:**

- (a) *General.* Construction of the concrete masonry walls shall conform to the requirements of the International Building Code (IBC) ) 2018 Edition and the 2019 Denver Amendments to the International Building Code, the plans and specifications.
- (b) *Sample Approval.* The Engineer shall approve in writing the following before concrete masonry wall construction begins:
  - 1. Color and texture of concrete masonry units.  
Four weeks before construction begins, provide the Engineer with two concrete masonry units of each color and texture required on the project.
  - 2. Color of mortar and craftsmanship of concrete masonry construction.  
A test panel is required at least three weeks prior to beginning concrete masonry construction. The panel shall represent the color and texture of CMU's, mortar, grout, pre-cast cap, craftsmanship, and finish of the sound barrier to be used throughout the project. The panel shall be constructed at a location designated by the Engineer and shall represent all materials to be used on the project. The panel shall be a minimum of 2 feet wide by 2 feet high. The Engineer shall be allowed one week to evaluate the acceptability of the panel materials and construction.  
The Contractor shall adjust materials and workmanship as required by the Engineer. Concrete masonry construction shall not start until the Engineer has approved the samples in writing.
- (c) *Craftsmanship.*
  - 1. Concrete masonry unit construction shall be plumb and level.
  - 2. CMU's shall be laid in a running (common) bond pattern.
  - 3. All joints shall be concave tooled, except those at fluted CMU's which shall be cut flush. Joints shall be tooled after the excess moisture in the mortar has been absorbed but before plasticity is lost. Mortar fins (resulting from tooling joints) at the interface of the tooled joints and the CMU's shall be removed before the mortar sets. Tooled joints shall be left smooth.
  - 4. Where masonry unit cutting is necessary, all cuts shall be made with a masonry saw to true neat lines.
  - 5. Steel reinforcing shall be securely held in position at the top and bottom of the wall.
  - 6. All cells shall be solidly filled with grout or as designated in the plans. Grout shall be consolidated mechanically to fill the cells of the CMU's and shall be reconsolidated by mechanical vibration after the excess moisture in the grout has been absorbed but before plasticity is lost. Walls shall be grouted full height. (The Contractor is responsible for the stability of the wall during construction.) Cleanouts shall be provided in the bottom course at every vertical bar and they shall be sealed after cleaning, inspection, tying of the vertical bar, and before grouting. Close cleanouts using face shells and mortar matching the texture, color, and finish of the adjacent materials.
  - 7. Remove all mortar and grout spillage from the wall at the end of each working day. After cleaning (Acids such as Muriatic Acid shall not be used.) there shall be no mortar or grout paste on CMU's.

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**REVISION OF SECTION 601  
MASONRY WALL**

**METHOD OF MEASUREMENT**

**Subsection 601.19 shall include the following:**

The Masonry Wall shall be measured by the number of square feet of one side completed and accepted. Measurement shall be from the top of the grade beam to the top of the concrete cap and along the top of the grade beam.

**BASIS OF PAYMENT**

**Subsection 601.20 shall include the following:**

The accepted quantities of Masonry Wall will be paid for at the contract unit price for the pay item listed below.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Masonry Wall	Square Foot

Payment shall be full compensation for all materials, labor, equipment, and testing necessary to complete the Concrete Masonry Pedestal.

**END OF SECTION REVISION**

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**REVISION OF SECTION 603  
REINFORCED CONCRETE PIPE (COMPLETE IN PLACE)**

**Section 603 of the Standard Specifications is hereby revised for this project as follows:**

**BASIS OF PAYMENT**

**Subsection 603.13 shall include the following:**

<b>Pay Item</b>	<b>Pay Unit</b>
18 Inch Reinforced Concrete Pipe (Complete in Place)	Linear Foot
24 Inch Reinforced Concrete Pipe (Complete in Place)	Linear Foot
30 Inch Reinforced Concrete Pipe (Complete in Place)	Linear Foot

The first paragraph after list of pay items is hereby deleted and replaced with the following:

Structure Excavation, Bedding Material, and Structure Backfill, Embankment, shoring, and pipe connection to existing drainage structures, if required, with all appurtenances will not be measured and paid for separately, but shall be included in the cost of the pay item.

**END OF SECTION REVISION**



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## **REVISION OF SECTION 604 INLET TYPE D (SPECIAL)**

**Section 604 of the Standard Specifications is hereby revised for this project as follows:**

### **DESCRIPTION**

**Subsection 604.01 shall include the following:**

This work will include construction of the Inlet Type D (Special) in accordance with the details shown in the plans.

### **METHOD OF MEASUREMENT**

**Subsection 604.06 shall include the following:**

Inlet Type D (Special) will be measured by the complete unit including frame, grate, and orifice plate(s), all associated fasteners and appurtenances.

Structure excavation, backfill, reinforcing steel, concrete or any other materials required for the construction of the water quality facility are not included in Inlet Type D (Special) and will be paid for separately.

### **BASIS OF PAYMENT**

**Subsection 604.07 shall include the following:**

Inlet Type D (Special) will be paid for at the contract unit price and shall include all labor, materials, shoring, if required, with all appurtenances including design by a registered engineer, hardware and all other appurtenances necessary to complete the installation in accordance with the plans. Earthwork required for Inlet Type D (Special) will not be measured and paid for separately.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Inlet Type D (Special)	Each

**END OF SECTION REVISION**

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**REVISION OF SECTION 606**  
**TENSIONED CABLE BARRIER (TL-4)**

**Section 606 of the CDOT Standard Specifications is hereby revised to include the following:**

**DESCRIPTION**

**Subsection 606.01 shall include the following:**

This Work consists of the installation of four-strand Tensioned Cable Barrier Test Level 4 (TL-4) with 10.5-foot post spacing at location described in the Contract Drawings.

**MATERIALS**

**Subsection 606.02 shall include the following:**

The four-strand tensioned cable barrier system shall meet the NCHRP Report 350 Test Level 4 and shall be the following:

Brifen wire Rope Safety Fence (Brifen WRSF) supplied by Brifen USA Inc., 12501 N. Santa Fe Avenue, Oklahoma City, OK 73114, Phone: 405.751.8062, Fax: 405.751.8338.

All cable and hardware shall be new (not re-used). All posts shall be socketed posts and shall be fitted with excluders and caps. Prismatic reflectors shall be installed on both faces of every 2<sup>nd</sup> cap (that is, on both faces, at 21-feet on center), and at all four end terminal posts. Reflector color shall match the color of the adjacent traveled-way edge line. Concrete for posts and anchorages shall be Concrete Class D.

The cable barrier system shall be of a Design which meets-Test Level 4 as described in the CHRP Report 350, Recommended Procedures for Safety Performance Evaluation of Highway Features, Published in 1993 by the Transportation Research Board.

**CONSTRUCTION REQUIREMENTS**

**Subsection 606.03 shall include the following:**

(d) *Tensioned Cable Barrier TL-4*. Tensioned Cable Barrier TL-4 shall be installed in accordance with the details as described in the Contract Drawings and in accordance with manufacturer's recommendations. The

Contractor shall make all arrangements for a qualified representative from the cable barrier manufacturer to be on-site to:

- a. Train Contractor personnel in proper installation of the Cable Barrier;

Check installation and tensioning after completion.

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**REVISION OF SECTION 606  
TENSIONED CABLE BARRIER (TL-4)**

The Contractor shall obtain documentation from the manufacturer confirming the most recent detailed drawings are provided for the materials to be installed, and that these materials conform to the requirements of the NCHRP Report 350 TL-4. Three weeks prior to start of Work, the Contractor shall submit one (1) electronic and two (2) hard copies of the manufacturer's drawings and specifications to the Engineer. Work shall not begin until approval of these drawings has been received from the Engineer.

Installation of the cable barrier shall be performed by manufacturer-trained Contractor personnel in the presence of the Engineer or his representative.

The wire rope shall be pre-stretched during manufacture in accordance with the manufacturer's specifications. Minimum breaking strength shall be 39,000 pounds. Sections of wire rope shall be connected using turnbuckles, with threaded ends factory swagged onto the wire rope. However, a maximum of two field-installed wedge-type connectors per wire rope per run may be used if needed for length adjustment. If used, they shall be the threaded-end socket type which secures the wedge by compression.

End Anchorages (Tensioned Cable Barrier) shall conform to NCHRP, Test Level 4 (TL-4).

Concrete foundations for end anchorages and line posts shall be constructed with appropriate rebar as recommended by the manufacturer, based on size of foundations. Concrete foundations for line posts and end anchorages shall be constructed with reinforcing rings, regardless of whether mow strips are installed or not. The Contractor shall conduct a soil survey based upon test borings at each anchor site, but no boring spacing shall be greater than one mile, and need not be less than one-half mile.

Boring shall be to a depth of 12 feet, minimum, to identify the soil type, classification, and load-bearing capacity (as indicated by SPT blows per foot or CPT-interpreted SPT values) and depth water was encountered. The Contractor shall submit the results of the soil survey to the manufacturer so that adjustments can be made (if required) to the size or type of footing used. A copy of this survey shall be submitted to the Engineer. The foundation Design shall be sealed by a Professional Engineer licensed in the State of Colorado.

The minimum concrete post footing size shall be 14 inches in diameter and 3 feet in depth. The minimum concrete anchor footing size will be 3-foot diameter and 8-foot depth when all ropes end into one anchor; minimum of at least 2.1 CY of concrete if ropers are anchored separately. The Contractor shall install larger footings than minimum when soil conditions warrant. All footings shall be constructed of Concrete Class D.

The Contractor shall maintain the cable barrier until DEN's Final Acceptance upon Project completion. Cable barrier tensioning shall be checked within six weeks of Project acceptance.

Contractor shall salvage reusable TL-4 parts, including standard socketed line posts, transition posts, post caps, turnbuckles, excluders, locating pegs, and post caps and deliver them in the same manner as the spare parts described above. Cable shall not be salvaged but shall become the property of the Contractor.

**METHOD OF MEASUREMENT**

**Subsection 606.05 shall include the following:**

Guardrail will be measured by the linear foot along the centerline of the rail from end to end of completed and accepted rail as shown on the plans, excluding end anchorages, median terminals, and transitions.

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**REVISION OF SECTION 606  
TENSIONED CABLE BARRIER (TL-4)**

**BASIS OF PAYMENT**

**Subsection 606.06 shall include the following:**

The accepted quantities of guardrail will be paid for at the contract unit price for the type specified.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
High-Tension Cable Barrier (TL-4)	Linear Foot
End Anchorages (Tensioned Cable Barrier)	Each

**END OF SECTION REVISION**

**Section 613 is hereby added to the Standard Specials for this project as follows:**

### **MATERIALS**

**Subsection 613.03 shall include the following:**

All electrical shall be installed by a Journeyman Electrician under the oversight of a Master Electrician licensed in the State of Colorado. Each Electrician shall have documented experience with this type of electrical installation. Documentation shall be supplied to the Project Engineer prior to start of any construction.

The Contractor is responsible for acquiring and posting of a state electrical permit from the Colorado state inspector's office with no additional cost to the project. Contractor shall coordinate with the state electrical inspector for all inspections and all additional Contractor work required by the inspector's office.

### **CONSTRUCTION REQUIREMENTS**

**Subsection 613.07 shall include the following:**

Underground conduit shall be buried a minimum of 24 inches below finished grade. There shall be no sag between boxes. Conduit under roadways shall be buried at 48 inches below finished grade. If the Contractor encounters bedrock such that the minimum conduit depths cannot be achieved, the Contractor shall be allowed to cover the conduit with 2 inches or more of concrete at a lesser burial depth.

Type Two Pull Box – Provide a heavy-duty, TIER 22, polymer concrete, bottomless pull/splice box with bolted cover flush mount in-grade with a minimum of 12 inches deep pea gravel base under box for drainage. Provide 12 inches wide x 4 inches deep concrete ring/collar around box to maintain level position in open landscape. Provide ground rod in pull box and bond 1#4 soft drawn bare copper conductor from ground rod through the grounding conduit in the light standard raceway to the lug at the back of the handhole in the light standard.

The Contractor shall install 1#12 AWG locate wire and 1,250lb nylon pull string with footage tape in all spare and empty conduits.

The Contractor shall be responsible for repairing damages caused by boring, trenching, cutting, drilling, etc. or performance of any related work in this contract area. Contractor shall furnish and install all barrier, pavement, landscape materials, etc. to restore the construction site outside of the pavement included in the roadway improvements to restore the construction site to pre-construction conditions.

All DEN owned electrical conduit shall be encased in red concrete. The Contractor shall be responsible for cutting into existing concrete encased PVC conduit to extend the electrical service to the reset sign location. The Contractor shall completely join the new PVC extension such that the PVC is glued together and will not come apart due to heaving or shifting of the soil, and such that new conductors could be pulled through the conduit at a future date if necessary.

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### **REVISION OF SECTION 613 ELECTRICAL**

The conduit shall be extended above grade to a new pull box location and then extended to the reset sign location. The new pull box shall be installed per Section 613 Pull Boxes – General. The gravel bed shall not be encased in concrete. The red concrete shall stop at least 12-inches below the bottom of the pull box to allow for water drainage.

The Contractor shall install a NEMA 4 junction box at the reset sign location to allow the new conduit to be extended to the existing conduit within the sign. The junction box shall be used to facilitate the pulling of new conductors through the sign to extend the existing service to the sign. If the Contractor finds that conductor connections can be made without installing a junction box, the Contractor shall propose an alternative solution to the Project Engineer to facilitate the work.

The Contractor shall install GRC conduit at all above grade installations. An expansion fitting shall be installed between the PVC to GRC.

All drilled penetrations through the existing masonry shall be completed in such a manner to minimize impact to the existing masonry. The resulting hole shall be filled with weatherproof, silicon sealant after the conduit is installed.

#### **Subsection 613.08 shall include the following:**

All DEN owned wiring shall be 600 Volt rated, Type: Conform to the applicable UL and ICEA Standards for the use intended. Copper conductors with 600-volt insulation unless otherwise specified or noted on the drawings. Stranded conductors for No. 8 and larger shall not be allowed unless otherwise specified or noted on the drawings. Aluminum conductors will not be permitted for DEN owned facilities.

1. Insulation: Type XHHW, THWN/THHN insulation minimum unless otherwise specified or noted on the drawings.

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**REVISION OF SECTION 613**  
**ELECTRICAL**

2. Size: No. 12 minimum unless otherwise specified or noted on the drawings. Not less than NEC requirements for the system to be installed.
3. Ground Conductor shall be size #4 AWG stranded, insulated unless otherwise specified or noted on the drawings. All power circuits shall include an insulated green grounding conductor.
4. Color Coding: Phase, neutral and ground conductors color-coded in accordance with NEC. Connect all Conductors of the same color to the same phase conductor as follows:

120/240V-1PH-3W Color coding shall be:

Line 1 = Black

Line 2 = Red

Neutral = White

Ground = Green

5. Unless otherwise authorized, the multiple system of electrical distribution shall be used. Conductors of the size and material specified shall be installed for control wiring, device wiring, main circuit wiring, ground wiring, service entrance wiring, and all other wiring necessary for a complete installation.
6. Type THWN or THWN-2 conductors shall be used for all underground conduit runs. Leave sufficient lengths of branch conductors to allow conductor splices to be extracted from handhole for maintenance. Type XHHW shall be used for the service entrance conductors.
7. Conductors shall be sized to prevent a voltage drop of more than three (3) percent per feeder run. All conductors shall be installed in conduit.
8. A complete grounding system shall be installed for the entire electrical installation. Grounding shall consist of ground cables, conduits, grounding rods, wire or strap, and ground fittings, as required by the National Electrical Code.

Aluminum conductors shall be allowed for all Xcel Energy owned equipment. The aluminum conductors shall be sized and installed to meet Xcel Energy construction requirements.

**BASIS OF PAYMENT**

**Subsection 613.14 is hereby revised to include the following:**

<b>Pay Item</b>	<b>Pay Unit</b>
2 Inch Electrical Conduit (Plastic)	Linear Foot
Type Two Pull Box	Each
Pull Box (surface mounted)	Each
Wiring	Lump Sum
Light Standard Foundation	Each
Temporary Lighting	Lump Sum

All work necessary and incidental to the installation of the electrical conduit as shown in the plans will not be measured and paid for separately but shall be included in the work.

**END OF SECTION REVISION**

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**REVISION OF SECTION 613**  
**TRAFFIC ELECTRICAL CONDUIT**

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

**DESCRIPTION**

**Subsection 613.01 shall include the following:**

This work includes furnishing and installing new High-Density Polyethylene (HDPE) and Polyvinyl Chloride (PVC) electrical conduit and fittings for use with fiber optic cable, electrical conductors, and communications cabling for any traffic signal and intelligent transportation systems work.

For locations where conduit is installed into asphalt, concrete, or slope pavement, patching with asphalt, concrete or slope pavement will be required and shall be included in the cost of the conduit.

**MATERIALS**

**Subsection 613.02 shall include the following:**

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

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

HDPE conduit and fittings shall be certified by the manufacturer as meeting American National Standards Institute (ANSI) ANSI/UL 651A. PVC conduit and fittings shall be certified by the manufacturer as meeting ANSI/UL 651. The manufacturers shall be International Organization for Standards (ISO) ISO 9001 compliant.

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

Each conduit shall be equipped with a pull tape. The pull tape shall have a minimum tensile strength of 1800 pounds and be of a design and manufacture that prevents cutting or burning into the conduit during cable installation. The pull tape shall include a continuous 22 gauge tracer wire. The tracer wire shall be orange and stranded. Splices in the pull tape and tracer wire may occur inside manholes and pull boxes and shall not be permitted inside conduit.

A minimum 12 gauge tracer will shall be included in conduits containing fiber optic cable in addition to the pull tape.

**CONSTRUCTION REQUIREMENTS**

**Subsection 613.07 shall include the following:**

All conduit and fittings installation shall conform to the NEC.



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**REVISION OF SECTION 613  
TRAFFIC ELECTRICAL CONDUIT**

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

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

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

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

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

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

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

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

Conduit plugs that are watertight, removable, mechanical and equipped with a fitting for connection to a pull rope and pull tape shall be supplied and installed in all open conduit ends as soon as the conduit is installed. Conduit shall be plugged at termination points such as pull boxes, manholes, controller cabinets and node buildings. Conduits should be plugged immediately after installation and also after any wiring or cabling is installed, which may require two separate plug types. Conduits containing cable shall be plugged with durable and reusable split type plugs, fabricated without metallic parts. The plugs shall allow easy removal and reinstallation around in-place cables. Split type plugs shall provide a watertight and airtight seal of at least 22 pounds per square inch. They shall be installable by hand without using tools and without damaging the cable. All plugs shall be correctly sized to fit the conduit being plugged.

All conduits shall use sweeps to elevate the buried conduits to the final grade within a pull box or manhole, as shown on the plans. The sweeps shall be terminated within the pull boxes and manholes to allow for easy installation and removal of conduit plugs. The sweeps shall be set above the ground surface of the inside of the pull box at a height that does not interfere with coiling of the fiber optic cable.

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### **REVISION OF SECTION 613 TRAFFIC ELECTRICAL CONDUIT**

All conduit runs containing fiber optic cable shall have a limited number of bends. The sum of the individual bends on a single conduit run between any two pull points shall not exceed 270 degrees. No individual bend shall exceed 90 degrees. All conduit bends shall have a minimum acceptable radius of 48 inches for 90 degree bends and for conduit containing fiber optic cable and 24 inches for all other bends. HDPE conduit minimum bending radius shall conform to Table 354.24 in the NEC.

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

Conduit shall always enter a pull box, manhole, cabinet base and all other structure types from the direction of the run only. Conduit shall be installed at the proper depth so as not to need notching or cutting.

All conduits ends shall be free from sharp edges and burrs prior to any wire installation.

### **METHOD OF MEASUREMENT**

**Subsection 613.13 shall include the following:**

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

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

### **BASIS OF PAYMENT**

**Subsection 613.14 shall include the following:**

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

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
2 Inch Electrical Conduit (Bored)*	Linear Foot
3 Inch Electrical Conduit (Bored)*	Linear Foot
2 Inch Electrical Conduit (Plastic)*	Linear Foot
3 Inch Electrical Conduit (Plastic)*	Linear Foot

*\*Conduit will not be paid for without proper plugs installed.*

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**REVISION OF SECTION 613  
TRAFFIC ELECTRICAL CONDUIT**

Electrical Conduit contract unit price shall be full compensation for work described above, specified in the plans, and complete and in place.

Any asphalt, concrete, or slope pavement removals or patching required during the installation of the conduit to tie into existing pull boxes or cabinets will not be measured and paid for separately but shall be included in the cost of the conduit.

**END OF SECTION REVISION**

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**REVISION OF SECTION 613**  
**PULL BOXES – GENERAL**

**Section 613 of the Standard Specifications is hereby revised for this project as follows:**

**MATERIALS**

**Subsection 613.02 shall include the following:**

Pull Boxes, covers, and extensions shall be made of fiberglass reinforced polymer concrete. Pull Boxes shall be verified by a 3<sup>rd</sup> Party Nationally Recognized Independent Testing Laboratory as meeting all test provisions of the latest American National Standards Institute (ANSI)/Society of Cable Telecommunications Engineers (SCTE) 77 Specification for Underground Enclosure Integrity, Tier 22 rating. Identification indicating Tier 22 compliance shall be stenciled by the manufacturer on the inside and outside of the box and the underside of the cover. Certification of Compliance shall be submitted with material submittals. The Pull Box shall have a detachable cover with a skid-resistant surface and have the words “TRAFFIC”, “COMM”, or “ELECTRIC” cast into the surface. Painting the words shall not be accepted. The cover shall be attached to the pull box body by means of a minimum 3/8 - 7 Unified National Course (UNC) stainless steel penta head bolts and shall have two lift slots to aid in the removal of the lid. Lift slots shall be rated for a minimum pull out of 3,000 pounds.

Pull Boxes installed in dirt or landscape areas shall have a 12-inch-wide by 6-inch-thick concrete collar placed around the top as shown on the Project Special Detail Sheet.

All concrete collars shall be Portland Cement Concrete Class B and shall be in accordance with Section 601.

**CONSTRUCTION REQUIREMENTS**

**Subsection 613.07 shall include the following:**

Pull Boxes shall be installed with 2 inches of 3/4 inch granite gravel around the outside of the Pull Box. 3/4 inch granite gravel shall also be installed 12 inches deep below the Pull Box, compacted once at 6 inches deep and again at 12 inches deep. The 3/4 inch granite gravel shall also be installed in the Pull Box 2 inches above the bottom of the Pull Box.

**METHOD OF MEASUREMENT**

**Subsection 613.13 shall include the following:**

Pull Boxes will be measured by the actual number that are installed and accepted, and will include base, lid, fiber optic cable brackets, excavation, backfill, concrete collars, and 3/4 inch granite gravel. Pull Boxes will also include the removal and patching of pavement, sidewalks, curb and gutters, and their replacement in kind to match existing grade.

**BASIS OF PAYMENT**

**Subsection 613.14 shall include the following:**

<b>Pay Item</b>	<b>Pay Unit</b>
Type Two Pull Box	Each
Type Four Pull Box	Each

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**REVISION OF SECTION 613  
PULL BOXES – GENERAL**

Concrete will not be measured and paid for separately but shall be included in the work.

**END OF SECTION REVISION**

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**REVISION OF SECTION 614  
GROUNDING AND BONDING**

**Section 614 of the Standard Specifications is hereby revised for this project as follows:**

**DESCRIPTION**

**Subsection 614.01 shall include the following:**

This work consists of grounding and bonding requirements at project locations for all Traffic or Intelligent Transportation System (ITS)-related structures, poles, service pedestals, and cabinets. The work covered in this section consists of labor, materials, and services required for a functional and unobtrusive grounding system.

- (a) *General.* The Contractor shall provide comprehensive grounding and bonding for Traffic or ITS-related equipment. The target resistance to ground value is equal to or less than 10 ohms.
- (b) *Applicable Documents.* Work performed in this section shall comply with the most current edition of the following codes and/or standards:
  - (1) Institute of Electrical and Electronics Engineers (IEEE) 81 – Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Grounding System
  - (2) IEEE C2 – National Electrical Safety Code
  - (3) National Electrical Manufacturers Association (NEMA) Grounding Rod (GR) 1 – Grounding Rod Electrodes and Grounding Rod Electrode Couplings
  - (4) National Fire Protection Association (NFPA) 70 – National Electrical Code
  - (5) NFPA 70E – Standard for Electrical Safety in the Workplace
  - (6) NFPA 780 – Standard for the Installation of Lightning Protection Systems
  - (7) TIA-607 – Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises
  - (8) Underwriters Laboratories (UL) 96 – Lightning Protection Components
  - (9) UL 96A – Installation Requirements for Lightning Protection Systems
  - (10) UL 467 – Grounding and Bonding Equipment

**MATERIALS**

**Subsection 614.08 shall include the following:**

- (a) *Components.*
  - 1. Grounding electrodes (driven rods). Ground rods shall be provided that meet or exceed the following requirements:
    - A. Preferred. Copper-clad steel ground rods (pointed) shall not be less than 5/8 inch diameter and a minimum of 8 feet in length. It shall be UL certified and have a minimum plating thickness of 10 milliinches (mils) copper cladding.
    - B. Other Alternatives. Other ground rod types, such as chemical ground electrodes, may be considered based on site soil chemistry, adjacent electrically bonded structures, or if the installation must occur in a corrosive area, but must be approved by the Engineer in writing.

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**REVISION OF SECTION 614  
GROUNDING AND BONDING**

2. Grounding Electrode Conductor. The grounding electrode conductor shall be solid or stranded copper with a minimum size of #6 American Wire Gauge (AWG), unless otherwise specified. The Contractor shall size the grounding electrode conductor in accordance with Article 250.66 of the National Electrical Code (NEC). Bare and insulated grounding electrode conductors shall be permitted, as approved by the Engineer. Insulated grounding electrode conductors shall be Type thermoplastic heat- and water-resistant nylon-coated (THWN) and conform to the requirements of Article 310 of the NEC. Insulated grounding electrode conductors shall utilize a green jacket color. The grounding electrode conductor run shall be installed in one continuous run without a splice or joint, except as permitted in accordance with Article 250.64(C) of the NEC.
  - A. For bonding between a cabinet frame and busbar, a braided ground strap shall be utilized. The braided ground strap shall consist of non-insulated tinned copper flat braid wire with a minimum width of ½ inch and a thickness of 0.07 inches (based on estimated #6 AWG equivalence).
3. Grounding Connectors. Grounding connectors shall be provided for attachment to grounding electrodes, ground bus and ground lugs. Grounding and bonding connections shall be made by means of a compression connector, a mechanical connector, or an exothermic weld. Mechanical and compression connectors shall have only one conductor installed unless designed or UL-listed for more conductors. Mechanical connections shall only be permitted when a compression or exothermic connection cannot be made.
4. Ground Bus. Provide copper bar stock grounding busbar. The minimum size shall be 1/4 inch thick by 2 inches high by 6 inches wide and positions for five lugs, unless otherwise specified by the Engineer. Hole patterns on the busbar shall accommodate two-hole lugs in accordance with Telecommunications Industry Association (TIA)-607 and hole spacing should not be less than 3/4 inch. Busbar must be wall mountable and UL certified. Stand-off brackets shall also be included and brackets shall be manufactured from 300 series stainless steel with stainless steel bolts and lock washers.

**CONSTRUCTION REQUIREMENTS****Subsection 614.10 shall include the following:**

- (a) *Bonding and Grounding.* The Contractor shall install equipment, materials and devices in accordance with equipment manufacturer's written instructions and in compliance with applicable installation standards.
  1. Connections.
    - A. The Contractor shall provide exothermically welded connections below grade and in areas exposed to visible moisture.
    - B. The Contractor shall provide heavy duty bolted clamped connections, UL listed, above grade and in areas where safety to personnel and structures dictate.
  2. Installation.
    - A. The Contractor shall install one grounding electrode. Each grounding electrode shall be installed such that at least 8 feet of the entire length of a ground rod is in contact with the soil. Alternative grounding electrodes shall be installed per NEC requirements. Where a rock bottom is encountered, the grounding electrode installation shall conform to the requirements of Article 250.53(G) of the NEC. The grounding electrode system shall be installed within the right-of-way.

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**REVISION OF SECTION 614  
GROUNDING AND BONDING**

- B. The Contractor shall leave top of grounding electrode exposed for testing and for verifying quantities.
  - C. The Contractor shall measure the resistance of the installed grounding electrode with respect to the surrounding soil using an earth ground resistance tester.
  - D. If the results exceed 10 ohms, the Contractor shall install a second grounding electrode a minimum of one electrode length away from the first grounding electrode. The bonding jumper used to connect grounding electrodes shall be installed and sized in accordance with Article 250.53(C) of the NEC.
  - E. The Contractor shall measure the resistance of the installed grounding electrode system with respect to the surrounding soil using an earth ground resistance tester.
  - F. The Contractor shall record and report results to Engineer in writing. The target resistance to ground is equal to or less than 10 ohms; however, after installing two grounding electrodes, a resistance to ground value equal to or less than 25 ohms will be accepted by the Engineer. The Contractor shall be responsible for confirming the resistance to ground requirements with the various manufacturers of the equipment it procures for this project. Where manufacturers have more stringent resistance to ground requirements for operational performance and warranties, the Contractor shall be required to adhere to the manufacturer's requirements for acceptance by the Engineer.
  - G. In the absence of low resistance soil conditions, the Engineer, at their sole discretion, may allow the use of the following: bentonite to fill the ground rod hole, chemical electrodes, or ground enhancement material. The Contractor shall obtain written permission from the Engineer prior to using the previously mentioned materials.
3. Surface Preparation.
- A. Ground Bus. An abrasive pad shall be used to remove any dirt, grease, oil, and oxidation from the ground bus. A thin coating of antioxidant compound shall be applied to the connection point on the ground bus. Using stainless steel hardware, the Contractor shall tighten and torque to the value specified for the hardware grade, material, and size. Only one lug shall be installed per a two-hole mounting on a bonding surface. Lugs shall not overlap or use the same mounting holes on a bonding surface. Due to thermal cycling anticipated in the field environment, the lock washer shall be substituted with flat washers and a cupped spring washer (i.e., Belleville washer), with the cup against the head of the bolt.
  - B. Other Surfaces. Clean the surface thoroughly where the grounding lug is to be connected. The grounding surface shall be clean of any paint, dirt, grease, oil, rust, and other oxidation. A thin coating of antioxidant compound shall be applied to the connection point on the surface. Using stainless steel or silicon bronze hardware, the Contractor shall tighten and torque to the value specified for the hardware material and size. Lugs shall not overlap or use the same mounting holes on a bonding surface. The lock washer shall be substituted with flat washers and a cupped spring washer, with the cup against the head of the bolt.
  - C. Ground Attachment to Structures and Poles. The grounding electrode conductor shall be connected to the ground stud on a structure or within a pole using stainless steel nuts and cupped spring washers. The connector type for the grounding electrode conductor shall be a full circle connector sized appropriately for the diameter of the ground stud and the wire gauge of the conductor.



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**REVISION OF SECTION 614  
GROUNDING AND BONDING**

Where a ground stud does not exist on a structure or within a pole, the Contractor shall install a tapped and threaded hole to accommodate the grounding electrode conductor and screw. The connector type for the grounding electrode conductor shall be a full circle connector sized appropriately for the diameter of the screw and the wire gauge of the conductor. Stainless steel screws and cupped spring washers shall be included.

- D. Grounding Connectors. The lug size, configuration, and material for compression connectors shall be selected based on the grounding electrode conductor size and fastening conditions. The insulation shall be trimmed back so that the bared grounding electrode conductor is slightly longer than the barrel. After applying an antioxidant compound on the exposed grounding electrode conductor, the conductor shall be inserted so that it touches the end of the barrel as viewed through the inspection port. The Contractor shall ensure the grounding electrode conductor remains at the end of the barrel before making the first crimp nearest the tongue end and working toward the conductor with the remaining crimps. The lug manufacturer's instructions shall be followed for the number of crimps and their location on the barrel. For exothermic welds to the grounding electrode conductor, the Contractor shall select the mold and weld metal applicable to the conductor size and lug configuration. The Contractor shall clean and dry (using a torch) the grounding electrode conductor and the mold. The Contractor shall insert the conductor and lug into the mold. The Contractor shall close the handle clamp, lock the mold, and then insert the disk into the mold. The Contractor shall pour the weld metal into the mold and apply the starting material over the weld metal and on the lip of the mold. The Contractor shall close the cover and ignite using a flint igniter. After the reaction is complete, the Contractor shall wait a minimum of 15 seconds and then open the mold and remove the finished lug connection. The Contractor shall clean any slag from the finished lug connection.

4. Testing.
- A. Testing shall be performed prior to connecting to utility ground in an effort to eliminate ground loops.
- B. When the grounding electrodes are installed, they shall be measured for their effectiveness using the three-point, fall of potential method per IEEE 81 to measure the resistance of the installed grounding electrode configuration with respect to the surrounding soil using an earth ground resistance tester. The final measurement must be performed in the presence of the Engineer or designated representative. The Contractor shall provide documentation to the Engineer of ground grid measurement results for each equipment site location tied to a single grounding system.
- C. The Contractor shall furnish its own earth ground resistance tester including stakes, clamps, cabling, transformers, and other required accessories needed to perform the testing. A copy of the earth ground resistance tester's National Institute of Standards and Technology (NIST) certification shall be provided to the Engineer as verification that the unit has been calibrated using standards and instruments traceable to international standards.

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**REVISION OF SECTION 614  
GROUNDING AND BONDING**

**METHOD OF MEASUREMENT**

**Subsection 614.13 shall include the following:**

Grounding and bonding will not be measured or paid for separately but will be considered subsidiary to the field device, structure, pole, service pedestal, and cabinet items, and shall include all labor, materials, equipment, testing, and documentation required to complete the work.

**END OF SECTION REVISION**

**REVISION OF SECTION 614  
TRAFFIC SIGNAL POLES – GENERAL**

**Section 614 of the Standard Specifications is hereby revised as follows:**

**MATERIALS**

**Subsection 614.08 (h) shall include the following:**

All traffic signal poles shall be painted dark olive green in conformance with Federal Specification No. 14056.

**FINISH:** All traffic signal poles and mast arms – except for the imbedded steel poles and the aluminum pedestal poles – shall be finish in hot dipped galvanized, epoxy primer, and powder coated in accordance with the Valmont F540 finish process or equal.

**PAINTING:** All traffic signal mast arm poles shall be powder coated in accordance with the following specifications:

*General:*

**Super Durable Powder Coating:** The super durable powder coating shall consist of a Urethane or Triglycidylisocyanurate (TGIC) Polyester Powder and provide a minimum of 3 times the gloss retention, color retention and ultraviolet light (UV) resistance as standard powder coatings.

*Surface Preparation:*

The exterior steel surface shall be blast cleaned to Steel Structures Painting Council Surface Preparation Specification No. 6 (SSPC-SP6) requirements utilizing cast steel abrasives conforming to the Society of Automotive Engineers (SAE) Recommended Practice J827. The blast method is a recirculating, closed cycle centrifugal wheel system with abrasive conforming to SAE Shot Number S280.

*Interior Coating:*

Interior surfaces (pole shafts only) at the base end for a length of approximately 2.0' shall be mechanically cleaned and coated with a zinc rich epoxy powder. The coating shall be electrostatically applied and cured in a gas fired convection oven by heating the steel substrate to a minimum of 350 degrees Fahrenheit and a maximum of 400 degrees Fahrenheit.

*Exterior Coating:*

All exterior surfaces shall be coated with Urethane or Triglycidylisocyanurate (TGIC) Polyester Powder to a minimum film thickness of 2.0 mils (0.002"). The coating shall be electrostatically applied and cured in a gas fired convection oven by heating the steel substrate to a minimum of 350 degrees Fahrenheit and a maximum of 400 degrees Fahrenheit. The thermosetting powder resin shall provide both intercoat as well as substrate fusion adhesion that meets 5A or 5B classifications of ASTM D3359.

**METHOD OF MEASUREMENT**

**Subsection 614.13 shall include the following:**

Coating of traffic signal poles and mast arms will not be measured or paid for separately but will be considered part of the 614 Traffic Signal item.

**END OF SECTION REVISION**

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**REVISION OF SECTION 614  
MICROWAVE VEHICLE RADAR DETECTOR**

**Section 614 of the Standard Specifications is hereby revised for this project to include the following:**

**DESCRIPTION**

**Subsection 614.01 shall include the following:**

This work shall consist of furnishing and installing microwave vehicle radar detectors in accordance with these Special Provisions at the locations shown on the Plans. Contractor shall order the Wavetronix SmartSensor HD, configuration software, mounting hardware, and compatible Click! DIN rail mountable components.

**MATERIALS**

**Subsection 614.08 shall include the following:**

(m) *Microwave Vehicle Radar Detector (MVRD).*

1. Pole Mounted MVRD within 40' of Traffic Control Cabinet. The MVRD shall include the radar detector unit, 20' standard combination power/data cable with connector, required length of un-terminated Belden 9330 or approved equal 4 pair separately shielded 22 AWG cable to reach from pole mounted communications cabinet to traffic control cabinet, data line surge suppressor, pole mount hardware, communications cabinet, and configuration software.

The radar detection unit shall be a non-intrusive device using frequency modulated continuous wave radar technology for the gathering of vehicle information including traffic volume, lane occupancy, individual and average speed, vehicle classification, and presence. It shall have auto configuration capabilities to simultaneously identify up to ten highway lanes with the ability to detect over center median barriers and accurately detect partially occluded vehicles. Weather shall not impact the radar detection of the unit. Wind or temperature change shall not cause the device's original field installation configuration to alter over time. The radar detection unit shall include the manufacturer's recommended power/ communication cable. The radar detection unit shall meet the following minimum requirements:

(1) Installation Type:	Side Fire or Forward Fire installation
(2) Detection Zones:	Up to 10 Lanes Simultaneously
(3) Detection Range:	3 to 250-feet
(4) Detection Zone Resolution:	1-foot
(5) Time Resolution:	2.5 msec
(6) Elevation 3 dB Beamwidth:	65°
(7) Azimuth 3 dB Beamwidth:	7°
(8) Operating Frequency:	24.0 to 24.25 GHz (K-Band)
(9) Communications:	RS-232 and RS-485
(10) Power:	8.0 Watts at 9 to 36 Volts DC
(11) Operating Temperature:	-40 to +165°F (Ambient)
(12) Humidity:	Up to 95% Relative
(13) Shock:	10g 10ms Half Sine Wave

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**REVISION OF SECTION 614  
MICROWAVE VEHICLE RADAR DETECTOR**

The communications cabinet shall be non-metallic Nema 4x enclosure or equivalent, measuring 8 x 6 x 4 inches (H x W x D), and have a securable hinged door with weather proof seal to prevent the ingress of wind and water. The communications cabinet shall include an internal backplane with DIN rail and mounting bracket assembly for attachment to supporting pole.

The DIN rail mountable components to be installed inside the communications cabinet shall include a WX-SC-200 Click 200 data line surge suppressor with hot swappable protected busses. The Data Line surge suppressor shall provide protection for RS-232, RS-485, and DC power to the radar detection unit. Wiring for the surge suppressor shall be by means of pluggable screw terminals and include unprotected as well as protected RS-232 and RS-485 communications connectors and shall have a minimum operating temperature range of -29 to 165°F up to 95% relative humidity.

2. Mounted Inside 334 Traffic Control Cabinet. There shall be a 19" bent rack mount Din rail, a Din rail mountable WX-SC-206 Click 206 .05 Amp re- settable circuit breaker and switch, a DIN rail mountable WX-SC-201 Click 201 AC to DC power converter. The power supply shall accept input voltage from 100 to 240 VAC at 45 to 65 Hz and provide 24 VDC output at 1Amp. The power supply shall have a minimum operating temperature range of -29 to 165°F up to 95%relative humidity. The power supply shall provide for 100% power reserve for a minimum of 20 ms to protect against static voltage dips, transient failures of supply voltage, or continuous phase failures. There shall be a WX-SC-205 Click 205 AC lightening power line surge protector DIN rail mountable with hot swappable protected busses, and a WX-SC-200 Click 200 data line surge suppressor. The surge suppressor shall provide protection for RS-232, RS-485, and DC power. Wiring for the surge suppressor shall be by means of pluggable screw terminals and include protected and unprotected RS-232 and RS- 485 communications connectors. The surge suppressor shall have a minimum operating temperature range of -29 to 165°F up to 95% relative humidity. The necessary number of input file-mountable WX-SC-174 Click! 174 four-channel and/or WX-SC-172 Click! 172 two-channel contact closure (loop emulator) modules with required RJ-11 pa ch cords shall be provided to emulate 1 primary and 1 secondary loop for each mainline lane.

**CONSTRUCTION REQUIREMENTS****Subsection 614.09 shall include the following:**

Two conduit access holes, not to exceed 1.5 inches shall be made on the bottom of the communications cabinet. One of these holes is to be used for the power/communications cable in from the sensor and the other for the power/communications cable out to the traffic control cabinet. The access holes shall be positioned at a location to ensure the proper, safe routing of wiring entering the cabinet. 3/4-inch Type 201 stainless steel strap used in conjunction with Type 201 stainless steel buckles shall be used to mount the communications cabinet to the structure so that the top of the cabinet is approximately 5 feet above surrounding grade. The communications cabinet shall be oriented such that anyone working in the cabinet has direct line of sight with oncoming traffic. The Contractor shall be responsible for any necessary modifications or additions needed to mount the communications cabinet to the structure.

.75-inch Type 201 stainless steel strap used in conjunction with Type 201 stainless steel buckles shall be used to mount the radar detection unit at a height and angle determined by roadway off- set and detection distance in accordance with manufacturer's recommendations and shall be properly grounded per the manufacturer's specifications.

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**REVISION OF SECTION 614  
MICROWAVE VEHICLE RADAR DETECTOR**

The manufacturer's recommended power/communication cable shall run on the interior of the mounting structure from the radar detection unit to the communications cabinet. A hole not to exceed 1.5 inches shall be made 12 inches below the radar detection unit to allow passage of the power/communications cable into the structure.

The Contractor shall ensure strain relief and drip loops in the power/communication cable before the cable enters the structure in accordance with manufacturer's recommendations. Two holes not to exceed

1.5 inches shall be made below the communications cabinet to allow the power/communications cables to pass from the interior of the structure to the interior of the communications cabinet. Flexible conduit shall be used to run cables from the structure to the communications cabinet.

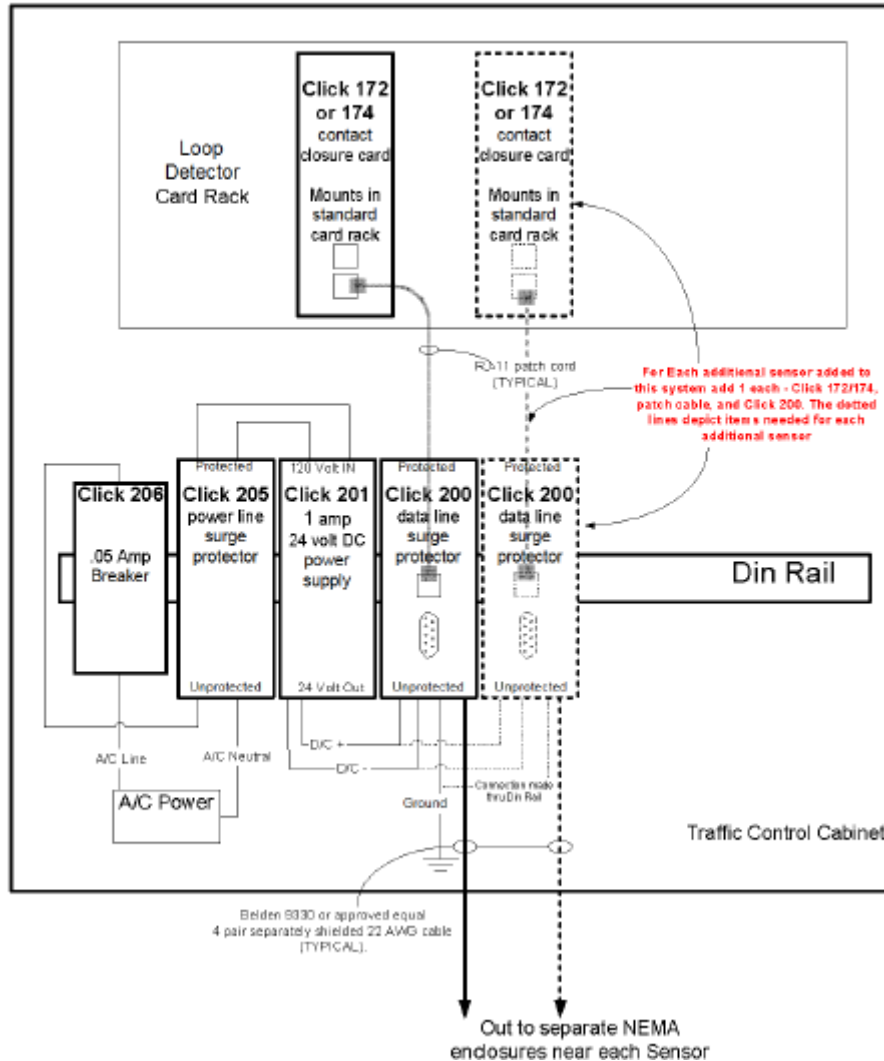
The Contractor shall run and connect power from the structure to the 0.5A circuit breaker and power line surge protector in the 334 traffic control cabinet. The Contractor shall wire supply power, power supply, surge suppressors, breaker, and radar detection unit in accordance with the manufacturer's recommendations. The radar detection unit shall be wired to support RS-232 serial communications.

All holes shall be free of burs and sharp edges prior to the installation of all cable, conduit, and conduit nipples. All cable entrances in structures, conduits, and cabinets shall be sealed and waterproofed. All wiring and electrical connections shall be performed in conformance with the latest version of the NEC.

The Contractor shall configure the radar detection unit to detect all lanes, in accordance with the manufacturer's recommendations.

The units shall be environmentally hardened for outdoor use with a temperature range of -10 to +80 degrees centigrade and available in one, two or four RS-232 port units. Also included at this location, a 120-volt AC to 24-volt DC power supply shall be included. This unit shall have a slim line DIN mountable case and be mounted to DIN rail in the 334 traffic control cabinet. The Contractor shall provide units which are compatible with current devices installed at various locations.

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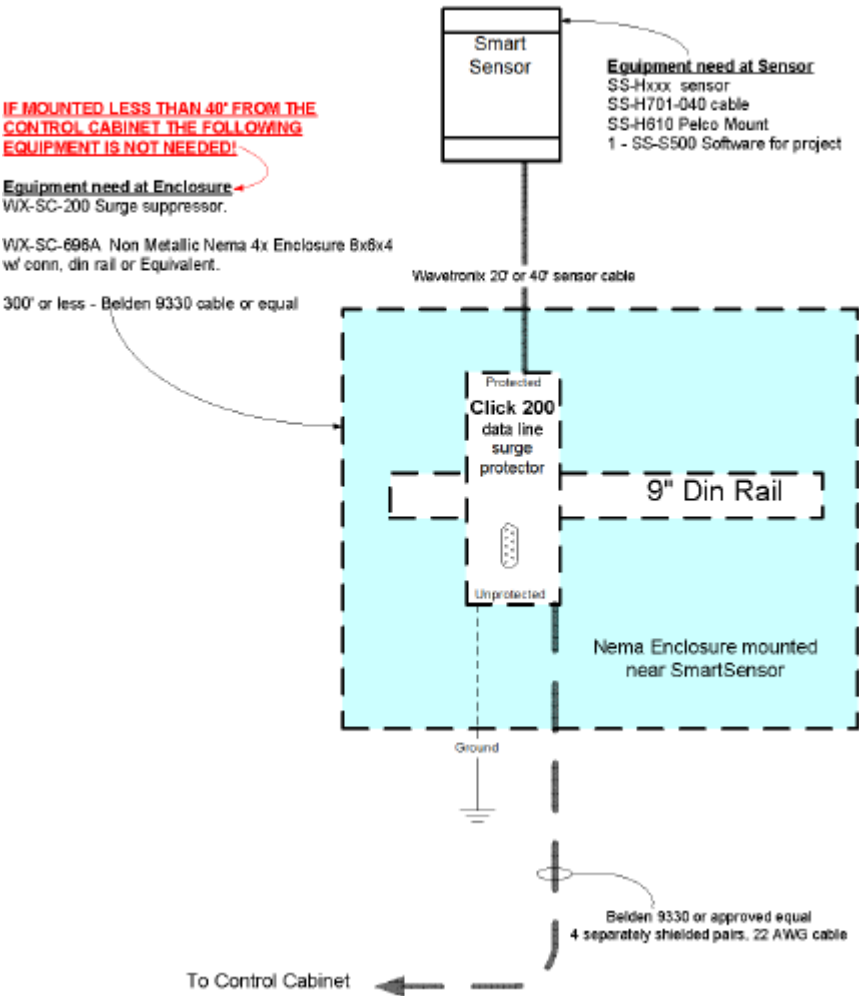
**REVISION OF SECTION 614  
MICROWAVE VEHICLE RADAR DETECTOR****Drawing showing the equipment needed in the Control Cabinet  
when installing Wavetronix SmartSensors with contact closure.**

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**REVISION OF SECTION 614  
MICROWAVE VEHICLE RADAR DETECTOR**

**Equipment drawing for each SmartSensor located less than 300' from control cabinet (as the wire travels).**



**BASIS OF PAYMENT**

The accepted quantities will be paid for at the contract unit price for the pay item listed below. If the existing MVRD is determined by the Engineer to be in good working condition, the existing MVRD may be reset.

Payment will be made under:

Pay Item	Pay Unit
Microwave Vehicle Radar Detector	Each

**END OF SECTION REVISION**



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**REVISION OF SECTION 614  
SIGN PANELS**

**Section 614 of the Standard Specifications is hereby revised for this project as follows:**

**MATERIALS**

**Subsection 614.04, first paragraph, last sentence shall be deleted and replaced with:**

All new ground mounted traffic signs shall be retro-reflective and conform to at least ANSI Standards for Type III sign sheeting material. Type VII or Type VIII sheeting material is acceptable. All new overhead mounted traffic signs shall be retro-reflective and conform to ANSI Standard for Type IX sign sheeting material.

**END OF SECTION REVISION**

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**REVISION OF SECTION 614  
TRAFFIC CONTROL DEVICES**

**Section 614 of the Standard Specifications is hereby revised for this project as follows:**

**MATERIALS**

**Subsection 614.08 (h) shall include the following:**

"Light Emitting Diode" (LED signal lenses shall be installed in all Red, Yellow, Green signal sections.  
This work shall be included in the cost of the Traffic Signal Face and will not be paid for separately.

**END OF SECTION REVISION**

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**REVISION OF SECTION 614  
SPECIAL CONSTRUCTION REQUIREMENTS TRAFFIC SIGNAL INSTALLATION  
PERSONNEL REQUIREMENT**

**Section 614 of the Standard Specifications is hereby revised for this project as follows:**

**DESCRIPTION**

**Subsection 614.01 shall include the following:**

The Contractor shall adhere to the following requirements regarding Traffic Signal construction and maintenance personnel. Current Certificates showing qualifications shall be submitted at the pre- construction meeting.

- (1) For any work inside the traffic signal cabinet, Signal and Signal Bench Technician shall be minimum IMSA Level II certified. This includes the completion of training in construction, corrective maintenance, and signal turn-on.
- (2) For all work external to the signal cabinet, a minimum IMSA Level I Traffic Signal Field Technician/Electrician or Traffic Signal Bench Technician/Signal Technician is required. An IMSA Level II Traffic Signal Electrician shall be on the job site at all times that signalization work is taking place to ensure proper construction. A maximum ratio of four IMSA Level I to one IMSA Level II will be allowed for work external to the signal cabinet.

The United States Department of Labor – Bureau of Apprenticeship and Training may be substituted for the IMSA Level I Traffic Signal Electrician requirement.

**END OF SECTION REVISION**

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**REVISION OF SECTION 621**  
**DETOUR PAVEMENT**

**Section 621 is hereby added to the project and shall include the following:**

**DESCRIPTION**

**Subsection 621.01 shall include the following:**

This work consists of constructing and removing detours including temporary pavement as shown in the plans, or as approved by the Project Engineer, and restoring disturbed areas to their original condition after the detours are removed.

**MATERIALS**

**Subsection 621.02 shall include the following:**

The Contractor shall be responsible for quality control for all materials and processes required to assure adequate quality of the detour.

**CONSTRUCTION REQUIREMENTS**

**Subsection 621.03 shall include the following:**

Proposed detour locations and dimensions shall be as shown in the plans and any other locations shall be approved by the Engineer. The pavement section shall consist of a minimum of 8 inches of Hot Mix Asphalt (HMA).

**MAINTENANCE OF DETOUR**

**Subsection 621.04 shall include the following:**

**Maintenance of Detour.** The Contractor shall maintain detours for the entire period that they are open to traffic. Any distress which affects the ride, safety, or serviceability of the detour roadway shall be corrected to the satisfaction of the Engineer at the expense of the Contractor.

**REMOVAL OF DETOUR**

**Subsection 621.05 shall include the following:**

**Removal of Detour.** The Contractor shall remove detours when they are no longer needed to maintain traffic. This shall include all items necessary to remove the detours and restore areas to their original condition.

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**REVISION OF SECTION 621  
DETOUR PAVEMENT**

**BASIS OF PAYMENT**

**Subsection 621.06 shall include the following:**

Detours shall be paid for at the unit price bid for the item.

Payment will be made under:

**Pay Item**

Detour Pavement

**Pay Unit**

Square Yard

Payment will be full compensation for all work and materials required to construct and remove detours. Detour Pavement includes, but not limited to, items such as embankment, aggregate base course, HMA pavement, safety edge, maintenance, saw cutting pavement, removal and disposal of pavement surface material, removal of embankment material, and restoring detour areas to their original condition, including reshaping and blading material for shouldering.

Clearing and grubbing, detour drainage pipe, and storm water management items will be measured and paid for separately.

Excess material removed from detours and not usable on the project shall become the property of the Contractor, and shall be disposed of off the project site.

Ten percent (10%) of the cost of Detour will be withheld until the detour has been removed and the area restored to its original condition, to the satisfaction of the Engineer.

**END OF SECTION REVISION**

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**REVISION OF SECTION 625  
ASSET GEOSPATIAL DATA COLLECTION**

**Section 625 of the Standard Specifications is hereby revised for this project as follows:**

**DESCRIPTION**

**Subsection 625.01 shall include the following:**

The Contractor's surveyor shall conduct an as-constructed survey as defined below of all assets installed or relocated on this project within the project limits.

**CONSTRUCTION REQUIREMENTS**

**Subsection 625.04 shall include the following:**

The Contractor's surveyor shall conduct an as-constructed survey of the following items: Installed or relocated utility lines as shown on the utility plans, including those installed or relocated by the Contractor or by others.

- (1) Installed or relocated culverts, conduit, inlets, or other drainage features.
- (2) Traffic signal heads, poles, pushbutton assemblies, and controller cabinets.
- (3) ITS/communications manholes, pull boxes, conduit, fiber splice points, poles, towers, cabinets, nodes, devices and other ITS assets.
- (4) Lighting including pull boxes, meters and light standards.

The as-constructed survey shall be completed in accordance with the *CDOT Survey Manual*, Chapter 6, Section 6.14. Item 4 is hereby deleted and replaced with:

4. Three-dimensional (containing northings, eastings and elevations) data is to be submitted to DEN's utility database. The Contractor's surveyor shall collect observations in accordance with Sections 2.1- 2.4 below. Accuracy requirements, projections, coordinate systems, and equipment requirements are outlined in Table 1 and Sections

1.1 - 1.4 below. Points and polylines shall be collected with the appropriately named survey codes identified in Table 2 below. Each file of observed points shall contain a description of what each point represents.

1.1. All utility and hydraulic installations within the Public right of way shall be collected using CDOT's mobile application, PointMan. Download the PointMan mobile application from the Apple Store (iOS) or Google Play (Android). If required, please contact CDOT at [cdotpointman@gmail.com](mailto:cdotpointman@gmail.com) in order to obtain new login and password information.

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**REVISION OF SECTION 625  
ASSET GEOSPATIAL DATA COLLECTION****1.2. High-accuracy equipment requirement:**

The Contractor shall use a device designed specifically for capturing GPS coordinates that is listed as compatible with CDOT's mobile application. Deviation from CDOT's list of accepted GNSS receivers must be requested and approved by the DEN in writing prior to submission of as-built data:

Trimble DA1	Emlid Reach RS2
Trimble R2	Bad Elf – Flex RTK
Trimble R8	Android only – Leica RTK
Trimble R10	
Trimble 12 and 12i	

**Projections and Coordinate Systems**

*Horizontal Datum:* **World Geodetic System (WGS84)**, select EPSG 4326 within the PointMan settings menu

*Vertical Datum:* The North American Vertical Datum of 1988, (NAVD 88) RTK GPS is an acceptable method to derive NAVD 88 elevations and is the vertical datum to be used for all CDOT projects. Use the latest Geoid model from NGS to compute orthometric heights.

**1.1. Positional Accuracy Specification**

DEN requires positional accuracy Level(s) 1, 2, or 3 for all Horizontal and Vertical positions collected for utilities and ITS assets installed within CDOT right of way. Accuracy level designations are shown in Table 1 below. Other assets may be collected at accuracies not to exceed 5. Utilizing CDOT's mobile application pedigree (survey record) will assist in determining the accuracy levels that must be assigned to the specific permitted installation by the utility company representative responsible for collection of as-built data.

**Table 1. Positional Accuracy Requirements**

Positional Accuracy Level	Positional Accuracy (English Units)	Positional Accuracy (SI Units)
1	0.1 ft	25 mm
2	0.2 ft	50 mm
3	0.3 ft	100 mm
4	1 ft	300 mm
5	3 ft	1000 mm
0	indeterminate	indeterminate

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ASSET GEOSPATIAL DATA COLLECTION**

At the 95% confidence level, use the root-mean-square error in accordance with FGDC-STD-007.3-1998. Positional accuracy is in direct reference to the actual geodetic positional coordinates referenced to the National Spatial Reference System maintained by the National Oceanic and Atmospheric Administration National Geodetic Survey.

Geodetic positional coordinates (latitude, longitude, and orthometric heights) reference the official United States datum, currently the North American Datum of 1983 and the North American Vertical Datum of 1988. GPS coordinates shall be delivered in World Geodetic System 84, latitudes and longitudes, and be in decimal degree format.

Rigid above-ground features are subject to the same positional accuracy requirements as underground features. The positional accuracy of suspended aerial cables and wires is variable due to environmental factors, and therefore shall be classified as Level 0, except at the points where they are anchored to support structures such as poles.



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ASSET GEOSPATIAL DATA COLLECTION**

For linear features, the depicted position must meet the tolerances as specified in Table 1 at every position along the length of the feature in order to be designated that accuracy level. Since survey-collected data and resulting 3D models are usually chorded, the point spacing must be close enough so that the true location and depicted location meet the tolerance along its entire length.

Documentation verifying the type of GPS unit being proposed for use, and the specifications of the unit shall be provided to the Project Engineer for review prior to data gathering. The Contractor shall supply complete information for each device. For data collection, the Contractor shall use a fixed RTK solution only.

Data shall be submitted to the Project Engineer in an electronic format per Section 1.1. If deviating from using the department's approved mobile technology including a GPS-collecting device with Windows and ArcPad, capable of ArcView/ArcGIS Export/Import Formats \*.e00 files, or ArcView/ArcGIS shape files must be approved in writing prior to using such alternative.

**2.0 Utilities Collected****Table 2. Utilities Collected**

<b>Utility Type</b>	<b>Feature Code</b>	<b>Description of Utilities</b>
Test hole	5950	Point – Test hole physically locating X,Y,Z underground facility location.
Proposed running line/Bore log data	6001 or 6075	Line segment code 6001 - surface elevation of proposed HDD bore. Point - 6075 location bore log depth required for each observed point.
Communication	4210, 4410 4211	Line segment - all communication facilities, including fiber optic (4211), copper (4210), coaxial (4410), including appurtenances within defined size parameter. Cable data collection shall include cable size and type, manufacturer, manufacturing date, installation date, and total slack footage at ITS junctures. Conduit data collection shall include the conduit depth, conduit size, conduit color, encasement type, manufacturer, manufacturing date, installation date, and duct availability (total number of ducts).
ITS Structures	TBD - In Development (Coordinate with Engineer)	Point – all communication structures, including cabinets, poles, manholes, and pull boxes. Structure data collection shall include structure type, manufacturer, manufacturing date, installation date, dimensions, direction and number of empty and used conduits. At all manholes and pull boxes, data collection shall also include splice enclosure information, as applicable. If there is a splice enclosure, the splice enclosure manufacturer, manufacturing date, installation date, and splice type(s) shall be collected.

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ASSET GEOSPATIAL DATA COLLECTION**

Utility Type	Feature Code	Description of Utilities
Gas	4510, 4511	Line segment - low pressure (4510), high pressure (4511), natural gas transmission, distribution, service lines, and appurtenances within defined size parameter.
Electric	4310	Line segment - secondary electric or higher voltage.
Electric Structures	TBD - In Development (Coordinate with Engineer	Point – all pull boxes and service meter cabinets. Structure data collection shall include structure type, manufacturer, manufacturing date, installation date, dimensions, direction and number of empty and used conduits. At service meter locations, the meter number, address, and owner shall be collected.
Pipe (Oil)	4610 or 4611	Line segment - pipeline facilities including crude oil, refined oil, and all other types of oil pipeline transmission, distribution, service lines, and appurtenances within defined size parameter.
Propane	4512	Line segment - propane transmission, distribution and service lines, and appurtenances within defined size parameter.
Sanitary Sewer	4811	Line segment - sanitary sewer facilities including all mains, collection system, force mains, services and leads, including appurtenances within defined size parameter. Combined sewer is classified as sanitary sewer.
Surface Elevation	6075	Point - X,Y,Z single observation for surface elevation.
Storm Sewer	2712	Line segment - storm sewer facilities including all mains and collection system, and appurtenances within defined size parameter. (Excludes underdrain).
Water	4710	Line segment - water transmission, distribution, service lines, and appurtenances within defined size parameter. (Excludes irrigation systems).
Unknown	6075 or 6001	Point and Line segment - this designation can be used for those facilities not covered by the feature codes above, including but not limited to industrial facilities of all types, and discovered utilities where the type of utility is unknown.

**2.1 - General Observations Standards**

- A. All transmission, distribution and collector system main lines
  - a. Start and end points
  - b. Minimum of every 25 feet with the following additional points
    - i. Deviations in installation alignment (horizontal and vertical) including, but not limited to, the following:
      - a. Intentional changes in geometry such as changing direction to avoid obstacles
      - b. Fittings such as elbows (horizontal and vertical)
    - ii. Changes in facility characteristics (change in size, material, number or pair, encasement size, material, etc.)

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- iii. Start and end point for vaults
- B. Appurtenances installed concurrently with new main installations, whereas appurtenances are defined as service leads and stubs.
  - a. Tap-in at the main and at (near) the right of way line
- C. New appurtenances from existing mains
  - a. All size and material types shall be recorded for each utility type
  - b. Tap-in at main and at (near) the right of way line
- D. Transverse utility crossings installed via trenchless methods
  - a. All qualified utilities crossing roads as described in Section 2.4
  - b. 25-foot intervals across pavement sections when safely achievable

All other transverse utility crossings that are installed using methods conducive to a direct survey observation require survey observations to be collected at a minimum of 25-foot intervals when crossing a pavement section. Additionally, all utilities shall be directly observed when installed using a method that support direct observation.

All utilities installed by trenchless technologies shall be observed directly above the installed utility with the elevation computed from the best available depth readings (typically, depths read from bore head during installation). The accuracy of the depth readings to the installed utility will vary depending on the type of equipment used during installation, use code 6075 to record bore depth and attribute information.

Direct survey observations are required where utilities are exposed, including tie-in locations, bore pits, hand holes, and manholes. Alignment and depth shall be documented during boring operations at the required interval. Some form of field witnessing shall be used to mark the horizontal location and depth of the utility based on readings from the equipment being used. The utility company then can survey each marked location and compute the elevation of the installed facility based on the recorded depth readings at each surveyed location.

At a minimum, alignment and depths must be physically documented at an interval of not more than 50 feet, and at all changes in horizontal and vertical alignment. The more survey observations collected along a utility line, the better the true three-dimensional alignment of the utility will be represented. For example, long and deep bores could create a parabolic curve shaped utility that will not be accurately represented with point spacing at 50 feet. Use professional judgement and collect additional points at a closer interval to generate a more representative geometry of the utility.

**METHOD OF MEASUREMENT**

**Subsection 625.13 shall include the following:**

Asset Geospatial Data work shall include all labor, materials, and equipment required to complete the work.

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**REVISION OF SECTION 625  
ASSET GEOSPATIAL DATA COLLECTION**

All costs associated with the Asset Geospatial Data work will not be measured and paid for separately but shall be included in the cost of the project's overall 625 Construction Surveying Lump Sum, Pay Item.

**END OF SECTION REVISION**

**-1-****REVISION OF SECTION 627 and 713  
PREFORMED THERMOPLASTIC PAVEMENT MARKING**

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

**CONSTRUCTION REQUIREMENTS**

**In subsection 627.09, first paragraph, delete the first sentence and replace with the following:**

The markings shall consist of a resilient white, yellow, or other color thermoplastic product with glass beads and anti-skid elements uniformly distributed throughout the entire cross-sectional area to ensure that skid resistance and retroreflectivity are maximized.

**Section 627 of the Standard Specifications is hereby revised for this project to include the following:**

**Subsection 627.09 (c) is hereby added to the Standard Specifications for this project as follows:**

*(c) Inlaid (Word-Symbol) (X-walk/Stop-bar) (Shield)*

All Preformed Thermoplastic Pavement Marking surfaces shall be ground before placement of proposed marking. Depth of grinding shall be such as to completely remove any existing pavement markings and to have a nominal depth of 125 milliinches (mils) +/- 10 mils. The inlaid area for the new Preformed Thermoplastic Pavement Marking shall be in the same shape or pattern as the Preformed Thermoplastic Pavement Marking that is being installed. Grinding of existing preformed thermoplastic pavement marking and existing asphalt will not be measured and paid for separately, but shall be included in the work.

Colorado epoxy glass beads and anti-skid elements applied to the surface of the material to ensure the required skid resistance and retroreflectivity will not be measured and paid for separately, but shall be included in the work.

Surface shall be dry and free of dirt, dust, chemicals, and significant oily substances. Existing pavement markings shall be removed prior to installation of Preformed Thermoplastic Pavement Marking in areas where markings overlap. Application procedures for Portland concrete pavement shall be as described above except a compatible primer sealer shall be applied before application of marking to ensure proper adhesion.

The Contractor shall require the stencil manufacturer to provide on-site training prior to installation of the first stencil. All crew members on the work site shall be certified by the stencil manufacturer. The training shall include surface preparation and stencil installation for both hot bituminous pavement and concrete pavement. The training shall be coordinated with and attended by the project engineer (or designee) and inspectors. Training shall be incidental to the work.

1. The Contractor shall use a durable, high skid resistant, retroreflective pavement marking material suitable for use as interstate shields; route shields; and bike path, roadway, intersection, airport, commercial, or private pavement delineation and markings.

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**REVISION OF SECTION 627 and 713  
PREFORMED THERMOPLASTIC PAVEMENT MARKING**

- A. The markings shall be a resilient white, yellow, or other color thermoplastic product, the surface of which shall contain glass beads and abrasives in an alternating pattern. The markings shall be resistant to the detrimental effects of motor fuels, lubricants, hydraulic fluids, etc. Lines, legends, and symbols shall be capable of being affixed to bituminous or Portland cement concrete pavements by the use of the normal heat of a propane torch.
  - B. The markings shall be capable of conforming to pavement contours, breaks, and faults through the action of traffic at normal pavement temperatures. The markings shall have resealing characteristics, such that it is capable of fusing with itself and previously applied thermoplastic when heated with the torch.
  - C. The markings shall not have minimum ambient and road temperature requirements for application, without any preheating of the pavement or special storage, handling, preheating, or treatment of the material before application.
- 2. Manufacturing Location, Control and International Standards Organization (ISO) Certification: The marking material must be produced in the United States, and the manufacturer must be ISO 9001:2015 certified for design, development, and manufacturing of preformed thermoplastic pavement markings, and provide proof of current certification.
  - 3. Material: The marking material shall be composed of an ester modified rosin resistant to degradation by motor fuels, lubricants, etc. in conjunction with aggregates, pigments, binders, abrasives, and glass beads which have been factory produced as a finished product. The marking material shall meet the requirements of the current edition of the Manual on Uniform Traffic Control Devices for Streets and Highways. The thermoplastic material shall conform to American Association of State Highway and Transportation Officials (AASHTO) designation M249, with the exception of the relevant differences due to the material being supplied in a preformed state.
- A. Graded Glass Beads
    - (1) The material shall contain a minimum of 30 percent intermixed graded glass beads by weight. The intermixed beads shall conform to AASHTO designation M247, with minimum 80 percent true spheres and minimum refractive index of 1.50.

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**REVISION OF SECTION 627 and 713  
PREFORMED THERMOPLASTIC PAVEMENT MARKING**

- (2) The material shall have factory applied coated surface beads and abrasives at a rate of 1/2 pound (0.23 kilogram)  $\pm$  20 percent] per 11 square feet (1 square meter) each in addition to the intermixed beads. The surface beads and abrasives shall be applied evenly across the surface of the material so that the surface is covered completely with glass beads and abrasive materials. The abrasive material shall have a minimum hardness of 9 (Mohs scale). The factory applied coated surface beads shall have a minimum of 80 percent true spheres, have a minimum refractive index of 1.50, and meet the following gradation:

Size Gradation		Retained, %	Passing, %
US Mesh	Um		
12	1700	0 - 2%	98 - 100%
14	1400	0 - 6%	94 - 100%
16	1180	1 - 21%	79 - 99%
18	1000	28 - 62%	38 - 72%
20	850	62 - 71%	29 - 38%
30	600	67 - 77%	23 - 33%
50	300	86 - 95%	5 - 14%
80	200	97 - 100%	0 - 3%

**B. Pigments**

- (1) White: The material shall be manufactured with sufficient titanium dioxide pigment to meet Federal Highway Administration (FHWA) Docket\_No. FHWA-99-6190 Table 5 and Table 6 as revised and corrected.
- (2) Red, Blue, and Yellow: The material shall be manufactured with sufficient pigment to meet FHWA Docket\_No. FHWA-99-6190 Table 5 and Table 6 as revised and corrected. The yellow pigments shall be organic and shall be heavy-metal-free.
- (3) Other Colors: The pigments shall be heavy-metal-free.

**C. Heating indicators:** The top surface of the material (same side as the factory applied surface beads/abrasives) shall have regularly spaced indents. The closing of these indents during application shall act as a visual cue that the material has reached a molten state allowing for satisfactory adhesion and proper bead embedment, and as a post-application visual cue that the application procedures have been followed.**D. Skid Resistance:** The surface of the preformed thermoplastic (anti-skid material) items shall contain factory applied anti-skid material with a minimum hardness of 9 (Mohs scale). Upon application the material shall provide a minimum skid resistance value of 60 British Pendulum Number (BPN) when tested according to American Society for Testing and Materials (ASTM) E303. The surface beads and abrasives shall be applied evenly across the surface of the material so that the surface is covered completely with glass beads and abrasive materials.

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**REVISION OF SECTION 627 and 713  
PREFORMED THERMOPLASTIC PAVEMENT MARKING**

- E. Thickness: The material shall be supplied at a minimum thickness of 125 mils (3.15 millimeters (mm)).
- F. Retroreflectivity: The material, when applied in accordance with manufacturer’s guidelines, shall demonstrate a uniform level of sufficient nighttime retroreflection when tested in accordance to ASTM E1710. The applied material shall have an initial minimum intensity reading of 275 millicandelas per square meter per lux ( $\text{mcd} \cdot \text{m}^{-2} \cdot \text{lx}^{-1}$ ) for white, as measured with a pavement marking retroreflectometer.
- G. Environmental Resistance: The material shall be resistant to deterioration due to exposure to sunlight, water, salt, or adverse weather conditions and impervious to oil and gasoline.

Only Preformed Thermoplastic Pavement Marking material listed on the Department’s approved products list may be used.

**BASIS OF PAYMENT**

**Subsection 627.13 shall include the following:**

Payment will be made under:

Pay Item	Pay Unit
Preformed Plastic Pavement Marking (Type 1)	Square Foot
Preformed Plastic Pavement Marking (Type 2) (Inlaid)	Square Foot

**Subsection 713.13 shall include the following:**

Preformed Plastic Pavement Marking (Contrast) (Inlaid) shall form a durable, comfortable, weather-resistant, matte black (non-reflective), skid- and tear-resistant pavement marking with a preformed, diamond, surface texture pattern. It shall have a nominal maximum thickness of 0.065 inches (at pattern heights) and be manufactured without the use of heavy metals, lead chromate pigments, or other similar lead-containing components.

Preformed Plastic Pavement Marking (Contrast) (Inlaid) shall be comprised of a black, pliant polymer conformance layer that is backed with a pressure-sensitive adhesive. The top plateaus of the pattern shall be coated with a polyurethane layer coated with skid-resistant particles. The conformance layer shall have an embedded net that provides resistance to tearing. Installation shall occur without the use of a surface preparation adhesive during the normal construction season. Preformed Plastic Pavement Marking (Contrast) (Inlaid) may be applied with a manufacturer-approved surface preparation adhesive, if conditions are dry and the ambient temperature is a minimum of 40°F and rising.

Preformed Plastic Pavement Marking (Contrast) (Inlaid) shall be constructed of the contrasting edge material that is used in Preformed Plastic Pavement Marking (Type II). The surface of the material shall provide a minimum initial average skid resistance value of 45 British Pendulum Number (BPN) when tested according to the procedure of American Society for Testing and Materials (ASTM) E303, subject to the following modification:



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PREFORMED THERMOPLASTIC PAVEMENT MARKING**

Skid resistance is calculated as the average of two measurements taken at an angle of 45° from one another.

The material shall be weather-resistant and resist lifting, shrinkage, and chipping when applied according to the manufacturer's recommendations.

**END OF SECTION REVISION**

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**REVISION OF SECTION 630  
TRAFFIC CONE**

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

**MATERIALS**

**In Subsection 630.05, revise the second paragraph as follows:**

The reflectorized material shall be AP 1000 Polyester (Reflexite Corp.), 3M Type III, Transparent (Reflexite Corp.), or 2010 Vinyl Cone Collar (Reflexite Corp.). Any other material is not acceptable unless its brightness is equivalent or greater than the types named.

**END OF SECTION REVISION**

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

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

**DESCRIPTION**

**Subsection 630.01 shall include the following:**

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

**MATERIALS**

**Subsection 630.09 shall include the following:**

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

The attenuator shall meet the requirements of TL-3 contained in NCHRP Report 350 (only applicable for impact attenuators developed prior to 2011) or MASH (acceptable for all impact attenuators).

**CONSTRUCTION REQUIREMENTS**

**Subsection 630.13 shall include the following:**

If sand barrel arrays are used, the Contractor shall paint, with white epoxy paint, an outline and the weight of each barrel on the pavement prior to final placement. All numbers shall be a minimum of 6 inches high. Barrel type shall be one of those listed in the *Safety Selection Guide*.

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

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

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

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

**METHOD OF MEASUREMENT**

**Subsection 630.17 shall include the following:**

Impact Attenuator (Temporary) will be measured by the number of attenuators shown on the plans, installed, certified, and accepted.

**BASIS OF PAYMENT**

**Subsection 630.18 shall include the following:**

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

<b>Pay Item</b>	<b>Pay Unit</b>
Impact Attenuator (Temporary)	Each

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

**END OF SECTION REVISION**

**-1-****REVISION OF SECTION 630  
UNIFORMED TRAFFIC CONTROL (LOCAL AGENCY)**

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

**DESCRIPTION**

**Subsection 630.01 shall include the following:**

This work consists of furnishing a uniformed police agency officer and vehicle from Colorado State Patrol and/or the local agency to perform uniformed traffic control:

**MATERIALS**

**Subsection 630.09 shall include the following:**

- (a) *Qualifications.* The local agency officer shall have completed “The Safe and Effective Use of Law Enforcement Personnel in Work Zones” Training Course. The Contractor shall provide copies of documentation certifying the officer’s successful completion of this course.
- (b) *Traffic Control Vehicles.* The Police Officer will utilize a vehicle for Uniformed Traffic Control duties.

The police vehicle shall have a Class 1 SAE certified light bar and control panel for exclusive use by uniformed police agency officers while performing Uniformed Traffic Control. The light bar shall have the following configuration:

- (1) minimum of 44 inches in length, and shall be either permanently or temporarily attached to the top of the vehicle.
- (2) flash red on the driver side and blue on the passenger side
- (3) equipped with an amber-colored directional device in the rear of the bar.
- (4) have alley and takedown lights.
- (5) The control panel shall be capable of controlling the front of the bar and the rear of the bar separately.
- (6) The traffic advisor shall be controlled separately.

The light bars shall be mounted on traffic control vehicles, and shall be maintained in good operating condition at all times.

**METHOD OF MEASUREMENT**

**Subsection 630.18 shall include the following:**

Uniformed Traffic Control will be measured by the total number of hours that are required for uniformed traffic control including minimum shift hours required by the agency, and shall include all costs with providing the police vehicle.

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**REVISION OF SECTION 630  
UNIFORMED TRAFFIC CONTROL (LOCAL AGENCY)**

**BASIS OF PAYMENT**

**Subsection 630.19 shall include the following:**

The accepted number of hours of Uniformed Traffic Control will be paid for at the contract unit price per hour. The police vehicle will not be measured separately but will be included in the hourly cost of Uniformed Traffic Control.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Uniformed Traffic Control	Hour

Hours of Uniformed Traffic Control that are not authorized or approved will not be paid for. Scheduling of traffic control will not be measured and paid for separately, but shall be included in the work.

Payment for the item Uniformed Traffic Control will be full compensation for all work and the vehicle with required light bars, other equipment, and other items necessary to complete the item. Licensing, insuring, servicing, and fueling the vehicle will not be paid separately, but shall be included in the work.

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**REVISION OF SECTION 630  
PORTABLE MESSAGE SIGN  
PANEL**

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

**DESCRIPTION**

**Subsection 630.01 shall include the following:**

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

**MATERIALS**

**Add subsection 630.031 immediately following subsection 630.03 as follows:**

**630.031 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 message 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 power source with battery back up, each sign shall be capable of operating on a hard wire, 100 110 VAC, external power source.
2. Each sign shall be furnished with an operating and parts manual, wiring diagrams, and trouble shooting guide.
3. The portable message sign shall be capable of maintaining all required operations under Colorado mountain winter weather conditions.
4. Each sign shall be furnished with an attached license plate and mounting bracket.
5. Each sign shall be wired with a 7 prong male electric plug for the brake light wiring system.

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### **REVISION OF SECTION 630 PORTABLE MESSAGE SIGN PANEL**

6. All communications hardware for remote programming, including, cellular phone, laptop computer, computer hardware and software, on trailer electrical wiring connectors, and switch controls necessary to allow all sign functions required by the specification shall be provided with each sign.
7. Each sign shall also be provided with all necessary equipment so that it can be switched to remote programming, using either hard wire dedicated telephone line, or remote dial-up via cellular telephone.
8. The supplier shall demonstrate the capabilities of the sign, and provide 2 days of training for operation and maintenance of the sign.)

Prior to obtaining this item, the Contractor shall submit the trade name, model number and specifications of the portable message sign panel he intends to use, to the Engineer, for approval. ADDCO Manufacturing Co. Inc., American Signal Company, Winko Matic Signal Company, Precision Solar Controls Inc. and National Signal Company are known to produce a suitable portable message sign panel. The Engineer's decision concerning acceptability of this item shall be Final.

### **CONSTRUCTION REQUIREMENTS**

**Subsection 630.13 shall include the following:**

The portable message sign panel shall be available on the project site at least ten working 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.

### **METHOD OF MEASUREMENT**

**Subsection 630.17 shall include the following:**

Portable message sign panels will be measured by the maximum number of approved units in use on the project at any one time. Two portable message sign panels shall be in continuous use throughout the duration of construction.

### **BASIS OF PAYMENT**

**Subsection 630.18 shall include the following:**

<b>Pay Item</b>	<b>Pay Unit</b>
Portable Message Sign Panel	Each

### **END OF SECTION REVISION**



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## **REVISION OF SECTION 630 CONSTRUCTION ZONE TRAFFIC CONTROL**

**Section 630 of the Standard Specifications is hereby revised as follows:**

### **MATERIALS**

**Subsection 630.02 shall include the following:**

Roll-up construction signs will not be allowed.

The flagger's STOP/SLOW sign paddle shall be 18 inches with letters six inches high.

**Subsection 630.07(a) shall include:**

Non-metallic drums may be substituted for vertical panel channelizing devices.

### **CONSTRUCTION REQUIREMENTS**

**Subsection 630.10 the second paragraph shall be deleted and replaced with the following:**

This project is not considered a significant project, and a TO or PI requirements are not applicable. The TMP must also be in accordance with Division 01 Section 015525 – Traffic Control.

**Subsection 630.10 (5) shall be revised to include the following:**

Vehicular and pedestrian access to all properties adjacent to the project shall be maintained continually throughout the duration of construction.

Access to driveways and doorways shall be maintained at all times during construction. The Contractor shall coordinate driveway work and other work adjacent to the buildings and doorways with the property owner a minimum of one week prior to starting the work.

### **METHOD OF MEASUREMENT**

**Subsection 630.17 shall be revised to include the following:**

A day shall be defined as the time from 12:00 midnight to 12:00 midnight. A week shall be defined as the time from Sunday at 12:00 midnight to the following Sunday at 12:00 midnight. The Traffic Control Manager shall keep a daily log of traffic control devices and personnel. The log shall list all devices and personnel deployed within the limits of construction for each day and shall be available for review by the Engineer by noon the following Monday to be eligible for payment for the previous week's work.

Plastic temporary fencing shall conform to section 710.04 and chain link fencing shall conform to section 710.03. Both items will be paid for by linear foot. Installation, maintenance, and relocation shall be included in the cost of the bid.

Construction traffic control devices, as determined by the approved MHT, will be paid for based upon the Traffic Control Manager's weekly submittal of daily logs. The number of traffic control devices paid per week shall be the maximum number of approved devices deployed on any one day during that week.

### **END OF SECTION REVISION**

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**FORCE ACCOUNT ITEMS**

**DESCRIPTION**

This special provision contains DEN’s estimate for force account items included in the Contract. The estimated amounts marked will be added to the total bid to determine the amount of the performance and payment bonds. Force Account work shall be performed as directed by DEN Project Manager.

**BASIS OF PAYMENT**

Payment will be made in accordance with City and County of Denver Standard Specifications for Construction General Contract Conditions section 1102 and 1104. Payment will constitute full compensation for all work necessary to complete the item.

<u>Force Account Item</u>	<u>Quantity</u>	<u>Estimated Amount</u>
F/A Temporary Plant Site	F.A.	\$75,000

**Force Account Descriptions**

F/A     Temporary Plant Site – Consists of the work to establish a temporary concrete batch plant at the site approved by DEN. Refer to the Project Special Provisions of Section 107 – Temporary Plant Site for further information on the location. The amount is not to exceed the amount in the Force Account pay item. The Contractor will be responsible for the timing and coordination required for plant erection and operation. If the Contractor elects to erect a batch plant on site, no additional contract time will be awarded.

**-1-****TRAFFIC CONTROL PLAN – GENERAL**

The key elements of the Contractor's method of handling traffic (MHT) are outlined in subsection 630.10 of the Standard Specifications and the requirements of this “Traffic Control Plan – General” are hereby included in the contract requirements.

The components of the TCP for this project are included in the following:

- (1) Subsection 104.04 and Section 630 of the specifications.
- (2) Standard Plan S-630-1, Traffic Controls for Highway Construction, and Standard Plan S-630-2.
- (3) Manual on Uniform Traffic Control Devices (MUTCD).
- (4) Division 01 Section 015525 – Traffic Control

Traffic Control shall be provided as required by, in descending order of precedence, MUTCD, the plans and special provisions for this project, Colorado Department of Transportation Standard Specifications, and Colorado Department of Transportation M and S Standards.

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

Traffic Control Management and Traffic Control Inspection will not be approved for payment by the DEN Project Manager for any date before the contract time has commenced or after the contract time has expired.

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

1. During the construction of this project, traffic shall use the present traveled roadway.
2. Work is permitted in accordance with CCD General Contract Conditions Title 306, including Section 306.1, **except as otherwise noted and subject to DEN's approval or as approved by the Engineer;**
  - Hauling to the DEN South Soil Stockpile and Excess Excavation Disposal sites identified in the plans (across Gun Club Road) will be limited to low volume traffic periods, as approved by the DEN Project Manager and DEN Operations.
  - An approved DEN Shutdown Request must be in place, per Division 01 requirements, regardless of the use of traffic control (flaggers, devices, closures)
  - Contractor shall coordinate lane closures with adjacent projects.
  - DEN Operations and/or the DEN Project Manager reserve the right to reduce or change the working hours and/or cancel closures based upon operational safety, predicted traffic volume, holidays or security needs of the Airport.
  - All cost associated with delays or cancellations shall be incidental to the work.

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**TRAFFIC CONTROL PLAN - GENERAL**

The Contractor shall cooperate fully and adhere to all the requirements specified by the DEN Project Manager, DEN Operations and the Denver Police Department. Any cost incurred by the Contractor to adhere to these requirements shall be included in the cost of the work.

3. Vertical cuts or fills greater than 1 inch resulting from construction operations adjacent to traffic lanes shall be delineated with drum channelizing devices at 40 foot intervals. Along roadway widening construction along Pena Blvd. shall include temporary Type 7 barrier that will be placed adjacent to the travel lane to safeguard the workers and the traveling public.
4. Construction equipment used on this project shall meet the same minimum exhaust requirements as those specified by the manufacturer of the equipment.
5. The Contractor and subcontractors shall equip their construction vehicles with flashing amber lights. All equipment to be used at night shall also be equipped with flashing amber lights. Flashing amber lights on vehicles and equipment shall be visible from all directions.
6. The Contractor shall maintain continuous access to all roadways, side streets, alleyways, driveways, building entryways, docks and bike paths at all times unless otherwise directed by the Engineer.
7. During non-construction periods (evenings, weekends, holidays, etc) all work shall be adequately protected to insure the safety of all traffic, as detailed in the Contractor's MHT. Excavations or holes shall be filled in or fenced while unattended.
8. Whenever the Contractor removes, obliterates, or overlays any pavement markings, he shall replace them on a daily basis prior to opening the affected areas to traffic. All temporary pavement markings shall fully comply with the Standard Specifications and Special Provisions.
9. The Contractor shall not have construction equipment or materials in the lanes that are open to traffic any time unless approved by the Engineer.
10. All personal vehicles and construction equipment parking is prohibited where it conflicts with clear zones, safety, access, or the flow of traffic. Landscaped areas and roadway shoulders shall be kept clear of parking and storage of all personal and construction equipment except where approved by the Engineer. Workers shall not access work areas by crossing roadways open to traffic unless proper traffic control or other necessary precautions are provided.
11. Traffic shall be carried on a paved surface at all times.
12. No work that interferes with traffic will be allowed on holidays or any day of a three-day or four- day weekend that includes a holiday. Holidays on which this restriction applies consist of those holidays recognized by the State of Colorado as listed in subsection 101.36.

The Contractor shall be responsible for maintaining, repairing and/or restoring roadways to the existing condition or better for the free flow of traffic, when used for hauling routes. The Contractor shall maintain at his own expense the portions of existing roadway being used to carry construction traffic.

**-3-****TRAFFIC CONTROL PLAN – GENERAL**

13. The Contractor shall clean the roadway of all construction debris before opening it up to traffic.
14. All flagging stations used at night shall be illuminated with floodlights. Street, highway lights, and “high mast lighting” may be used for flagging station illumination when approved by the Engineer. Floodlights shall be located and directed as not to interfere with the sight of any motorists.
15. Prior to the removal and resetting of any sign, the Contractor and Engineer shall prepare an inventory. Any signs damaged due to the Contractor’s operations shall be replaced in kind or repaired by the Contractor at no additional cost to the project.
16. Steel drum channelizing devices shall not be used for traffic control.
17. Two-way traffic shall be maintained on all streets at all times, via flagging if necessary for closures of less than one day.
18. No phase changes or major shifts to traffic will be allowed to be implemented on Fridays.
19. Unless otherwise noted, all of the Contractor’s costs of any nature required to satisfy the requirements in this “Traffic Control Plan – General” shall be included in the contract prices for the project, including any additional traffic control items required for haul routes into the project, and no additional payment will be made. Temporary fence required for protection of the work will not be paid for separately but shall be included in the work.
20. The Contractor shall provide each flagger, and Traffic Control Supervisor with a minimum 5-watt VHF radio in order to provide adequate communications during construction. The radios shall have sufficient range to communicate a minimum of 5 miles. The method of handling traffic (MHT) submitted by the Contractor shall address radio communications. Providing VHF radios and all costs associated with their use will not be paid for separately but shall be included in the work.
21. During construction, the Contractor shall be responsible for maintaining the existing permanent signing on temporary sign supports throughout the project. This work will not be paid for separately but shall be included with the work.
22. The required TCS Diary(s) shall be submitted to the DEN Project Manager before 10:00 am each following day and shall include a listing of all flagging hours, labor hours, and traffic control devices in use. The TCS Diary(s) shall be checked and approved by the Contractor prior to the submittal to the DEN Project Manager.

The TCS shall submit a separate daily flagger sign-in sheet to the DEN Project Manager before 10:00 am the following day that includes the date and name(s) of all flaggers on the project for each day.

Failure to submit the TCS Diary(s) and daily flagger sign-in sheet(s) to the DEN Project Manager by 10:00 am the following day may result in delayed or withholding of payment.

All costs incidental to the foregoing requirements shall be included in the original contract prices for the project.

**END OF SECTION REVISION**

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UTILITIES**

Known utilities within the limits of this project are:

<b>UTILITY COMPANY ADDRESS</b>	<b>CONTACT NAME EMAIL</b>	<b>TELEPHONE</b>
Denver International Airport (DEN) 8500 Pena Blvd. Denver, CO 80249	Clint Davis Clint.davis@flydenver.com	TBD
Denver International Airport (DEN) - Communications 8500 Pena Blvd. Denver, CO 80249	Nick Sears Nicholas.sears@flydenver.com	303-342-4724
Denver International Airport (DEN) - Plumbing (Sanitary/Water) 8500 Pena Blvd. Denver, CO 80249	Catherine Rafferty Catherine.rafferty@flydenver.com	303-342-4467
Denver International Airport (DEN) - Stormwater 8500 Pena Blvd. Denver, CO 80249	Matthew Love Matthew.love@flydenver.com	303-342-4875
Denver Water 1600 West 12 <sup>th</sup> Ave. Denver, CO 80204	Paul Peloquin Paul.peloquin@denverwater.org	303-628-6620
Xcel Energy – Electric and Gas Distribution 5460 W 60 <sup>th</sup> Ave. Arvada, CO 80003	Denise Gabaldon Denise.gabaldon@xcelenergy.com	TBD

Refer to Title 7 of the City and County of Denver General Contract Conditions.

In no way shall the contents of this utility specification contradict the Wastewater Capital Projects Management Standard Construction Specification. Any discrepancies identified by the Contractor shall be brought to the attention of the Project Engineer for clarification and resolution.

All new underground facilities, including laterals up to the structure or building being served, installed as part of this project must be electronically locatable when installed, in compliance with Colorado Revised Statutes, Title 9, Article 1.5.

**PART 1 - CONTRACTOR SHALL PERFORM THE WORK LISTED BELOW:**

Coordinate project construction with performance by the utility owner of each utility work element listed in Part 2 below. Perform preparatory work specified in Part 2 for each utility work element. Provide an accurate construction schedule that includes all utility work elements to the owner of each impacted utility. Provide each utility owner with periodic updates to the schedule. Conduct necessary utility coordination meetings and provide other necessary accommodations as directed by the Project Engineer. Notify each utility owner in writing, with a copy to the Project Engineer, prior to the time each utility work element is to be performed by the utility owner. Provide notice, as specified in Part 2, immediately prior to the time the utility work must begin to meet the project schedule.

Provide traffic control, as directed by the Project Engineer, for any utility work performed by the utility owner within the project limits expected to be coordinated with construction. However, traffic control for utility work outside of typical project work hours shall be the responsibility of the utility owner.

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**UTILITIES**

Perform each utility work element for every utility owner listed in Part 1. Notify each utility owner in advance of any work being done by the Contractor to its facility, so that the utility owner can coordinate its inspections for final acceptance of the work with the Engineer. Obtain written acceptance from the utility owner for work performed by Contractor.

**All Utility Companies**

The Contractor will contact each utility company a minimum of 2 business days, unless otherwise noted, prior to working in the vicinity of the utility company's facilities so that the utility company can provide an inspector and/or complete any necessary adjustments or relocations.

If a need for utility work by either the Contractor or a utility company arises, the following shall apply:

The Contractor shall be responsible for coordinating the adjustment of utilities on this project. The Contractor shall keep each utility company advised of any work being performed in the vicinity of their facilities, so that each utility company can coordinate any needed locates, adjustments or inspections. Contractor shall provide the appropriate utility company ample notice, but not less than two (2) working days, prior to commencing activities in the vicinity of their facilities. Any additional work performed by the Contractor on behalf of the impacted utility company shall not be paid for by the City and County of Denver but shall be paid by the utility company requiring the work, unless otherwise agreed to in writing by the Engineer.

**DEN Communications**

The Contractor shall protect in place DEN Communications facilities as shown in the plans.

**Timing:** The Contractor shall notify DEN at least two (2) weeks in advance of work being conducted in the vicinity of DEN facilities.

**DEN Plumbing (Sanitary/Water)**

The Contractor shall protect in place DEN Plumbing facilities as shown in the plans.

**Timing:** The Contractor shall notify DEN at least two (2) weeks in advance of work being conducted in the vicinity of DEN facilities.

**DEN Stormwater**

The Contractor shall protect in place DEN Stormwater facilities as shown in the plans.

**Timing:** The Contractor shall notify DEN at least two (2) weeks in advance of work being conducted in the vicinity of DEN facilities.

**Denver Water**

The Contractor shall coordinate with Denver Water regarding the removal of abandoned water lines.

All work on Denver Water Department facilities shall be performed by contractors on the current list of Denver Water Department Pre-Qualified Contractors and shall be done in conformance with standards and specifications of the Denver Water Department after plans and specifications have been approved by Denver Water.

**-3-**  
**UTILITIES**

The Contractor shall support all waterlines crossing the storm main, storm laterals and sanitary sewers when they are exposed for work to be conducted beneath them.

The Contractor shall adjust existing Denver Water valves, manholes and meter pits to final grade as shown in the plans. The adjustment of the existing water valve shall be to ¼" to ½" below final grade of the roadway surface. All work shall include all items necessary to complete the work, and materials necessary to provide a complete functional installation of the water valve.

The Contractor shall arrange for a Pre-Construction conference with Denver Water Department forces.

The Contractor shall coordinate inspections and outages with Denver Water Department forces. All isolation during the outage period(s) shall be coordinated by a Denver Water Department inspector.

The Contractor shall coordinate the removal and replacement of all domestic and fire services with property owners and will be responsible for replacing any existing service line(s) that contain lead from the main to the first copper or brass fitting within the structure. Any inside meter settings will be required to be relocated to an outdoor meter setting.

**Timing:** The Contractor shall provide the utility owner written notice 5 days immediately prior to each required inspection.

**Xcel Energy – Electric Distribution**

The Contractor shall confirm that Xcel has completed the relocations which were to have been completed prior to construction as described in Part 2.

The Contractor shall protect in place Xcel facilities as shown in the plans.

**Timing:** The Contractor shall notify Xcel Energy at least two (2) weeks in advance of work being conducted in the vicinity of Xcel electric facilities. It is expected that Xcel relocations will be completed prior to construction.

**Xcel Energy – Gas Distribution**

The Contractor shall protect in place Xcel facilities as shown in the plans.

The Contractor shall coordinate with Xcel Energy and remove abandoned gas lines as needed.

The Contractor shall support Xcel Energy's gas lines when they are exposed for work to be conducted beneath them if the length of the exposed pipe exceeds the maximum allowable unsupported pipe span shown on the table below from Xcel.



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UTILITIES**

<b>Table 7.6.1 – Maximum Unsupported Pipe Span</b>					
<b>COATED STEEL PIPE</b> (see notes 1, 2, & 4)			<b>PLASTIC PIPE</b> (see notes 1, 3, & 4)		
<b>Nominal Pipe Diameter (in)</b>	<b>Pipe Wall Thickness (in)</b>	<b>Allowable Unsupported Length (ft)</b>	<b>Nominal Pipe Diameter (in)</b>	<b>SDR</b>	<b>Allowable Unsupported Length (ft)</b>
3/4	.113	11	1/2 CTS	7.0	4
			3/4 IPS	11.0	5
1	.133	13	1 CTS	11.5	5
			1 IPS	11.0	5
1 1/4	.140	14	1-1/4 IPS	10.0	6
1-1/2	.145	15	1-1/2 IPS	11.0	7
2	.154	18	2 IPS	11.0	7
3	.156	22	3 IPS	11.5	9
	.216	21			
4	.156	25	4 IPS	11.5	10
	.237	24			
6	.188	30	6 IPS	11.5	12
	.250	30			
8	.219	35	8 IPS	11.5	14
	.250	35			
10	.219	39			
	.250	39			
12	.250	42			
16	.250	48			
18	.250	51			
20	.250	54			
24	.312	59			
26	.375	61			
30	.375	66			

**Timing:** The Contractor shall notify Xcel Energy at least two (2) weeks in advance of work being conducted in the vicinity of Xcel gas facilities. It is expected that Xcel relocations will be completed prior to construction.

#### **Xcel Energy – Lighting/Traffic**

The Contractor shall be responsible for the coordination of power source work to be performed by Xcel Energy. The Contractor shall complete and submit a Builder's Call Line (BCL) Application for electrical services for every Xcel Energy work element that is to be coordinated with the project. A separate application is required for each electrical service, demolition work, and City and County of Denver-owned Street lighting work. The request is to be processed through Xcel Energy's Builder's Call Line at 1-800-628-2121 or [BCLCO@Xcelenergy.com](mailto:BCLCO@Xcelenergy.com). The name of the owner for each meter or flat-rate service shall be the owner's name and billing address responsible for paying the utility bill and shall be listed on the BCL application. The Contractor shall be listed as the Builder and the contact during construction on the BCL application. The Contractor shall perform the required coordination to establish the power sources for street lighting, various other equipment that requires electrical service and traffic signals as shown on the plans. The Contractor shall perform all work necessary to maintain existing or establish new power sources to the devices called for in the plans and per the standard for any metered or flat-rate services. The Xcel Energy portion of this work shall be completed within the time frames set forth in the franchise agreement in a manner that does not interfere with the project construction activities of the City and County of Denver.

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**UTILITIES**

The Contractor shall coordinate all traffic signal-light pole installations and power source connections, including any removals with Xcel Energy forces.

**Timing:** The Contractor shall contact notify Xcel Energy 60 days in advance of needing power source work completed. It is expected to take up to 12 weeks to design and construct power source locations.

**PART 2 - UTILITY OWNERS SHALL PERFORM THE WORK LISTED BELOW:**

Although the Contractor shall provide traffic control for utility work expected to be coordinated with construction, traffic control for utility work outside of typical project work hours or outside of project limits shall be the responsibility of the utility owner. The utility owner shall prepare and submit to the Engineer a Method of Handling Traffic for utility work to be performed outside typical project work hours or outside of project limits. The utility owner shall obtain acceptance of the Method of Handling Traffic from the Engineer prior to beginning the utility work to be performed outside typical project work hours or outside of project limits.

This work will be performed by the utility owners as necessary to avoid conflicts with construction activities. New locations shall be as indicated in the plans. Utility owners shall comply with schedule requirements of the Contractor and make every effort not to impact the overall construction schedule. Unless otherwise approved by the Engineer, abandoned aboveground appurtenances such as pedestals shall be removed and abandoned underground utilities and manholes/handholds shall be abandoned in place.

Utility owners are responsible for obtaining all necessary permits from Denver International Airport (DEN) and/or the City and County of Denver, as required.

**Denver Water**

Denver Water shall inspect utility work performed by the Contractor listed in Part 1 above. The Contractor shall coordinate inspections with Denver Water forces.

**Timing:** The Contractor shall provide the utility owner written notice 5 days immediately prior to each required inspection.

**Xcel Energy – Electric Distribution**

Xcel shall relocate the light poles and appurtenances along the east side of Gun Club Road between E 75<sup>th</sup> Ave. and E 78<sup>th</sup> Ave as shown on the plans.

**Timing:** The Contractor shall notify Xcel Energy at least two (2) weeks in advance of work being conducted in the vicinity of Xcel electric facilities. It is expected that Xcel relocations will be completed prior to construction.

**Xcel Energy – Lighting/Traffic**

Xcel Energy shall coordinate with the Contractor about Xcel facilities in the project area and shall adjust or relocate facilities as needed.

**Timing:** The Contractor shall contact notify Xcel Energy 60 days in advance of needing power source work completed. It is expected to take up to 12 weeks to design and construct power source locations.

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UTILITIES**

**GENERAL:**

The Contractor shall comply with Article 1.5 of Title 9, CRS ("Excavation Requirements") when excavating 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 actual day of notice, prior to commencing such operations. The Contractor shall contact the Utility Notification Center of Colorado (UNCC) at phone no. **811 or 1-800-922-1987**, to have locations of UNCC registered lines marked by member companies. All other underground facilities shall be located by contacting the respective owner. Utility service laterals shall also be located prior to beginning excavation or grading.

The locations of utility facilities as shown on the plan and profile sheets were obtained from the best available information. No warranty is made for the adequacy or accuracy of subsurface information provided. The Contractor shall cooperate with the utility owners in their relocation operations.

All costs incidental to the foregoing requirements will not be paid for separately but shall be included in the work.

**END OF SECTION REVISION**

**EXHIBIT J**

**CONTRACT DRAWINGS**

**202366978-00: Chato's Concrete, LLC**

**Gun Club On-Ramp to Pena Boulevard**

**Incorporated by Reference as found in City Clerk File # 20230080  
at the Denver Office of the Clerk and Recorder**



# INVITATION FOR BID

Gun Club On-Ramp to Peña Boulevard

IFB No. 202366978

March 22, 2023

**INVITATION FOR BID (IFB)**

Airport Office Building (AOB)  
Denver International Airport (DEN)  
8500 Pena Boulevard, Room 8810  
Denver, Colorado 80249-6340

Contract Administrator (CA): Diane Folken  
E-Mail: [contract.procurement@flydenver.com](mailto:contract.procurement@flydenver.com)

Invitation for Bid #: IFB No.202366978

**BIDS MUST BE RECEIVED BY: APRIL 20, 2023, by 2:00PM DENVER LOCAL TIME**

**Schedule of Activities**

This projected schedule is an estimated timeline and is subject to change at the sole discretion of the City. All times listed in this document are understood to be Denver local time.

Event	Date
IFB Advertisement	March 22, 2023
Optional Pre-Bid Conference	March 29, 2023, at 3:00 p.m. Denver Local Time
Last Date to Submit Written Questions	April 7, 2023, by 2:00 p.m. Denver Local Time
Bid Opening	April 20, 2023, by 2:00 p.m. Denver Local Time

**Pre-Bid Conference – OPTIONAL**

An optional Pre-Bid Conference will be held virtually via a Microsoft Teams Meeting at the date and time listed above in the Schedule of Activities. Please click on the following link to access the meeting.

[\\* Teams Meeting Link\\*](#)

At this conference, DEN representatives will explain the opportunity and answer questions regarding this IFB, including any written questions submitted to DEN prior to the conference.

**IFB Questions**

DEN will not answer any telephone inquiries about this IFB. Written questions are due by the time listed above in the Schedule of Activities and shall be submitted electronically via the Rocky Mountain E-Purchasing System (BidNet) website. **DEN requires all questions to be submitted individually on this site.**

Note: BidNet limits the characters available to input for DEN to respond to each question. For this reason, multiple questions may not be submitted as a single question, as DEN is unable to respond to multiple questions in the space provided. Because of this limitation, DEN reserves the right to reject groups of questions submitted in a single question box or to select and respond to only one question posed. A multi-part question containing an initial question and a follow-up is the exception to this rule. All questions and answers will be posted on the BidNet website as an addendum to the bid at the link below following the deadline for submittal of questions:

<https://www.bidnetdirect.com/colorado/cityandcountyofdenverdepartmentofaviation>

**Bid Submittal**

The Bid shall be prepared in accordance with the Preparation of Bid as described in Section III of this IFB. Bidders shall submit their Bid and all required forms via the BidNet website at the link below. Bids are due by the date and time listed in the Schedule of Activities above.

<https://www.bidnetdirect.com/colorado/cityandcountyofdenverdepartmentofaviation>

Allow ample time for the electronic submission of your bid. Following are links to a BidNet Electronic Bid Submission (EBS) guide and EBS FAQ site. DEN strongly encourages bidders to review this information prior to starting your submission in addition to starting the submission process at least one (1) business day prior to the bid due date. DEN will not extend the submission deadline due to any technical issues or outages you may experience.

Vendor EBS Guide:

[http://business.flydenver.com/bizops/documents/den\\_Vendor\\_EBS\\_Guide.pdf](http://business.flydenver.com/bizops/documents/den_Vendor_EBS_Guide.pdf)

EBS FAQs:

<http://faq.bidnetdirect.com/electronic-bid-submission/>

BidNet Vendor Training Video Link:

<https://bidnetdirect.webex.com/bidnetdirect/lr.php?RCID=921c686e667f4017a58858e957e03eff>

**Small Business Enterprise (SBE) Defined Pool Requirements**

Article VII, Chapter 28, of the Denver Revised Municipal Code (D.R.M.C.), states the Director of the Division of Small Business Opportunity (DSBO) has the authority to utilize the SBE defined pool program for designated contracts for services by the City and County of Denver. The Director has designated this solicitation as a small business defined pool procurement in accordance with the SBE Ordinance requirements.

Award of a contract through this solicitation will be strictly limited to City and County of Denver Small Business Enterprise (SBE) Firms currently certified in accordance with Section 28-205, D.R.M.C. certified within the selection pool. The SBE contractor/consultant minimum self-performance requirement is 30%.

**General Statement of Work**

The project consists of the construction of a new interchange on-ramp at Gun Club Road and Peña Boulevard inbound and other associated roadway improvements within the area. Gun Club Road will be widened to the east and restriped to accommodate a new left turn lane onto the new ramp. The roadway construction will be a 10.5-inch full depth Portland cement concrete pavement over an aggregate base course. The scope of work will include, but is not limited to, demolition, concrete paving, general construction in support of concrete paving work, earthwork, stormwater drainage conveyance, traffic signal construction, erosion control and revegetation, traffic control, and existing roadway/pavement tie-ins.

**Prequalification Requirements**

Each Bidder must be prequalified in category **1F(2) Concrete Roadway Paving** at or above the **\$3,000,000.00** monetary level in accordance with the City's Rules and Regulations Governing Prequalification of Contractors. Each Bidder must have submitted a prequalification application a minimum of ten (10) calendar days prior to the response due date. Applications for prequalification must be submitted via [B2Gnow](https://www.denvergov.org/B2Gnow). To view the Rules and information on how to apply, please visit our website at [www.denvergov.org/prequalification](http://www.denvergov.org/prequalification).

**BID SUBMITTAL REQUIREMENTS**

The following is a checklist for reference when compiling the Bid submission. The documents listed below are required:

- ☐ Bid Forms - all complete and signed
  - Bid Letter – fill out completely and acknowledge all addenda
  - Bid Data Forms – all forms completed and submitted
  - Disclosure of Legal & Administrative Proceedings & Financial Conditions
  - Bid Bond
- ☐ Sample Agreement:
  - List of proposed modifications or legal issues regarding terms of the Sample Agreement as outlined in Section II-2.
- ☐ Diversity Survey
  - Diversity and Inclusiveness in City Solicitations (online survey – include the completed survey with your Bid submission)
- ☐ Financial Forms
  - Schedule of Prices/Values and Quantities



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**I. CITY, AIRPORT AND PROJECT OVERVIEW**

The values of equity, diversity, inclusivity, accessibility, and sustainability are inherent to the City's strategy to develop and maintain prosperous communities. Accordingly, these values are imbedded into all the City's procurement processes to ensure competitive procurements that offer equitable opportunities for all potential Bidders, including greater contracted and significant participation for historically underutilized multicultural businesses to ensure Denver's long-term economic, social, and environmental health. Through equitable procurements, the City is committed to working to remove barriers and increase access to City contracting opportunities for all historically underutilized and small businesses including those owned by minorities, women, veterans, LGBTQ+, and individuals living with disabilities as well as those in economically distressed or redlined neighborhoods. It is a primary value to promote economic equity by engaging a more diverse and inclusive community of Bidders and contractors, both as prime and sub-contractors to address racial, socioeconomic and gender disparities. Through this promotion of equity, diversity, and inclusion (EDI), the City strives to improve opportunities that ensure fair and just access to jobs, housing, education, mobility options, and healthier communities. It is the City's expectation that all successful Bidders demonstrate their commitment to these City values through their procurement responses and post contract and/or lease activities.

Each procurement opportunity is to be approached with ethical and honest behavior. The City will solicit, evaluate, and award contracts based upon the Bidder's alignment with the City's values as it relates to its approach, proven experience, ability to perform work, costs, and pricing. DEN is looking for Bidders that demonstrate a history of equity, diversity, integrity, stewardship, innovation, and humanity. The City is looking for Bidders that have EDI embedded in their policies, procedures, practices, initiatives, and exhibit actionable results and ensures that of those that they partner with.

The City's values may be demonstrated through but are not limited to: (a) workforce expansion; (b) utilization of and work with the historically underutilized community, separate from required certified goals; (c) environmental sustainability and (d) EDI and Equal Employment Opportunity (EEO) programs for staff.

In accordance with procedures described herein, you are hereby invited to submit a Bid for the subject project, which is described in the Technical Specifications and Drawings incorporated herein. The work under this Contract is anticipated to start on or about June, 2023, and has a scheduled duration of 341 days. The Bid must be prepared and submitted in accordance with the requirements and procedures contained in this IFB document and the City's, including DEN's, ordinances, rules, policies, and procedures. Compliance with these requirements by the Bidder is mandatory and is a condition of responsiveness. Any failure to satisfy these requirements will be a sufficient basis for the City to disqualify the Bidder. The City shall not be liable for any of the Bidder's expenses associated with its preparation of the Bid or DEN's consideration of it. The Bidder, if selected, shall not include any such expenses as part of its fee for performing the Scope of Work.

## II. ADMINISTRATIVE INFORMATION

### II-1 Issuing Office

The City, by the Contract Procurement Department (DEN Contract Procurement). This IFB is governed by the City's ordinances and Procurement Rules in effect at the time of its issuance. DEN Contract Procurement is the sole point of contact concerning this IFB. All communication must be done through DEN Contract Procurement.

### II-2 Introduction and Acceptance of IFB Terms

The Bidder, by submitting its Bid, acknowledges that it understands and will agree to the corresponding Exhibits and the Scope of Work, and that the Bidder shall be able to perform the project as required. Acknowledgement of this condition shall be indicated by the signature of the Bidder on the Bid Acknowledgement Letter, which is attached hereto and incorporated here in as Attachment 1, or an officer of the Bidder legally authorized to execute contractual obligations. A submission in response to this IFB acknowledges acceptance by the Bidder of all terms and conditions as set forth herein. The Bidder shall identify clearly and thoroughly any variations between its Bid and this IFB. Failure to do so shall be deemed a waiver of any rights to subsequently modify the terms of performance, except as outlined or specified in this IFB.

Bidders shall undertake a detailed review of the Attachment 5, Sample Agreement and submit with their Bid a list of all legal issues or proposed modifications which the Bidder would like DEN to review and address, should they be selected as the Apparent Low Bidder. The Bidder may submit questions regarding the Sample Agreement using the same method designated for other questions related to this IFB. Bidders are strongly advised to seek legal counsel for advice regarding the Sample Agreement. DEN will not respond to legal questions such as about the interpretation of a provision of the Sample Agreement or provide legal advice regarding the Sample Agreement to Bidders. DEN shall assume that the Sample Agreement has been thoroughly reviewed and discussed with legal counsel prior to submission of the Bid. If the Bidder does not identify any issues or proposed modifications to the Sample Agreement, the City may refuse to consider any proposed revisions received later from the Bidder, if they are selected as Apparent Low Bidder. The City may consider the Bidder's comments in considering whether to select Bidder as the Apparent Low Bidder.

Attachment 5 is a sample agreement and, as such is subject to revision or modification by DEN at any time. DEN reserves the right to modify any term or condition of this Sample Agreement, and to add, delete or modify terms and conditions, as DEN's interests may require, prior to execution of a final agreement. **The Sample Agreement contains certain provisions required by Federal, State, and/or City law and policy, and these provisions may not be revised or negotiated.**

### II-3 Means of Communication

During the solicitation process for this IFB, all communication between DEN Contract Procurement and Bidders will be via postings on DEN's BidNet website:

<https://www.bidnetdirect.com/colorado/cityandcountyofdenverdepartmentofaviation>

DEN Contract Procurement will post notices, which include, but are not limited to, any modifications to administrative or performance requirements, answers to inquiries received, clarifications to requirements, addenda, and the announcement of the Apparent Low Bidder. It is the responsibility of each potential Bidder to monitor the BidNet website regularly in order to be aware of changes, communications and/or addenda to bids.

DEN will not be held responsible for misinformation received from private plan holders. Please use the BidNet website to obtain solicitation information for DEN.

**II-4 Interpretation of Bid Documents**

The Bidder may request, in writing, a clarification or interpretation of any aspect of the IFB documents. Such requests must be made via the BidNet website by the due date and time specified in the Schedule of Activities listed on Page 2. DEN shall post all questions and answers on the BidNet Website following the deadline for submittal of questions as an addendum to the bid. DEN will not accept or respond to oral inquiries except for those made at the Pre-Bid Conference. The only 'official' responses are those that are posted to the BidNet Website for this IFB.

**II-5 Addenda**

DEN reserves the right to revise the IFB documents at any time up to the time set for submission of the Bids. Any such revision(s) shall be described in an addendum to the IFB and shall be posted on the BidNet Website at the following link:

<https://www.bidnetdirect.com/colorado/cityandcountyofdenverdepartmentofaviation>

If DEN determines that the addendum may require significant changes to the Scope of Work, the deadline for submitting the Bids may be postponed by the number of days that DEN determines will allow Bidders sufficient time to revise their Bids. Any new submittal deadline date for delivering Bids to DEN shall be included in the addendum.

Bidders must acknowledge in their Bid that they received all addenda to the IFB documents (see Attachment 1, Part 1). Failure to acknowledge receipt of addenda may disqualify the Bid.

**II-6 DEN Website**

It shall be conclusively presumed that the Bidder did, before submitting a Bid and prior to the final Bid deadline, read all addenda, posted decisions and other information items relevant to the IFB which appeared on the DEN BidNet Website. Bidder may also contact the DEN Contract Administrator, Diane Folken, by email at [contract.procurement@flydenver.com](mailto:contract.procurement@flydenver.com) to confirm all posted information.

Please visit the BidNet Website at the following link which contains such services and information as:

<https://www.bidnetdirect.com/colorado/cityandcountyofdenverdepartmentofaviation>

- a. Advertisements for RFx and IFB opportunities
- b. Status of RFx and IFB opportunities
- c. Addenda including vendor questions and responses
- d. Plan holder's/Document Taker's list
- e. Award information

**II-7 Withdrawal of Bid**

A Bidder may withdraw its Bid by submitting to DEN a written request signed by the Bidder's authorized representative. The withdrawal of a Bid does not prejudice the right of the Bidder to submit future Bids.

**II-8 Rights of DEN**

DEN reserves the rights to cancel or modify this IFB at any time and to reject any or all bids for any reason or for no reason. This IFB is an open and equitable Invitation for Bids, and each Bid constitutes an offer to contract that DEN may consider in its sole and absolute discretion. Any errors or omissions in a Bid may result in the rejection and disqualification of the entire Bid. Errors, omissions, and other acts that may result in Bid rejection and disqualification include, but are not limited to, failure to strictly comply with the IFB requirements or any applicable ordinances, rules, or policies; the submission of any inaccurate or false information; any improper communications or collusion involving Bidders; default or termination for

cause of any public or private contracts within the past five (5) years; delinquent arrearages owed to DEN; and failure to submit proof of licensing or franchise authority and any related exclusivity requirements.

Notwithstanding the broad rights reserved to DEN to reject and disqualify any or all Bids, DEN may waive any immaterial deficiencies in Bids and may allow Bidders to cure any such deficiencies if an opportunity to cure is determined by DEN to be in DEN's best interests. If given an opportunity to cure, Bidders will be notified of the allotted time to correct the identified deficiency; failure to correct the deficiency in the time allotted may result in Bids being deemed non-responsive and disqualified. DEN's waiver of an immaterial deficiency will in no way modify the IFB or excuse Bidders from full compliance with all IFB specifications. DEN may exercise the foregoing rights at any time without notice and without any liability whatsoever to any Bidder or other party. By responding to this IFB, each Bidder is deemed to accept and agree to all of these terms and conditions and to waive any rights to challenge DEN's determinations regarding Bid deficiencies in accordance with this section.

#### II-9 **Bidder Agreements**

Bidders may submit proposed agreements of any form (contracts or documents) that contain supplemental terms and conditions that the Bidder desires to be considered by the City for inclusion in the contract. Such forms may include Bidder's software licensing agreements, maintenance contracts, and technical support agreements. By accepting delivery of these items, DEN is not bound to accept them as part of an ensuing contract. DEN may negotiate such supplemental terms and conditions that do not materially conflict with the contract terms and conditions detailed in this IFB and do not materially change the nature of this solicitation or adversely affect competition. If the parties cannot agree on the terms of the contract, including any terms desired by Bidder, DEN may terminate negotiations with the Bidder and enter into a contract with another responsive Bidder. ***Certain of DEN's contract provisions are required by Federal, State and/or City law and policy and are not subject to modification.***

#### II-10 **Small Business Enterprise (SBE) Defined Pool Requirements**

Article VII, Chapter 28, of the Denver Revised Municipal Code (D.R.M.C.), referred to in these Procurement Documents as the "SBE Ordinance" and any Rules or Regulations promulgated pursuant thereto apply to this Project and are incorporated into these Procurement Documents by reference. Under the SBE Ordinance, states the Director of Division of Small Business Opportunity ("Director") has the authority to designate expenditure contracted by the City and County of Denver to the SBE defined pool program. The Director has designated this solicitation as a small business defined pool procurement and in accordance with the SBE Ordinance requirements, award will be strictly limited to currently certified Small Business Enterprise (SBE) Firms in accordance with Section 28-205, D.R.M.C. In order to comply with the procurement requirements of the SBE Ordinance, proper SBE certification shall be a condition of responsiveness and award will only be made to the responsive, qualified SBE Proposer. Proposer's failure to comply with the SBE Ordinance, any Rules or Regulations promulgated pursuant thereto, or any additional requirement contained herein shall render the proposal nonresponsive and shall constitute cause for rejection. Failure by the contractor/consultant awarded the contract to comply with SBE Ordinance requirements during the performance of the contract is a material breach of the contract, which may result in the imposition of sanctions on the contractor/consultant, as deemed appropriate by DSBO. Copies of the SBE Ordinance and its accompanying Rules and Regulations are available for the use and review by Proposers, as well as additional SBE Guidance which can be found here: <https://www.denvergov.org/dsbo>. Proposers are encouraged to contact DSBO at (720) 913-1999 with specific questions related to compliance with this ordinance.

- a. All Proposers, at the time the proposal is submitted, must be properly SBE certified by the City on or before the date of proposal submission. DSBO maintains an SBE Directory ("Directory"), which

is a current listing of SBEs that have been certified by the City. A copy of the DSBO Directory is located at DSBO web site at <https://www.denvergov.org/dsbo>.

- b. In addition, each Proposer must perform a commercially useful function for no less than 30% of the total amount of the contract or purchase order.

**PLEASE NOTE:** The Proposer(s) must be certified in the NAICS code(s) that coincide with the scope of work they will be performing to count towards the SBE participation. DSBO will evaluate each bid to determine the responsiveness of the bid to the requirements of the SBE Ordinance.

#### II-11 **Certification of Independent Price and Work Determination**

By submission of this Bid, each Bidder, and in the case of a joint Bid, each party thereto, certifies, that, in connection with this IFB:

- a. Prices and specific work processes in this Bid have been arrived at independently, without consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor, or with any party contracted by DEN to design and/or manage all or part of the program or work of which this IFB is a part;
- b. Unless otherwise required by law, the prices quoted and specific work processes described in this Bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to opening, directly or indirectly to any other bidder or to any competitor or to any party contracted by DEN to design and/or manage all or part of the program or work of which this IFB is a part; and
- c. No attempt has been made or will be made by the Bidder to induce any other person or firm to submit or not to submit a Bid for the purpose of restricting competition.

Further, each person signing Attachment 1, Part 1 Bid Letter, for this Bid certifies that:

- d. They are the person in the Bidder's organization responsible for the decision as to the prices being offered herein and that they have not participated, and will not participate, in any action contrary to subsection (a) through (c) above; or
- e. They are not the person in the Bidder's organization responsible for the decision as to the prices being offered herein but that they have been authorized in writing to act as agent for the persons responsible for such decision in certifying that such persons have not participated, and will not participate, in any action contrary to subsections (a) through (c), above, and as their agent does hereby so certify; and they have not participated, and will not participate, in any action contrary to subsections (a) through (c), above.

A Bid will not be considered for award where subsections (a), (c), (d) or (e), above, have been deleted or modified. Where (b) above has been deleted or modified, the Bid will not be considered for award unless the Bidder furnishes with the Bid a signed statement which sets forth in detail the circumstances of the disclosure and the Chief Executive Officer (CEO), or their designee, determines that such disclosure was not made for the purpose of restricting competition.

#### II-12 **Designation of Subcontractors**

The Bidder shall describe the qualifications of each subcontractor which it intends to use and the percentage and scope of the work which will be assigned to each of them. Resumes for the subcontractor's key personnel must be included.

Bidders who submit a Bid in response to this IFB are precluded from participation as a subcontractor with any other Bidders who submit a Bid for this IFB. However, subcontractors may be named on more than one (1) Bid. Subcontractors who are named in more than one Bid are prohibited from sharing information about one Bidder with another Bidder or utilizing such information to assist in the preparation of another Bid.

**II-13 Payment**

Appropriate clarifications and additions to the Scope of Work may be made during negotiations with the successful Bidder. It is the intent of DEN to enter into a Contract in which the Bidder will be paid pursuant to the terms of the Contract.

**II-14 Disclosure of Legal and Administrative Proceedings and Financial Condition**

- a. The Bidder shall submit (at time of submittal) a statement which shall disclose all legal or administrative proceedings that involve a civil claim in excess of Fifty Thousand Dollars (\$50,000) in which the Bidder, its principals or key personnel were a party in the last five (5) years. The Bidder shall include in the statement:
  1. The caption of the action naming all parties;
  2. The case number, jurisdiction, and the date the action was filed;
  3. A brief description of the action, the amount of the claim and whether the action involved performance under any public or private construction contract; and
  4. The outcome or disposition of the action.
- b. The Bidder shall submit (at time of submittal) a statement which shall disclose whether Bidder has filed for protection under the laws of the U. S. Bankruptcy Code within the last ten (10) years.
- c. The Bidder shall submit (at time of submittal) a statement as to whether the Bidder, its principals, or key employees presently, or in the past, are or have been involved in any debarment or suspension proceedings. Please include a description of any proceedings which prohibited or limited the Bidder from bidding or entering into any contract with any federal, state, or local government entity. Include a brief description of the reason(s) for such action having been taken, the effective dates thereof and the governmental agency.

If the Bidder is a partnership or joint venture, please include a statement disclosing the information listed in subparagraph A and B, above, for each partner or joint venturer. If the Bidder is fifty percent (50%) or greater owned by another entity or individual, please include a statement disclosing the above information for such entity or individual.

- d. The Bidder shall submit (at time of submittal) a statement as to whether the Bidder, its principals or key employees have been convicted of any crime related embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, receiving stolen property, fraud, unfair trade practices, violation of state or federal antitrust statutes, or other law indicating a lack of business integrity or business honesty or have been convicted of any other felony in any jurisdiction within the last five (5) years. Include the current status of any such principal or key employees.



- e. The Bidder shall submit (at time of submittal) its Dun & Bradstreet identification number if applicable. If the Bidder is a partnership or joint venture, it must submit the Dun & Bradstreet identification number for each partner of a joint venture.
- f. If the Bidder is a publicly held company, it shall submit (at the time of submittal) a list of any holders of ten percent (10%) or more of its stock.
- g. During contract negotiations or at any time during the term of the executed contract, the Bidder may be asked to submit the following:
  - 1. An audited statement of overhead rates, payroll taxes and operating (profit) margin used to calculate hourly billing rates for DEN and approval. If the Bidder does not have audited overhead rates, a Core Staff Labor Rates Sheet, may be requested for each entity without audited overhead rates. This statement shall cover the Bidder's most recently completed fiscal year and shall be signed by a certified public accountant as a Certified Audited Statement in which the accountant expresses their opinion as to the fairness with which the statement represents the Bidder's financial position, results of operations and changes in financial position.
  - 2. If the Bidder is a partnership or joint venture, a Certified Audited Statement is required for each partner or joint venture. If the Bidder does not have audited overhead rates, a Core Staff Labor Rates Sheet, may be requested for each entity without audit overhead rates. If any individual owns thirty-two percent (32%) or more of the Bidder, a Certified Audited Statement is required for each such individual or if a Certified Audited Statement is not available, then the individual must supply copies of their federal tax returns for the prior two (2) years.
  - 3. If a Bidder is a small business as defined by the United States Small Business Administration, the Bidder may elect to submit copies of its Federal tax return for the prior two (2) years and prepare a Core Staff Labor Rates Sheet, in lieu of a Certified Audited Statement.
  - 4. A signed statement certifying that no material or significant changes have occurred since the date of completion of the Certified Audited Statement, or the filing of the Federal tax return and the date of the Bid.

#### II-15 **Insurance Requirements**

Bidder shall adhere to all insurance requirements stated in Attachment 3, which are attached hereto and incorporated herein by reference. ACORD FORM (or equivalent) must be emailed in pdf format to: [contractadmininvoices@flydenver.com](mailto:contractadmininvoices@flydenver.com).

#### II-16 **Governmental Immunity**

Bidders and subcontractors understand and agree that the City, its officers, officials and employees are relying on, and do not waive or intend to waive by any provisions, the monetary limitations or any other rights, immunities and protections provided by the Colorado Governmental Immunity Act, §§ 24-10-101 - 120, C.R.S., or otherwise available to the City, its officers, officials and employees.

#### II-17 **Security**

After receiving an executed contract, the Bidder shall be deemed a Contractor of DEN. The Contractor (or subcontractor) requiring access to the Controlled Area, Sterile Area or Secured Area shall become a

“Participant” in the Airport Security Program (ASP) and remain in good standing in order to retain Airport Security privileges.

Participant guidelines are outlined in DEN Rules and Regulations Part 20. A Contractor must be sponsored by an Air Carrier, Tenant or by the City. Once a Contractor company has been sponsored, they must designate an Authorized Signatory.

The sponsorship establishes that a Contractor (or subcontractor) has legitimate business at the Airport. All construction Contractors must submit a Participant Sponsorship form signed by their sponsor. A company sponsoring a Participant shall immediately notify Airport Security when any sponsorship is terminated.

A subcontractor company working under its own entity must be sponsored by a Contractor company. The subcontracting company must designate its own Authorized Signatory(ies).

Each Participant shall designate an Authorized Signatory to ensure the Participant’s compliance with the ASP and act as the point of contact between the Participant and Airport Security. The Authorized Signatory shall be designated in writing to Airport Security by the Participant.

The Authorized Signatory is responsible for signing and verifying all information on the Denver International Airport Fingerprinting and Badging applications. All submitted applications must be an original. It is the Authorized Signatory’s responsibility to ensure that Airport Security maintains valid contact information. The Authorized Signatory must maintain a current and valid Airport Identification Badge (ID Badge).

The security status of the Airport is subject to change without notice. Should the security status of the Airport change at any time during the term of the Contract, a written notice shall be issued to the Contractor, detailing all applicable security modifications. The Contractor must take immediate steps to comply with those security modifications.

The Contractor shall return to DEN, upon Contract completion or termination, or upon demand by DEN, all access keys and Airport ID Badges issued to it by DEN to Controlled Areas, Sterile Areas, or Secured Areas of the Airport. If the Contractor fails to return any such Airport ID Badge(s) or Airport Security Key(s) at Contract completion or termination or upon demand by the DEN, the Contractor shall be liable to the DEN for all DEN’s costs, including the DEN’s labor costs for re-coring doors and any other work which is required to prevent compromise of any Airport Security system. In order to collect such costs hereunder, the DEN may withhold funds in such amount from any amounts due and payable to the Contractor under the Contract.

Airport Security must be immediately notified if an Airport ID badge or security key is lost or stolen and must be notified immediately upon the termination of an individual’s employment. Pursuant to Title 49 Code of Federal Regulations (C.F.R.) Part 1520.04-10(d) a fee shall be assessed against any employer who fails to return an Airport ID badge or security keys upon the termination of an individual’s employment, transfer, or completion of a project or contract. An additional fee may be requested to cover the administrative cost of processing a lost badge or security key.

II-18 **Airport Identification (ID) Badge Requirements**

All individuals employed at the Airport with Secured Area access, or working in the Terminal, Concourses or Parking and Ground Transportation facilities, must obtain an Airport ID Badge. Airport ID Badges will be issued by Airport Security. All Airport ID Badges shall be and remain the property of the Airport. The Airport ID Badge must be surrendered on demand to Airport Operations and/or a Contract Security Guard.

An individual employed by more than one (1) company, or changing employers, must obtain an Airport ID Badge for each company. Badge color indicates general areas and levels of authorization in relationship with direct support of an individual's job function. Badge color does not determine access. The respective classes of Airport ID Badges, indicated by badge color and associated driving endorsement icon, describe driving privileges in direct correlation with job function.

The individual must complete an application, on a form prepared and currently approved by Airport Security. Two (2) valid forms of identification must be presented with the application, one of which must be a government-issued photo identification. The second form of identification must verify proof of citizenship (i.e., birth certificate or legal residency with work authorization). All information regarding the individual's name, age, gender, and other vital statistics on both forms of identification must be consistent and verifiable.

A DEN Fingerprinting and Badge Application, Security Threat Assessment (STA) and Criminal History Record Check (CHRC) must be completed for everyone requesting an Airport ID Badge. Denver International Airport Fingerprinting and Badge Applications are available from the Airport Security Office. Allow adequate time for processing of the STA and CHRC.

The individual must view a training film on DEN Rules and Regulations as they pertain to overall security and pass a corresponding test to assure understanding of the DEN Rules and Regulations.

If the individual requests driver authorization, a valid driver's license must be presented, and the individual must view a training film on Denver Municipal Airport System Rules and Regulations as they pertain to overall Movement of Vehicles in the Secured Area and pass a corresponding test to assure understanding of the Rules and Regulations.

A construction orientation specific to the project must be conducted. A designated time for this session must be coordinated with Planning and Development and Airport Operations.

A lost or stolen Airport ID Badge must be immediately reported to Airport Security. For a replacement Airport ID Badge, a new DEN Fingerprinting and Badge Application must be completed and signed by the Company(s) Authorized Signatory. A non-refundable fee must be paid for a replacement Airport ID Badge.

If for any reason the Airport ID Badge becomes inoperable or damaged, the Airport ID Badge holder shall return that badge to Airport Security, and a replacement badge will be issued. A replacement fee may be assessed should the damage be attributable to the negligence of the employee who was issued the badge.

When an employee is terminated, the Contractor company shall immediately notify Airport Security. This notification must be followed by the return of the Airport ID Badge and written confirmation of this information. The Contractor company must recover Airport ID Badges from individuals whose employment at the Airport has been terminated. The Contractor company shall notify Airport Security in writing when a subcontractor is no longer under the Contractor company's sponsorship. All Airport ID Badges must be returned to Airport Security.

An employee possessing a valid Airport ID Badge may escort other individuals into the Secured Area(s) under the conditions listed in the Rules and Regulations Part 20. If the project is extended, DEN's Project Manager must submit a new Sponsorship Form with a new expiration date. This can be accomplished thirty (30) calendar days prior to expiration of the Airport ID Badge. An application revision must be completed for each employee still required on the project if the badges have expired.

**II-19 Background Checks**

Every individual requesting an Airport ID Badge must complete a CHRC and a STA for unescorted access to the Sterile and Secured Area(s).

If an applicant has been convicted of a crime or found guilty by reason of insanity or has been arrested for any of the disqualifying crimes or is awaiting judicial proceedings, they may be ineligible to obtain an Airport ID Badge. A list of the disqualifying crimes may be found in 49 C.F.R. 1542.209.

**II-20 Vehicles in the Secured Area**

All Contractor employees who are required to drive in the Sterile and Secured Area(s) unescorted to perform their jobs are required to complete a training film on Denver Municipal Airport System Rules and Regulations as they pertain to overall movement of vehicles in the Sterile and Secured Area(s) and pass a corresponding test to assure understanding of the Rules and Regulations.

All unescorted vehicles must display a current Airport Contractor Vehicle Permit (Permit). Permits are available from Airport Security. An application form must be completed, signed by an Authorized Signatory, and all applicable permit fees must be paid for each Permit requested, and it must be signed by the Authorized Signatory. A Permit is required for each state licensed vehicle, and the vehicle Permit is not transferable.

The Contractor shall purchase and maintain in force a minimum of Ten Million Dollars (\$10,000,000.00) in combined, single-limit automobile insurance for bodily injury and property damage liability per accident or occurrence.

**II-21 Violations**

Any Contractor employer not regulated under 49 C.F.R. Part 1544, Aircraft Operator, will be responsible for payment or reimbursement to DEN of any Civil Penalties imposed by the Transportation Security Administration (TSA) for individual security violations by their employees and/or subcontractor employees for violations under 49 C.F.R. Part 1542.

A Contractor employee may be personally subject to Civil Penalties imposed by TSA for individual security violations committed by Contractor employees and/or subcontractor employees under 49 C.F.R. Part 1542.

Everyone who is issued an Airport ID Badge shall comply with all Security Advisories, Rules and Regulations Governing the Denver Municipal Airport System Rules and Regulations, the CEO Directives and any DEN Standard Policies and Procedures regarding Airport Safety, Security and Operations. The failure of any individual to comply with such Security Advisories, rules, and directives, etc. will result in the issuance of a Violation Notice and may result in the assessment of a Federal Civil Penalty and/or the denial, suspension, or revocation of their Airport ID Badges.

The security status of DEN is subject to change without prior notice. Should the security status of DEN change at any time during the term of the Contract, a written notice shall be issued to the Contractor, detailing all applicable security modifications. The Contractor must take immediate steps to comply with those security modifications.

**II-22 Diversity and Inclusivity in City Solicitations**

Each Bidder shall, as a condition of responsiveness to this IFB, complete and return the "Diversity and Inclusiveness in City Solicitations Information Request Form" with their Bid.

Using the "Diversity and Inclusiveness in City Solicitations Information Request Form," please state whether your firm has a diversity and inclusiveness program for employment and retention, procurement

and supply chain activities, or customer service, and provide the additional information requested on the form. The information provided on the “Diversity and Inclusiveness in City Solicitations Information Request Form” will provide an opportunity for DEN contractors to describe their own diversity and inclusiveness practices. Bidders are not expected to conduct intrusive examinations of its employees, managers, subcontractors, or business partners in order to describe diversity and inclusiveness measures. Rather, DEN simply seeks a description of the Bidder’s current practices, if any.

Diversity and Inclusiveness information provided by Bidders in response to DEN solicitations for services or goods will be collated, analyzed, and made available in reports consistent with the Mayor’s Executive Order No. 101. However, no personally identifiable information provided by or obtained from Bidders will be included in such reports.

For DEN to consider a Bid, Bidders must complete the electronic version of the Diversity and Inclusiveness in City Solicitations Form – then **save an electronic copy of the completed form and include the electronic copy as part of its Bid. A Bid or response to a solicitation by a Bidder that does not include this completed form shall be deemed non-responsive.** The form is found at:

<https://us.openforms.com/Form/57f3a8ea-39b7-4115-be17-1770f38d3cf6>

The Diversity and Inclusiveness Form is separate from the requirements established by DSBO and must always be completed – regardless of whether there are any DSBO goals assigned to this project.

#### II-23 **Wage Ordinances**

The services being requested in this IFB may involve services that are covered pursuant to Article IV of Chapter 20 of the D.R.M.C., which is designed to address the issue of wage equity and cost of living affordability in the City and County of Denver. Bidder agrees that any contract with DEN shall include a requirement that Bidder will comply with the provisions of D.R.M.C. relating to minimum and prevailing wages, including, but not limited to, paying all covered workers no less than the City Minimum Wage for all covered services rendered in connection with the resulting contract. Additionally, Bidder agrees that the contract shall require compliance with all current and future federal and state laws and City ordinances.

#### II-24 **Taxes**

1. **General:** Bidders shall refer to the General Conditions, G.C. 323 regarding taxes to which Bidder may be subject in performing the Work under this Contract, including but not limited to, sales and use taxes and the Denver Occupational Privilege Tax. The following instructions are to be considered along with the General Conditions – and not in lieu of them.
2. **Sales and Use Tax:** Construction and building materials sold to contractors and subcontractors for use on structures, roads, streets, highways, and other public works owned by the City at DEN are exempt from state, Regional Transportation District (RTD) and Cultural Facilities District sales and use taxes. However, such materials will be subject to sales and use taxes imposed by the City.
3. **Exemption Certificates – Sales and Use Tax:** Contractor and Contractor’s subcontractors are responsible for applying to apply to the Colorado Department of Revenue (CDOR) for a certificate or certificates of exemption, indicating that their purchase of construction or building materials is for a public project, and to deliver to the City copies of such applications as soon as possible after approval by the CDOR. Bidders shall not include in their Bid amounts the State, RTD and Cultural Facilities District Sales and Use Taxes.
4. **Denver Occupational Privilege Tax:** Any employee working for a Contractor or a subcontractor who earns over Five Hundred Dollars (\$500.00) working in Denver during a calendar month is subject to the

payment of the Employee Occupational Privilege Tax. The Contractor and any subcontractor must pay the Business Occupational Privilege Tax for each of its employees who are subject to such tax.

**II-25 Conformed Technical Specifications and Contract Documents**

If applicable, and when Technical Specifications are included and/or referenced herein, Bidder understands that the Technical Specifications and Contract Drawings included in this IFB have been conformed by the City. The conformed Technical Specifications and Contract Drawings were prepared by posting or otherwise incorporating the changes noted in any addendum/addenda into the Technical Specifications and Contract Drawings to form a single set of construction documents.

**II-26 Site Inspection and Investigations**

Prior to submitting its Bid, the Bidder shall inspect the work site and its surroundings. A site visit may be scheduled immediately following the Pre-Bid Conference as indicated herein. For purposes of a Contract, it shall be conclusively presumed that the Bidder has made a thorough inspection of the site and has waived the right to later claim extra payment or time extension(s) for conditions which would have been evident during an inspection or investigation.

Drawings and Specifications which define the Work to be done were prepared on the basis of interpretation by design professionals of information derived from investigations of the work site and site condition data provided by the City. Such information and data are subject to sampling errors, and the interpretation of the information and data depends to a degree on the judgement of the design professional. In view of this, the Bidder is invited to make additional investigations as the Bidder's judgement dictates the need for such investigations.

Because the Bid information cannot be guaranteed, the Contractor shall have assumed the risks attendant to successful performance of the Work, except for the risk of encountering differing site conditions which are defined in the General Conditions and shall never make claim for additional payments or time extensions on the grounds that the nature or amount of Work to be done was not understood by the Bidder at the time of Bid submission.

**II-27 Materials and Substitutions**

It is often convenient and practical to specify materials and equipment to be incorporated into the Work by a proprietary name or by the name of its manufacturer. When so specified and further qualified by the phrases "or equal" or "or equivalent," it shall be understood that such specification is not intended to limit the material and equipment selection process. Rather, the specification is intended to indicate a standard of quality and capability which will be accepted. However, all Bidders desiring to use materials other than the specified materials must obtain the written approval of the Project Manager.

Bidders requesting substitutions will submit a Request for 'or Equal' Approval Form contained herein. All requests for approval of equal or equivalent material shall contain adequate technical data to clearly demonstrate equivalency. Requests containing inadequate or incomplete information will not be reviewed.

Any such Request for 'or Equal' Approval Form must be submitted via email to [contract.procurement@flydenver.com](mailto:contract.procurement@flydenver.com), must include in the email Subject line: "Request for Substitution" and the IFB name, and the email must be received no later than ten (10) calendar days before the posted deadline for IFB submittals. All approvals of equal or equivalent materials will be posted to the Contract Procurement website as addendum(s) to ensure full and complete disclosure to all potential Bidders. All requests for approval of equal or equivalent material shall contain adequate technical data in order to clearly demonstrate equivalency. Incomplete submittals will not be reviewed.

If the Bidder is awarded the Contract and elects to use an 'or equal' that has been added by addendum(s), the Bidder shall be deemed to have warranted that:

- (1) The use of the 'or equal' fulfills the specification requirements contained in this IFB.
- (2) The installation of the 'or equal' will not impact the spatial requirements for the Work or the scheduling of work performed by the City or other contractors.

Additionally, the Bidder agrees that it shall modify any building system(s) (i.e., HVAC, structural, electrical) impacted by the use of an 'or equal' at no cost to the City or any other contractors under contract with the City and shall make no claims for delay or disruption arising out of such 'or equal' modification.

**II-28 Permit Fees**

For the construction of this project, the awarded Contractor agrees to pay the permit fees described in General Condition 317 and in the Special Conditions and Technical Specifications.

**II-29 Construction Scheduling**

The Bidder shall refer to the General Conditions, Special Conditions and Division 013210 of the Technical Specifications for scheduling requirements for this Contract.

**II-30 Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion**

The Bidder certifies, by submission of its Bid or acceptance of this Contract, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible or involuntarily excluded from participation in any government contract by any Federal, State, or local government department or agency. It further agrees by submitting its Bid that it will include this clause without modification in all lower-tier transactions, solicitations, Bids, contracts, and subcontracts. Where the Bidder or any lower-tier participant is unable to certify to this statement, it shall attach an explanation to its Bid.

**II-31 Bid Guarantee, Bond**

As a guarantee of good faith on the part of the Bidder, each IFB must be accompanied by a Bid guarantee consisting of either a certified or cashier's check made payable without condition to the order of the City and County of Denver, or a Bid bond written by an approved corporation surety in favor of the City and County of Denver. If the Bidder's IFB submission is responsive and Bidder is awarded a Contract but fails to either (1) execute a Contract in the form prescribed, (2) furnish the Payment & Performance Bonds described in Title 15 of the General Conditions, (3) furnish the required evidence of insurance described in Title 16 of the General Conditions or in the Special Conditions, or (4) satisfy any other condition precedent to Contract execution within its power within five (5) working days after such notice is made by the City, said Bid guarantee shall be forfeited to the City as liquidated damages and not as a penalty. The Bid guarantee shall be in the amount of five percent (5%) of the Maximum Contract Amount.

A Bid Guarantee form for execution by the Bidder is supplied with each set of contract documents. IF A BID GUARANTEE IS USED, IT MUST BE THE FORM OF BID GUARANTEE SUPPLIED WITH THE CONTRACT DOCUMENTS.

Once the awarded Bidder executes a Contract and delivers to the City satisfactory Performance & Payment Bonds and the required insurance documentation and, if applicable, City Council approval of the Contract, the Bid guarantees of non-awarded Bidders will be returned.

**II-32 Payment & Performance Bonds**

The awarded Contractor will be required to submit Payment & Performance Bonds which guarantees it will fulfill its contractual obligations under this project and guarantees it will pay its subcontractors, material suppliers and/or laborers for any work and materials provided. The amount of the Bonds will be 100% of the Maximum Contract Amount (the full amount of the bid). Should the awarded Contractor default on its obligations and fails to complete the project, a claims process may be initiated. If Contractor is found to be in breach of the Contract, it must compensate the City up to the full amount of the Bonds.

**II-33 Project Controls Requirements**

Bidder will be required to use the designated Project Management Information System (PMIS) as set forth in the Technical Specifications. The PMIS is Airport Infrastructure Management's (AIM's) tool for project and information management, data analysis and document control. DEN will be responsible for providing the licensing and training for PMIS.

**II-34 Equal Employment Opportunity**

- A. D.R.M.C. Article III, Division 2 of Chapter 28 applies to this contract. It is the policy of the City to provide equal opportunity in employment without regard to race, color, creed, sex, national origin, religion, marital status, or political opinion or affiliation. It is hereby deemed and declared to be for the public welfare and in the best interest of the City to require bidders, contractors and subcontractors soliciting and receiving, directly or indirectly, compensation from or through the City, for the performance of such contracts, to meet certain affirmative action and equal employment opportunity requirements. Additionally, contractors and subcontractors that hold any contracts which are federally assisted shall be required to adhere to the Department of Labor's Contract Compliance program under Executive Order No. 11246 as defined in the regulations of the Secretary of Labor at 41 C.F.R. Chapter 60-4.
- B. After the Notice to Apparent Low Bidder has been issued, the Apparent Low Bidder shall submit the following to DSBO:
  - a. A statement that the bidder shall implement the affirmative action steps set forth in the Rules and Regulations and Bid Conditions of the Manager of Public Works pertaining to Equal Employment Opportunity, attached hereto, or the bidder's affirmative action plan which meets these requirements, and
  - b. A projection of its anticipated workforce for this contract on the attached "EEO Questionnaire." Both of these submittals are required before DSBO will approve the Notice to Proceed.
- C. The bidder who is awarded this contract shall comply with the provisions and requirements, including the goals of minority and female participation and specific affirmative action steps, set forth in the Rules and Regulations and Bid Conditions of the Manager of Public Works pertaining to Equal Employment Opportunity, as said rules and regulations may be amended or readopted from time to time by the Manager of Public Works or the Director of the Division of Small Business Opportunity.

**II-35 Conflicts of Interest**

An organizational conflict of interest occurs when, because of the relationship between two organizations or one organization (including its subsidiaries or related organizations) performing or proposing for multiple scopes of work, there is or could be in the future a lack of impartiality, impaired objectivity, an unfair advantage over one or more firms competing for the work, or a financial or other interest in other scopes of work.



If the Bidder currently has existing contracts with the City for work at DEN, including any contracts held by Bidder's parent, affiliates, or subsidiary corporations, this could pose a conflict of interest and could place your Bid in jeopardy of being rejected for conflict of interest. If the Bidder believes a conflict of interest may exist but can be mitigated, please describe the steps it proposes that it will take to mitigate the conflict.

If the City identifies a conflict of interest that is not identified by the Bidder in its response, the City may find the Bidder to be non-responsive. If the City identifies a conflict during the course of the contract and the Bidder failed to disclose such conflict, the City may terminate the contract for cause or convenience at the discretion of the City.

**II-36 Title VI Solicitation Notice**

The City, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders or offerors that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

**II-37 Confidentiality of Records**

Documents submitted pursuant to this RFP will be subject to the Colorado Open Records Act, C.R.S. §§ 24-72-201, *et seq.* Information clearly marked as confidential and proprietary will be kept confidential by City, unless otherwise provided by law. City will attempt to notify the Proposer if a request is made for pages of documents clearly marked as confidential and proprietary so that the Proposer may take any action it deems necessary to defend the request. The Proposer, not the City, shall be the entity responsible for defending against Colorado Open Records Act disclosures for any records claimed by the Proposer to be confidential and proprietary.

**III. PREPARATION OF BID****III-1 Preparation of Bid**

The Bid shall be submitted in accordance with and meet all requirements set forth in the Bid Forms, which are attached hereto. The Bidder shall fill in all blank spaces in the applicable Bid Forms and initial all interlineations, alterations, or erasures in its Bid. The Bidder shall not delete, modify, or supplement the printed matter on the forms which are included in "Attachment 1, Bid Forms" or make substitutions thereon. The Bidder's completed Bid Forms shall constitute its Bid. It shall be conclusively presumed that the Bidder did, before submitting a Bid, read all addenda, posted decisions and other information items relevant to the IFB that appeared on the BidNet Website.

An authorized representative of the Bidder shall execute Attachment 1 of its Bid Forms – the "Bid Letter."

- a. If the Bidder is a corporation, it shall upon execution of the Contract provide a certificate from the Secretary of State, showing that it is qualified to do business in the State of Colorado. Please call the Secretary of State for Colorado at (303) 894-2200 for information on obtaining such certification.
- b. If the Bidder is a partnership, the Bidder must include with its Bid evidence satisfactory to DEN that the partner signing the Bid has the authority to do so.
- c. If the Bidder is a joint venture, the Bidder shall submit with its Bid a notarized copy of the joint venture agreement. That agreement must describe the scope and amount of work each participant will perform and contain a provision that each participant will be jointly and severally liable to DEN for completing all the work and to third parties for all duties, obligations and liabilities which arise out of the joint venture's performance of the work.

**III-2 Completing and Signing Bid Forms**

Each Bidder shall submit the following, completed, and executed in accordance with the Contract Documents:

- a. the Bid Forms, including any additional forms required by any addendum;
- b. the Bidder's Bid Bond or Bid Guarantee in conformance with II-31; and
- c. the Diversity and Inclusivity in City Solicitations

The Bidder must complete the Bid Forms by legibly writing or printing in ink, words, or figures, or both if required all the bidder's offered prices for performing the work. All blank spaces which require a response of the bidder must be properly filled in. In filling out the Bid Forms, the Bidder shall avoid making changes to the extent possible, but, if changes are necessary, any interlineation, white outs, or erasures shall be initialed.

For any contracts containing unit prices, the Bidder shall specify in the Bid Forms a unit price for each item for which a quantity is given and shall write in figures the products of the respective unit prices and quantities in the "Amount" column provided for that purpose.

Each Bidder must sign the Bid Forms and give the Bidder's current business address and contact information as noted. If an individual, the signature must be of the individual offering the bid; if a partnership, the signature must be that of a general partner; and if a joint venture, by each joint venture

participant in their individual capacity as a corporation, partnership, or individual; if a corporation, both the president or a vice president and the secretary must sign and the seal of the corporation must be affixed. Signatures of other persons may be acceptable if the Bid contains evidence satisfactory to the CEO to prove that the other persons are authorized to bind the Bidder.

Bidder shall submit its Bid Data Information in accordance with the format shown on each of the Bid Data Forms. Bidder shall prepare and use as many sheets as are necessary to provide the information required. Bidder shall ensure that each page of its Bid Data is completed and properly identified with the Bid Data form name, Bidder's name, and page number.

**IV. EVALUATION OF BIDS****IV-1 BASIS FOR SELECTING THE APPARENT LOW BIDDER**

The selection of the Apparent Low Bidder will be made on the basis of the lowest responsive bid by a qualified bidder whose bid complies with all of the requirements prescribed herein. The lowest bidder shall be determined by the Total Base Bid Amount. This selection shall be subject to the approval of such resulting contract in accordance with the Charter and ordinances of the City and County of Denver.

If add alternates are listed in the Bid Documents, the Apparent Low Bidder will be chosen based solely on the lowest responsive Total Base Bid Amount.

**IV-2 SUBMITTAL OF BIDS**

There will be no live bid opening for this project. Bids shall be submitted electronically via the BidNet website at:

<https://www.bidnetdirect.com/colorado/cityandcountyofdenverdepartmentofaviation>

Following electronic submittal of bid (including a scan of the bid bond), the original bid bond must be received by mail within seven (7) calendar days of bid opening date to be considered part of a responsive bid. Bid bonds shall be mailed to Denver International Airport, 8500 Peña Blvd., Denver, CO 80249-6340, Attention: Diane Folken. At this time, bid bonds cannot be hand-delivered in person.

**IV-3 UNACCEPTABLE BIDS**

The City will not accept Bids from bidders in arrears to the City upon debt or contract, or which are defaulters (as surety or otherwise) upon any obligation to the City, or that are deemed irresponsible or unreliable by the CEO. A history or pattern of litigation against the City by any bidder, proposed subcontractor, interested party, or any person, firm, or corporation affiliated with any bidder, among other items, will be considered by the CEO in determining the responsibility and reliability of bidders. Bidders may be required to submit satisfactory evidence that they have a practical knowledge of the particular work bid upon and that they have the necessary financial resources to complete the proposed work.

**IV-4 ONLY ONE BID ACCEPTED**

The City will accept only one Bid for the same work from any one bidder. This includes Bids that may be submitted under different names by one firm or corporation. Evidence of collusion among bidders shall be grounds for exclusion of any bidder who is a participant in any such collusion.

**IV-5 CONSIDERATION OF BIDS**

After the Bids are opened and read and any discrepancies have been reviewed, bids will be compared based on the Total Contract Bid Amount written on Attachment 1, Page 1 of the Bid Letter.

If a discrepancy exists between a price or amount written in words and the price or amount written in figures, the price or amount written in words shall govern, except that in the case where a price or amount shown in figures has been crossed out and replaced with a new, legible, initialed figure, the initialed figure shall govern.

Any bid discrepancies which the City corrects in accordance with the general rules described above shall be corrected with the understanding that the Apparent Low Bidder waives any claims against the City because of the bidder's mistakes in its bid.

The City reserves the right to waive informalities, to reject any and all bids, and to advertise for new bids where it is in the best interest of the City. The City also reserves the right to negotiate terms of the Contract.

**IV-6 INFORMAL AND UNBALANCED BIDS**

Bids shall be considered informal and may be rejected for the following reasons:

- a. If the bid is on a form other than the Bid Forms furnished by the City, or if the form is altered or any part thereof is detached.
- b. If there are unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the bid incomplete, indefinite, or ambiguous.
- c. If the bidder fails to acknowledge in the bid receipt of any or all addenda current on the date of opening of bids.
- d. If the bid does not contain a unit price or lump sum amount for each item listed except in the case of authorized alternative items.
- e. If there is an interlineation, white out, or erasure in the Bid Forms.
- f. If the bid is unbalanced so that (1) each pay item does not carry its own proportion of cost, or (2) any pay item contains an inadequate or unreasonable price.

**IV-7 NOTICE TO APPARENT LOW BIDDER – EXECUTION OF CONTRACT**

The Apparent Low Bidder will be given written notice of such status on the form included in the Bid Documents within ninety (90) days from the date of opening of bids.

The Apparent Low Bidder shall execute the contract and return it to the City along with the required bonds and insurance forms within ten (10) business days from and including the date of the Notice to Apparent Low Bidder. When the executed contract and the required bonds and insurance certificates are received, approval for the City to contract with the Apparent Low Bidder shall be sought in accordance with the Charter of the City and County of Denver. Such notice shall not create any rights in the Apparent Low Bidder to any contract with the City.

**END OF INSTRUCTIONS TO BIDDERS**

**V. SPECIAL CONDITIONS****SC-1 CONSTRUCTION CONTRACT GENERAL CONDITIONS**

The Construction Contract General Conditions which constitute a part of the Contract Documents are set forth in a separately published document, entitled "City and County of Denver, Department of Aviation and Department of Public Works, Standard Specifications for Construction, General Contract Conditions," 2011 Edition, the Table of Contents to which is bound herein (which may be informally referred to as the Yellow Book). The General Conditions book is available for purchase for \$12.00 per copy at the following locations during the business hours stated, Monday through Friday, excluding holidays:

Office of the Cashier  
Wellington E. Webb Municipal Office Building, 2nd Floor  
201 West Colfax Avenue  
Denver, Colorado, USA 80202  
7:30 a.m. to 4:30 p.m.

The General Conditions are also available on the City and County of Denver website at:

<https://www.denvergov.org/content/denvergov/en/contract-administration/contractor-resources/general-contract-conditions.html>

**SC-2 DRAWINGS AND SPECIFICATIONS TO BE FURNISHED BY THE CITY**

The City will provide the following Contract Documents to the Contractor in electronic format at no expense to the Contractor:

1. Contract Drawings dated March 22, 2023
2. Division 01 Specifications dated March 22, 2023
3. Division 02 Project Special Provisions dated March 22, 2023

Additional copies of the foregoing documents will be furnished to the Contractor at the Contractor's expense. The Contractor will be responsible for supplying all subcontractors with copies of the Contract Documents at its expense.

If Sensitive Security Information ("SSI") is provided to the Contractor, the Contractor shall be required to comply with Department of Aviation, Standard Policies and Procedures No. 6003, "Contractor Protection of Sensitive Security Information," or its successor, and 49 C.F.R. § 1520, or its successor.

The City will not supply any copies of the General Contract Conditions to the Contractor at City expense.

**SC-3 REVISIONS TO G.C. 201**

The second sentence of General Condition 201 is amended to read: "The unit responsible for this management and control is the Airport Infrastructure Management Office under the supervision of the Senior Vice President for Maintenance and Airport Infrastructure Management."

**SC-4 CITY LINE OF AUTHORITY AND CONTACTS**

In accordance with General Condition 214, the City's line of authority for administration of this Contract is:

Chief Executive Officer (CEO). Executive Office, 9th Floor, Airport Office Building, 8500 Peña Boulevard, Denver, CO 80249. Any reference to the Manager of Aviation shall also mean Chief Executive Officer, Department of Aviation (CEO).

Executive Vice President – Chief Construction and Infrastructure Officer (EVP-CCIO) who reports to the CEO. Airport Infrastructure Management office, 9th Floor, Airport Office Building, 8500 Peña Boulevard, Denver, CO 80249.

Senior Vice President - Airport Infrastructure Management (SVP-AIM) who reports to the COO. Airport Infrastructure Management office, 10th Floor, Airport Office Building, 8500 Peña Boulevard, Denver, CO 80249.

Director of Infrastructure and Quality Assurance, reports to the SVP-AIM. The Project Manager reports to the Director of Infrastructure and Quality Assurance. Airport Infrastructure Management Division, 7<sup>th</sup> Floor, Airport Office Building, 8500 Peña Boulevard, Denver, CO 80249.

Project Manager, the City representative who has day to day administrative responsibility of this Contract, and who reports to the SVP-AIM. All notices, requests, pay applications (pursuant to G.C. 902), and other correspondence from the Contractor shall be sent to the assigned Project Manager unless otherwise provided in this Contract. The Project Manager for this Contract is: Daniel Liddle, Airport Infrastructure Management Office, 7th Floor, Airport Office Building, 8500 Peña Boulevard, Denver, CO 80249, phone 303-342-2200.

The CEO may from time to time substitute a different City official as the designated “SVP-AIM” hereunder, and any such change will be effective upon the issuance of written notice to the Contractor which identifies the successor SVP-AIM. The SVP-AIM may from time to time change the assigned Project Manager, and any such change will be effective upon the issuance of written notice to the Contractor which identifies the successor Project Manager.

#### **SC-5 CONTRACTOR PERFORMANCE; SUBCONTRACTING**

With respect to General Condition 501, no more than seventy percent (70%) of the work may be subcontracted. If it is determined to be in the City’s best interest, this percentage may be modified throughout the course of the project by the SVP-AIM.

#### **SC-6 COOPERATION WITH OTHERS**

The Technical Specifications describe the constraints on the physical work site areas. These descriptions are not exhaustive, and the Contractor is required to coordinate its activities and work as may be required to meet FAA or City requirements while performing work on DEN.

Without limiting the foregoing, contracts administered by the City involve or may involve work overlapping or adjoining the Work under this Contract and may be prosecuted concurrently with the Work performed under this Contract. There may also be other adjoining or overlapping contracts which are not listed.

#### **SC-7 PROSECUTION AND COMPLETION OF THE WORK:**

The Work to be performed under the Contract is described in the Technical Specifications and Contract Drawings. The Contractor shall complete the Work within 341 consecutive calendar days from Notice to Proceed.

The Work to be performed under the Contract may be divided into the Milestone Areas which are described in the Technical Specifications or Contract Drawings. The Contractor shall complete the work included within these areas within the number of days set forth by the Project Manager.

<u>Milestone</u>	<u>Date of Completion (or Days from NTP)</u>
Substantial completion: Gun Club Widening	172 days from NTP
Substantial completion: Remaining Work	285 days from NTP

**SC-8 LIQUIDATED DAMAGES**

If the Contractor fails to achieve Substantial Completion of the Work within the Contract Time, the Contractor shall be liable to the City for liquidated damages at the rate of Two Thousand, Five Hundred Dollars (\$2,500.00) per day until substantial completion is achieved.

Article IV of the Contract and General Condition 602 cover payment and withholding of liquidated damages.

**SC-9 FACILITY SECURITY AND PERSONNEL ACCESS**

The Contractor shall conduct all its activities at the Airport in compliance with the Airport security system rules and regulations, which are administered by the Airport Operations Division. The Contractor shall obtain the proper access authorizations for its employees, subcontractors, and suppliers (i.e., Badges and Permits), and shall be responsible for such persons' compliance with all the Airport rules and regulations. A copy of the Contractors' section of the Airport Security rules and regulations are available for Contractor review at the Airport Access Services Office, Concourse A East Subcore, 4th Level. Persons regularly entering the construction areas must obtain personnel access badges from the Airport Access Services Office and must display badges, at all times, upon entering the construction, restricted and sterile areas of the airport. Any employee, subcontractor or supplier who violates such rules may be subject to revocation of his access authorization, including authorization for access to the construction site and all other restricted and sterile areas.

The security status of the Airport is subject to change without notice. These contract Special Conditions are applicable to the current security status of the Airport. Should the security status of the Airport change at any time during the term of this Contract, a written notice shall be issued to the Contractor detailing all applicable security modifications from the airport's current security status. The Contractor shall take **immediate steps** to comply with those security modifications as directed in the written notice.

If these security modifications involve any additional project cost, the Contractor shall submit a Contractor Change Request in accordance with the General Conditions for the additional cost. The Contractor Change Request shall outline in specific detail the effects of the security modifications on the Contractor's performance of the Contract and shall provide a detailed cost breakdown for each item for which the Contractor is requesting reimbursement.

The Contractor shall return to the City, at contract completion or termination, or upon demand by the City, all access keys issued to it by the City to all areas of the Airport. If the Contractor fails to return any such key or keys at contract completion or termination or upon demand by the City, the Contractor shall be liable to the City for all the City's costs, including the City's labor costs for employees, incurred in re-coring doors and any other work which is required to prevent compromise of the Airport security system. In order to collect such costs hereunder, the City may withhold funds in such amount from any amounts due and payable to the Contractor under this Contract.

The construction of all the Project/Task Items that involve the breaching of any airport perimeter security boundary or continued access to restricted access rooms or areas will require the posting of authorized contract security personnel to maintain required security controls. The Contractor's **Total Contract BID Amount** shall include the cost of providing security services to maintain control and supervision of any and all airport perimeter security boundary breaches and for the duration of work activities where access to restricted areas is required and until the airport perimeter security boundaries are reestablished.

When security boundaries are opened for any reason, the Contractor must maintain one hundred percent (100%) control and supervision for the entire time that the openings are present to prevent unauthorized access to the secure / restricted access areas.



**THE IMPORTANCE OF THIS SPECIAL CONDITION CANNOT BE OVER-EMPHASIZED. SEVERE FINANCIAL PENALTIES AS WELL AS CONTRACT TERMINATION COULD RESULT IF AIRPORT PERIMETER SECURITY REQUIREMENTS ARE NOT STRICTLY FOLLOWED. THE REQUIREMENT TO PROVIDE ONE HUNDRED PERCENT (100%) CONTROL AND SUPERVISION OF BREACHES IN THE AIRPORT'S PERIMETER SECURITY BOUNDARY IS ABSOLUTE. AT NO TIME, DURING WORK AND NON-WORK HOURS SHALL ANY BREACHES IN THE AIRPORT'S SECURITY PERIMETER BE UNSUPERVISED AND / OR UNSECURED.**

For off-hours of construction, the Contractor may choose to erect a temporary wall to close all perimeter openings. The wall construction shall be of sufficient materials and strength to prevent access to the airport's Sterile/Restricted Areas. The Contractor shall submit for review and approval, the details, and materials for the temporary closure of security perimeter breaches for review and approval.

The Contractor will provide contract security guard services to maintain supervision of these openings. The security services must provide coverage to allow for lunch breaks, comfort breaks and etc. The security services **must** be obtained from the following contract security guard company:

Covenant Aviation Security, LLC  
1112 W. Boughton Road  
Suite 355  
Bolingbrook, IL 60440

DEN Contact:  
Covenant Management  
720-222-4774

All security guards provided for this project must have a Denver Airport SIDA Badge.

The DEN Security Guard Contractor may change between the bidding or Bid phase of this contract from Notice to Proceed to closure of all security perimeter breaches. The Contractor shall maintain a contractual relationship with the Security Guard Contractor holding the most current contract with Denver International Airport.

The Contractor shall continue to provide security of these areas until such time that the breaches in the airport's security perimeter have been permanently secured.

The Contractor shall submit a written security plan for approval to the Director of Airport Security prior to the start of construction on any work where a breach of the perimeter security boundaries is required.

#### **SC-10 CONSTRUCTION ACCESS**

The work site is located at Gun Club Road between 75<sup>th</sup> and 78<sup>th</sup> Avenue. The Contractor shall have access to the work site via public roadways. The Contractor is responsible for ensuring all of the Contractor's and Subcontractor's personnel have the ability to access and locate the areas of work where the scope is to be performed without additional escorting or supervision from DEN.

The City will not provide parking spaces for the Contractor's employees or subcontractor employees at the Airport. Arrangements for transportation and parking for all of its and its subcontractors' employees will be the responsibility of the Contractor. The Total Contract Bid Amount or Contract Amount shall include any and all costs associated with the Contractor's and subcontractors' employee parking. Information about parking facilities and charges is available from the Airport Parking Office. Refundable deposits are required for all parking passes.

Unless specifically required by the Contract Documents, the Contractor shall install no fences or other physical obstructions on or around any project work area without the approval of the City.

**SC-11 VEHICLE PERMITTING**

Vehicle access on the Airport Operation Area ("AOA") is controlled by and requires permission from the Airport Access Services Office. It is not anticipated that the Contractor will need to operate vehicles on the AOA to perform the Work. Only direct construction support vehicles and/or equipment will be allowed in the contractor's work areas or sites.

**SC-12 VENDORS AND SUPPLIERS**

The Contractor shall provide the Project Manager's office with a list of its equipment/material vendors and suppliers. Vendors or suppliers shall access the construction work areas via the Contractor's access route, described in SC-10 above. All delivery vehicles are subject to search.

**SC-13 COMMUNICATION DEVICES**

Any site communications devices, mobile communication devices or internet data devices used at DEN must be approved by DEN Technologies.

**SC-14 USE, POSSESSION OR SALE OF ALCOHOL OR DRUGS**

The Contractor and its officers, agents, and employees shall cooperate and comply with the provisions of Executive Order No. 94 and Attachment A thereto concerning the use, possession, or sale of alcohol or drugs. Violation of these provisions or refusal to cooperate with implementation of the policy can result in the City's barring the Contractor from City facilities or participating in City operations.

**SC-15 ATTORNEYS' FEES**

Colorado Revised Statute 38-26-107 requires that in the event any person or company files a verified statement of amounts due and unpaid in connection with a claim for labor and materials supplied on this project, the City shall withhold from payments to the Contractor sufficient funds to insure the payment of any such claims. Should the City and County of Denver be made a party to any lawsuit to enforce such unpaid claims or any lawsuit arising out of or relating to such withheld funds, Contractor agrees to pay to the City its costs and a reasonable attorney's fee. Because the City Attorney Staff does not bill the City for legal services on an hourly basis, Contractor agrees a reasonable fee shall be computed at the rate of two hundred dollars (\$200) per hour of City Attorney time.

**SC-16 INSURANCE REQUIREMENTS**

In accordance with the provisions of Title 16 of the General Conditions, the minimum insurance requirements for this contract are set forth in Section II-15 of the Instructions to Bidders. The Contractor specifically agrees to comply with each condition, requirement or specification set forth in the attachment for each required coverage during all periods when the required coverages are in effect.

Contractor and sub-contractors shall procure and maintain until all of their obligations have been discharged, including any warranty periods under this Contract are satisfied, required insurance against claims for injury to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees, or sub-contractors.

The insurance requirements herein are minimum requirements for this Contract and in no way limit the indemnity covenants contained in this Contract.

The City and County of Denver 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, his agents, representatives, employees, or sub-contractors. The Contractor shall assess its own risks as it deems appropriate and/or prudent, maintain higher limits and/or broader coverages. 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.

Contractor shall furnish the City and County of Denver with certificates of insurance (ACORD form or equivalent approved by CCD) as required by this Contract. The certificates for each insurance policy are to be signed by a person authorized by the insurer to bind coverage on its behalf.

All certificates and any required endorsements are to be received and approved by the City before work commences. Each insurance policy required by this Contract must be in effect at or prior to commencement of work under this Contract and remain in effect for the duration of the project. Failure to maintain the insurance policies as required by this Contract or to provide evidence of renewal is a material breach of the Contract. All insurance coverages for sub-contractors shall be subject to the minimum requirements identified in the Exhibit. All sub-contractors' certificates and endorsements shall be received and approved by the Contractor before work commences. The City reserves the right to request copies of these certificates at any time.

All certificates required by this Contract shall be sent directly to [ContractAdminInvoices@flydenver.com](mailto:ContractAdminInvoices@flydenver.com). The City project/contract number and project description shall be noted on the certificate of insurance. The City reserves the right to require complete, certified copies of all insurance policies required by this Contract at any time.

The parties hereto understand and agree that the City and County of Denver, its officers, officials and employees, are relying on, and do not waive or intend to waive by any provisions of this Contract, the monetary limitations or any other rights, immunities and protections provided by the Colorado Governmental Immunity Act, §§ 24-10-101 - 120, C.R.S., or otherwise available to the City and County of Denver, its officers, officials and employees.

#### **SC-17 SUBCONTRACTOR RELEASES**

The release form referred to in General Condition 907 is attached to this Contract. It is entitled "Denver International Airport Partial Release."

#### **SC-18 ADDITIONAL AFFIRMATIVE ACTION REQUIREMENTS, FEDERAL PROVISIONS**

This contract is subject and subordinate to the terms, reservations, restrictions, and conditions of any existing or future agreements between the City and the United States, the execution of which has been or may be required as a condition precedent to the transfer of federal rights or property to the City for airport purposes, and the expenditure of federal funds for airport purposes. The "Federal Requirements" section attached hereto is made a part of this Contract.

#### **SC-19 ESTIMATED QUANTITIES OF UNIT PRICED ITEMS**

The "total estimated quantity" of each unit price item as stated on the bid schedules shall be the estimated quantity which is used to determine the percentage of change in such item for purposes of G.C. 1104.7.

#### **SC-20 REVISIONS TO G.C. 1102**

G.C. 1102.2 is amended by replacing the phrase "Change Request" in all its occurrences in such G.C. with the phrase "Change Notice."

G.C. 1102.3 is amended by replacing the phrase "Field Order/Change Order Directive" in all its occurrences in such G.C. with the phrase "Change Order Directive."

#### **SC-21 LISTING OF ACCEPTABLE MANUFACTURERS**

The Technical Specifications list "Acceptable Manufacturers" for certain products. Such listing identifies manufacturers of certain products which have been determined by a preliminary review to be able to meet the basic product and/or system technical requirements. The listing is not intended to provide a blanket endorsement or acceptance of the manufacturer's specified products or product line. All products from listed manufacturers

must meet the detailed requirements of the Technical Specifications. Products that do not meet all detailed Technical Specifications are not acceptable and will be rejected, regardless of whether the manufacturer was listed as "acceptable." The Contractor is responsible for determining the acceptability of all products under the Technical Specifications prior to submission of products for approval.

#### **SC-22 ACCESSIBLE PARKING SPACES, ACCESS AISLES AND ROUTES OF TRAVEL**

If any Work is performed in or adjacent to parking facilities at the Airport, the Contractor is responsible for compliance with this SC-30. "Accessible" parking spaces and access aisles as used in this SC-30 mean parking spaces and access aisles which are accessible for, and reserved for use by, persons with disabilities. These parking spaces and access aisles are designed and built to standards established by federal regulations implementing the Americans with Disabilities Act of 1990 ("ADA") and are marked by signage. "Accessible routes of travel" as used herein means routes through parking facilities which comply with ADA accessibility standards, including degree of slope and absence of obstructions.

Accessible routes of travel and accessible parking spaces and access aisles must be kept free of obstructions and construction debris at all times. No accessible parking spaces or access aisles or accessible routes of travel shall be relocated, blocked, or rendered unusable unless the contractor has obtained specific advance approval in writing for such actions from the airport's ADA Compliance Officer.

When prosecution of the Work requires that accessible spaces be temporarily blocked, those accessible spaces and their access aisles shall be temporarily relocated to another location as close as possible to an accessible building entrance. Temporary signage that identifies these parking spaces and access aisles as reserved for the handicapped shall be installed, and the accessible route shall be clearly marked as required.

Before blocking or relocating accessible parking spaces or accessible routes of travel, the contractor must obtain written approval from the DEN ADA Compliance Officer, by submitting a completed request form, which will be provided to the Contractor by the Project Manager at the preconstruction meeting if it is not included as a standard form in Section 019990 of the Technical Specifications. The request shall include the location of alternative spaces and/or routes, and specifications of the temporary signage to be used. Work shall not proceed without this approval.

If a vehicle is parked in any accessible space which is either temporary or approved to be relocated, the contractor will not remove signage or take any other action which would allow the access aisle for such parking space to be blocked. Such actions must be postponed until the parking space is no longer occupied.

#### **SC-23 SUBCONTRACTOR PAYMENTS AND SUBCONTRACTOR RELEASES – REQUIRED USE OF THE B2G CONTRACT MANAGEMENT SYSTEM**

The Contractor is required to use the City B2G Contract Management System to report all subcontractor payments and shall adhere to the City's Procedure for Reporting Subcontractor Payments. It is the Contractor's obligation to ensure that complete subcontractor information is entered into the B2G System prior to submission of the first application for payment in order to avoid any delays in payment. The Contractor shall, prior to the submission of each subsequent invoice, ensure payments to subcontractors have been entered into the B2G System, including subcontractor confirmation of amount of payment received, for services performed during the prior billing period.

#### **SC-24 PAYMENTS TO CONTRACTORS**

The Contractor recognizes and agrees that applications for payment shall be submitted using the Textura® Payment Management System (PPM System), which will also be the payment mechanism to disburse payments to sub-contractors used on this Project. For more information, please refer to Division I, Technical Specifications.

The Contractor further agrees that, to the fullest possible within the TPM System, the City shall be entitled to all non-Confidential records, reports, data, and other information related to the project that are available to Contractor through the TPM System, including, but not limited to, information related to Contractor and subcontractor billings. To that end, Contractor agrees that it will activate any available settings within the TPM System that are necessary to grant the City access to such non-Confidential information related to the contract and the project. Applications for payment shall be based on the Contract Unit Prices or the approved Schedule of Values described in GC 903.1

In accordance with General Contract Condition 902, PAYMENT PROCEDURE, the party(ies) responsible for review of all Pay Applications shall be:

**Agency/Firm**

DEN Division CA

DEN Division PM

DEN Division Director

DEN Contract Procurement CA

CCD Denver Prevailing Wage

In accordance with General Contract Condition 906, APPLICATIONS FOR PAYMENT, each Application submitted shall include the following:

- a. The estimate of Work completed shall be based on the approved schedule of values or unit prices, as applicable, and the percent of the Work complete.
- b. Each Application for Payment shall include each and every independent subcontractor's payroll information including pay dates and pay amounts.
- c. The Contractor shall also submit to the Auditor and other appropriate officials of the City in a timely fashion, information required by General Contract Condition 1004, REPORTING WAGES PAID.

In accordance with General Contract condition 907, RELEASES AND CONTRACTORS' CERTIFICATION OF PAYMENT, Applications for Payment must be accompanied by a completed Partial or Final Claim Release Form, as appropriate, from EACH subcontractor and supplier, **AND** the Contractor's Certification of Payment Form.

**SC-25 CONFIRMATION OF LAWFUL EMPLOYMENT**

General Condition 311 is deleted in its entirety and replaced by:

**311 No employment of a worker without authorization to perform work under the agreement.**

1. This Agreement is subject to Division 5 of Article IV of Chapter 20 of the Denver Revised Municipal Code, and any amendments (the "Certification Ordinance").
2. The Contractor certifies that: At the time of its execution of this Agreement, it does not knowingly employ or contract with a worker without authorization who will perform work under this Agreement, nor will it knowingly employ or contract with a worker without authorization to perform work under this Agreement in the future.

- a. It will participate in the E-Verify Program, as defined in § 8-17.5-101(3.7), C.R.S., and confirm the employment eligibility of all employees who are newly hired for employment to perform work under this Agreement.
  - b. It will not enter into a contract with a subconsultant or subcontractor that fails to certify to the Contractor that it shall not knowingly employ or contract with a worker without authorization to perform work under this Agreement.
  - c. It is prohibited from using the E-Verify Program procedures to undertake pre-employment screening of job applicants while performing its obligations under this Agreement, and it is required to comply with any and all federal requirements related to use of the E-Verify Program including, by way of example, all program requirements related to employee notification and preservation of employee rights.
  - d. If it obtains actual knowledge that a subconsultant or subcontractor performing work under this Agreement knowingly employs or contracts with a worker without authorization, it will notify such subconsultant or subcontractor and the City within three (3) days. The Contractor shall also terminate such subconsultant or subcontractor if within three (3) days after such notice the subconsultant or subcontractor does not stop employing or contracting with the worker without authorization, unless during the three-day period the subconsultant or subcontractor provides information to establish that the subconsultant or subcontractor has not knowingly employed or contracted with a worker without authorization.
  - e. It will comply with a reasonable request made in the course of an investigation by the Colorado Department of Labor and Employment under authority of § 8-17.5-102(5), C.R.S., or the City Auditor, under authority of D.R.M.C. 20-90.3.
3. The Contractor is liable for any violations as provided in the Certification Ordinance. If the Contractor violates any provision of this section or the Certification Ordinance, the City may terminate this Agreement for a breach of the Agreement. If this Agreement is so terminated, the Contractor shall be liable for actual and consequential damages to the City. Any termination of a contract due to a violation of this section or the Certification Ordinance may also, at the discretion of the City, constitute grounds for disqualifying the Contractor from submitting bids or proposals for future contracts with the City.

**VI. ATTACHMENT 1, BID FORMS****Attachment 1, Part 1 Bid Acknowledgement Letter**

CONTRACT NAME: GUN CLUB ON-RAMP TO PEÑA BOULEVARD

Contract No.: 202366978

Bid Letter

BIDDER \_\_\_\_\_

Chief Executive Officer  
City and County of Denver  
Business Management Services (Procurement) Office  
Airport Office Building, Room 8810  
Denver International Airport  
8500 Peña Boulevard  
Denver, Colorado 80249

This letter is in response to the Notice of Invitation for Bids first published on March 22, 2023, for Contract No. 202366978, Denver International Airport, Gun Club On-Ramp to Peña Boulevard.

This contract is for the construction of a new interchange on-ramp at Gun Club Road and Peña Boulevard inbound and other associated roadway improvements within the area. Gun Club Road will be widened to the east and restriped to accommodate a new left turn lane onto the new ramp. The roadway construction will be a 10.5-inch full depth Portland cement concrete pavement over an aggregate base course. The scope of work will include, but is not limited to, demolition, concrete paving, general construction in support of concrete paving work, earthwork, stormwater drainage conveyance, traffic signal construction, erosion control and revegetation, traffic control, and existing roadway/pavement tie-ins.

The undersigned Bidder declares that it has carefully examined the location of the proposed work and has carefully read and examined all of the Contract Documents which include, but are not limited to, the Contract Drawings, Technical Specifications, Construction Contract General Conditions, Special Conditions, Instruction to Bidders, and EEO provisions, and hereby proposes to furnish all labor, materials, equipment, tools, transportation and services, and to discharge all duties and obligations necessary and required to perform and complete the Work as required in the Contract Documents which are provided herewith and by this reference made a part hereof for the prices shown in the bid forms and totaled below:

TOTAL BASE BID AMOUNT: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ Dollars and \_\_\_\_\_ Cents

(\$ \_\_\_\_\_).

The undersigned acknowledges receipt, understanding and full consideration of the following addenda to the Contract Documents:

Addenda Nos.: \_\_\_\_\_

The undersigned agrees that this Bid is a firm offer to the City to perform and complete the Contract described above which cannot be withdrawn for one hundred twenty (120) calendar days after the bids are opened or until after a contract for the work described in these bid documents is fully executed by the City, whichever date is earlier.

The undersigned Bidder hereby agrees to appear at Denver International Airport, Business Management Services Office, Room 8810, Airport Office Building, at any time within ten (10) business days from the date of a written notice from the CEO to do so, mailed, emailed, or faxed to the business address of Bidder and at that time the Bidder shall: (1) deliver an executed Contract which conforms with this bid; (2) furnish the required performance and payment bonds in the sum of the Total Contract Bid Amount shown above, executed by a surety company acceptable to the CEO; and (3) furnish the required insurance documents.

Enclosed herewith is a bid guarantee, as defined in the Instructions to Bidders, in the amount of which bid guarantee the undersigned Bidder agrees is to be paid to and become the property of the City as liquidated damages should the bid be considered to be the best by the City and the undersigned Bidder notified that it is the Apparent Low Bidder and it fails to enter into contract in the form prescribed and to furnish the required performance and payment bonds and evidences of insurance within ten (10) business days as stipulated above.

Attached and incorporated herein are the proposed Schedule of Prices and Quantities and Bid Data Forms. All of the forms must be completed. Bidder acknowledges that the City may incorporate, at its option, any or all of the data submitted by the Bidder into a contract arising out of this Bid.

The undersigned Bidder acknowledges the right of the City to waive informalities in the bids, to reject any or all bids submitted, and to re-advertise for bids.

The undersigned certifies that it has examined and is fully familiar with all of the provisions of the Contract Documents and is satisfied that they are accurate; that it has carefully checked all words and figures and all statements made in these Bid forms; and that it has satisfied itself with respect to the actual site conditions and the nature and location of the Work, the general and local conditions which may be encountered in the performance of the Work, and other matters which in any way affect the Work or the cost thereof.

[CERTIFICATION AND SIGNATURE ON FOLLOWING PAGES]



This bid is submitted upon the declaration that neither, I (we), nor, to the best of my (our) knowledge, none of the members of my (our) firm or company have either directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this Bid.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

BUSINESS ADDRESS OF BIDDER: \_\_\_\_\_

City, State, Zip Code: \_\_\_\_\_

Telephone Number of Bidder: (\_\_\_\_) \_\_\_\_\_

Fax Number of Bidder: (\_\_\_\_) \_\_\_\_\_

Social Security or Employer Id. No. of Bidder: \_\_\_\_\_

Email Address: \_\_\_\_\_

SIGNATURE OF BIDDER:

PRINT NAME OF BIDDER:

Attest:

(Corporate Seal)

\_\_\_\_\_

Secretary

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

President

If no disclosure required in accordance with II-14, please sign affirmation statement.

Date \_\_\_\_\_

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**Attachment 1, Part 3 Contract Information**

1. Name of Bidder/Contractor: \_\_\_\_\_
2. Type of business entity: \_\_\_\_\_  
NOTE: If bidder is a partnership or joint venture, give full names of all partners or joint venturers. Bid must be signed by all joint venturers. If bidder is a limited liability company, bid must be signed by authorized manager (may be signed by member-manager if LLC is organized to allow management by members).
3. Prequalified by City and County of Denver as Construction Contractor : Categories: \_\_\_\_\_  
Monetary Limit: \_\_\_\_\_
4. Address of Contractor: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Telephone: \_\_\_\_\_  
Email Address: \_\_\_\_\_
5. Established where and when: \_\_\_\_\_
6. Contractor's Banks: \_\_\_\_\_  
\_\_\_\_\_
7. Principal Officers of Contractor (managers and members if LLC):  

Name: _____	Name: _____
Title: _____	Title: _____
 Name: _____	 Name: _____
Title: _____	Title: _____

## Attachment 1, Part 3 Contract Information

8. Bidder's/Contractor's City and County of  
Denver Contractor License if it has obtained  
one:

License No.:

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Class:

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A contractor license is required prior to start of construction but not prior to bid submittal.

9. Bidder's/Contractor's state of incorporation (state of organization if an LLC or partnership):

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10. Bidder's Surety:

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11. Surety's State of Incorporation:

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12. Address of Contractor in other areas  
(if different from No. 4):

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13. Name and address of person to  
receive payments:

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14. If the Bidder/Contractor is a joint venture, it shall attach a certified copy of the joint venture agreement. The joint venture agreement will not be included as a Contract Document.

15. The Bidder/Contractor shall identify all applicable labor agreements (if any) to be used in the performance of the Work:

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16. References (Provide three professional references below):

1. Company Name: \_\_\_\_\_

Contact: \_\_\_\_\_

Project Title: \_\_\_\_\_

Email: \_\_\_\_\_

Phone Number: \_\_\_\_\_

2. Company Name: \_\_\_\_\_

Contact: \_\_\_\_\_

Project Title: \_\_\_\_\_

Email: \_\_\_\_\_

Phone Number: \_\_\_\_\_

3. Company Name: \_\_\_\_\_

Contact: \_\_\_\_\_

Project Title: \_\_\_\_\_

Email: \_\_\_\_\_

Phone Number: \_\_\_\_\_

**Attachment 1, Part 4 List of Proposed Non-SBE Subcontractors**

Bidder Company Name: \_\_\_\_\_

IFB Name: Gun Club On-Ramp to Peña Boulevard

IFB No.: 202366978

Bidder shall list below the name, business address, work assignment and dollar value of each subcontractor that is **not** a DBE subcontractor that will perform work or labor or provide services to the Bidder relating to this Contract in an amount greater than one and one-half percent (1.5%) of the Bidder’s total bid. Only one (1) subcontractor for each portion of the work shall be listed. Any proposed subcontractors to be utilized by the Bidder that are certified as a Small Business Enterprise (SBE) shall also be listed on the “List of Proposed Subcontractors” attached to this IFB.

If the Bidder does not identify a subcontractor to perform portions of the work which could be subcontracted on this form or the List of Proposed DBE Subcontractors, the Bidder, if it is awarded the Contract, agrees not to subcontract such portions that exceed one and one-half percent (1.5%) of the total bid amount until the Contractor has advised the SVP of AIM in writing of the reasons why the subcontractor was not listed in the Bid submission and complied with the requirements of General Condition 502.

If the Bidder is awarded the Contract and does not enter into a subcontract with a subcontractor listed below or on the List of Proposed SBE Subcontractors, the Bidder agrees not to subcontract any of the work assignment identified for that subcontractor until the Bidder has advised the SVP of AIM in writing of the reasons why a different subcontractor is being used and has obtained approval.

Subcontractor Information	Work Assignment	Subcontract Dollar Value
Name: _____ Address: _____ Phone: _____		
Name: _____ Address: _____ Phone: _____		

## Attachment 1, Part 4 List of Proposed Non-SBE Subcontractors

Name: _____ Address: _____ Phone: _____		
Name: _____ Address: _____ Phone: _____		
Name: _____ Address: _____ Phone: _____		
Name: _____ Address: _____ Phone: _____		

This page can be duplicated if additional sheets are required

**Attachment 1, Part 5 Certification of Non-Segregated Facilities**

The Bidder must certify that it does not maintain or provide for its employees any segregated facilities at any of its establishments and that it does not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Bidder certifies further that it will not maintain or provide for its employees segregated facilities at any of its establishments and that it will not permit its employees to perform their services at any location under its control, where segregated facilities are maintained. The Bidder agrees that a breach of this certification is a violation of the equal opportunity clause in this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, parking lots, drinking fountains, recreation or entertainment areas, transportation and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion or national origin because of habit, local custom or any other reason. The Bidder agrees that (except where it has obtained identical certification from proposed subcontractors for specific time period) it will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding Ten Thousand Dollars (\$10,000) which are not exempt from the provisions of the equal opportunity clause and that it will retain such certification in its files.

Dated: \_\_\_\_\_

Bidder Company Name: \_\_\_\_\_

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

Title: \_\_\_\_\_



**Attachment 1, Part 6 Equal Opportunity Report Statement**

The Bidder shall review, complete, sign and submit with its Bid this Equal Opportunity Report Statement (Statement). A Bid may be considered unresponsive and may be rejected, in the City's sole discretion, if the Bidder fails to provide the fully executed Statement or fails to furnish required data. The Bidder shall also, prior to award, furnish such other pertinent information regarding its own employment policies and practices as well as those of its proposed subcontractors as the FAA, the Owner or the Executive Vice Chairman of the President's Committee may require.

The Bidder shall furnish similar Statements executed by each of its first tier and second-tier subcontractors and shall obtain similar compliance by such subcontractors before awarding subcontracts. No subcontract shall be awarded to any non-complying subcontractor.

Equal Opportunity Report Statement as Required in 41 C.F.R. 60-1.7(b)

The Bidder shall complete the following statements by checking the appropriate blanks. Failure to complete these blanks may be grounds for rejection of Bid:

1. The Bidder has \_\_\_ has not \_\_\_ developed and has on file at each establishment affirmative action programs pursuant to 41 C.F.R. 60-1.40 and 41 C.F.R. 60-2.
2. The Bidder has \_\_\_ has not \_\_\_ participated in any previous contract or subcontract subject to the equal opportunity clause prescribed by Executive Order No. 11246, as amended.
3. The Bidder has \_\_\_ has not \_\_\_ filed with the Joint Reporting Committee the annual compliance report on Standard Form 100 (EEO-1 Report).
4. The Bidder does \_\_\_ does not \_\_\_ employ fifty (50) or more employees.

Dated: \_\_\_\_\_

Bidder Company: \_\_\_\_\_

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

Title: \_\_\_\_\_

**Attachment 1, Part 7 Bid Bond****Bidder** \_\_\_\_\_DENVER INTERNATIONAL AIRPORT  
Gun Club On-Ramp to Peña Boulevard  
Contract No. 202366978**Bid Bond**

KNOW ALL MEN BY THESE PRESENTS, THAT \_\_\_\_\_, as Principal, and \_\_\_\_\_, a corporation organized and existing under and by virtue of the laws of the State of \_\_\_\_\_, and authorized to do business within the State of Colorado as Surety, are held and firmly bound unto the City and County of Denver, Colorado, as Obligee, in the full and just sum of \_\_\_\_\_ Dollars and \_\_\_\_\_ Cents (\$ \_\_\_\_\_) lawful money of the United States, 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 by these presents:

WHEREAS, the said Principal is herewith submitting its Bid, dated on \_\_\_\_\_, \_\_\_\_\_, for the construction of Contract No. 202366978, Gun Club On-Ramp to Peña Boulevard, Denver International Airport, as set forth in detail in the contract documents for the City and County of Denver, Colorado, and said Obligee has required as a condition for receiving said Bid that the Principal deposit specified bid security in the amount of not less than five percent (5%) of the amount of said Bid, as it relates to work to be performed for the City, conditioned that in event of failure of the Principal to execute the Contract for such construction and furnish required Performance and Payment Bond if the Contract is offered them, that said sum be paid immediately to the Obligee as liquidated damages, and not as a Penalty, for the Principal's failure to perform.

The condition of this obligation is such that if the aforesaid Principal shall, within the period specified therefor, on the prescribed form presented to them for signature, enter into a written Contract with the Obligee in accordance with his bid as accepted, and give Performance and Payment Bond with good and sufficient surety or sureties, upon the form prescribed by the Obligee, for the faithful performance and the proper fulfillment of said Contract, or in the event of withdrawal of said bid within the time specified, or upon the payment to the Obligee of the sum determined upon herein, as liquidated damages and not as a Penalty, in the event the Principal fails to enter into said Contract and give such Performance and Payment Bond within the time specified, then this Obligation shall be null and void, otherwise to remain in full force and effect.

[END OF PAGE]

Signed, sealed, and delivered this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

Attest: \_\_\_\_\_  
PRINCIPAL

\_\_\_\_\_  
Secretary  
[SEAL if bidder a corporation] By: \_\_\_\_\_  
President

\_\_\_\_\_  
SURETY

By: \_\_\_\_\_  
Attorney-in-Fact

(ATTACH POWER OF ATTORNEY)

Power of Attorney shall be certified as to the date of  
bid.

**Attachment 1, Part 8 Schedule of Prices/Values and Quantities**

## **SCHEDULE OF PRICES/VALUES AND QUANTITIES**

The Schedule of Prices/Values and Quantities forms which apply to this contract are  
Included as a separate Excel Attachment in BidNet.

**These pages are not included in the page numbering of this contract document.**

**VII. ATTACHMENT 2, INSURANCE REQUIREMENTS**

## **INSURANCE REQUIREMENTS**

The insurance requirements relative to this contract are contained in the pages immediately following this page.

These pages are not included in the page numbering of this contract document.

**EXHIBIT C**

**CITY AND COUNTY OF DENVER  
INSURANCE REQUIREMENTS FOR DEPARTMENT OF AVIATION  
OWNER CONTROLLED INSURANCE PROGRAM (OCIP/ROCIP) PROJECT**

**NOTICE OF CHANGE TO ROCIP:** DEN reserves the right to terminate or modify the DEN ROCIP or any portion thereof. Further, dependent on factors including, but not limited to, the official timing and duration of the ROCIP project for which services are provided under this Agreement, DEN may need to transition from one ROCIP program to another and introduce corresponding requirements for contractors. DEN will provide Contractor notice in accordance with the terms and conditions of this Agreement.

**1. General Information**

City and County of Denver and Denver International Airport (hereinafter referred to collectively as “DEN”) has arranged for certain construction activities at DEN to be insured under an Owner Controlled Insurance Program (OCIP) or a Rolling Owner Controlled Insurance Program (ROCIP) (hereinafter collectively referred to as “ROCIP”). A ROCIP is a single insurance program that insures DEN, the Contractor and subcontractors of any tier, and other designated parties (Enrolled Parties), for work performed at the Project Site. Certain trade contractors and subcontractors are ineligible for this program; see ROCIP Insurance Manual Section 4. Insurance requirements are determined based on the scope of work.

**1.2 ROCIP Manuals**

Below are links to access the current reference manuals related to DEN ROCIP. These manuals are part of the Contract Documents.

[ROCIP Insurance Manual](#)

[ROCIP Safety Manual](#)

[ROCIP Claims Guide](#)

**2. Insurance Requirements for Non-ROCIP Contractors and Subcontractors (Ineligible Parties)**

Contractor and subcontractors of any tier shall require all Ineligible Parties, as defined in ROCIP Insurance Manual Section 4 or confirmed as excluded by DEN, to provide and maintain insurance of the type and in limits as set forth in the Contractor Subcontract Agreement and such insurance shall include the minimum defined coverages and be evidenced to DEN as required in this Section 2.

**2.1 Certificate Holder**

Certificate(s) shall be issued to:

CITY AND COUNTY OF DENVER  
Denver International Airport  
8500 Peña Boulevard, Suite 8810  
Denver CO 80249  
Attn: Risk Management

**2.2 Acceptable Certificate of Insurance Form and Submission Instructions**

**Please read these requirements carefully to ensure proper documentation and receipt of your certificate(s) of insurance.**

- ACORD FORM (or equivalent) certificate is required.
- SUBMIT via emailed in pdf format to: [contractadmininvoices@flydenver.com](mailto:contractadmininvoices@flydenver.com)
- ELECTRONIC CERTIFICATES are required, hard copy documents will not be accepted.

- THIRD PARTY SOFTWARE may be implemented during the term of this Agreement to manage insurance compliance and documents with required use by Vendor of such system.
- REFERENCE on the certificate must include the DEN assigned Contract Number.

## 2.3 Coverage and Limits

### 2.3.1 Commercial General Liability

Contractor shall maintain insurance coverage including bodily injury, property damage, personal injury, advertising injury, independent contractors, and products and completed operations in minimum limits of \$1,000,000 each occurrence, \$2,000,000 products and completed operations aggregate; if policy contains a general aggregate, a minimum limit of \$2,000,000 annual aggregate must be maintained.

- 2.3.1.1 Coverage shall include Contractual Liability covering liability assumed under this Agreement (including defense costs assumed under contract) within the scope of coverages provided.
- 2.3.1.2 Coverage shall include Mobile Equipment Liability, if used to perform services under this Agreement.

### 2.3.2 Business Automobile Liability

Contractor shall maintain a minimum limit of \$1,000,000 combined single limit each occurrence for bodily injury and property damage for all owned, leased, hired and/or non-owned vehicles used in performing services under this Agreement.

- 2.3.2.1 If operating vehicles unescorted airside at DEN, a \$10,000,000 combined single limit each occurrence for bodily injury and property damage is required.
- 2.3.2.2 If Contractor does not have blanket coverage on all owned and operated vehicles and will require unescorted airside driving privileges, then a schedule of insured vehicles (including year, make, model and VIN number) must be submitted with the Certificate of Insurance.
- 2.3.2.3 If transporting waste, hazardous material, or regulated substances, Contractor shall carry a Broadened Pollution Endorsement and an MCS 90 endorsement on its policy.
- 2.3.2.4 If Contractor does not own any fleet vehicles and Contractor's owners, officers, directors, and/or employees use their personal vehicles to perform services under this Agreement, Contractor shall ensure that one or both of the following coverages are maintained as appropriate: (i) Personal Automobile Liability including a Business Use Endorsement by the vehicle owner and (ii) Non-Owned Auto Liability by the Contractor.
- 2.3.2.5 If Contractor will be completing all services to DEN under this Agreement remotely and not be driving to locations under direction of the City to perform services, this requirement is waived.

### 2.3.3 Workers' Compensation and Employer's Liability Insurance

Contractor shall maintain the coverage as required by statute for each work location and shall maintain Employer's Liability insurance with limits no less than \$1,000,000 per occurrence for each bodily injury claim, \$1,000,000 per occurrence for each bodily injury caused by disease claim, and \$1,000,000 aggregate for all bodily injuries caused by disease claims.

2.3.3.1 Colorado Workers' Compensation Act allows for certain, limited exemptions from Worker's Compensation insurance coverage requirements. It is the sole responsibility of the Contractor to determine their eligibility for providing this coverage, executing all required documentation with the State of Colorado, and obtaining all necessary approvals. Verification document(s) evidencing exemption status must be submitted with the Certificate of Insurance.

#### 2.3.4 Professional Liability (Errors and Omissions) Insurance

Contractor shall maintain a minimum limit of \$1,000,000 each claim and policy aggregate, providing coverage for applicable services outlined in this Agreement. If there are no applicable professional services, this coverage will not be required.

The Contractor shall be responsible for conferring with DEN Risk Management on any subcontractors providing work to the Project to obtain a formal determination if this coverage will be required.

#### 2.3.5 Contractor's Pollution Legal Liability

If required by DEN Risk Management for any specific Excluded Party based on their scope of work, Contractor shall maintain coverage for its work site operations that are conducted on DEN's premises including project management and site supervision duties with a limit no less than \$1,000,000 each occurrence and aggregate resulting from claims arising out of a pollution condition or site environmental condition resulting out of work site operations on DEN's premises.

2.3.5.1 Coverage shall include claims/losses for bodily injury, property damage including loss of use of damaged property, defense costs including costs and expenses incurred in the investigation, defense or settlement of claims, and cleanup cost for pollution conditions resulting from illicit abandonment, the discharge, dispersal, release, escape, migration or seepage of any solid, liquid, gaseous or thermal irritant, contaminant, or pollutant, including soil, silt, sedimentation, smoke, soot, vapors, fumes, acids, alkalis, chemicals, electromagnetic fields, hazardous substances, hazardous materials, waste materials, low level radioactive waste, mixed wastes, on, in, into, or upon land and structures thereupon, the atmosphere, surface water or groundwater on the DEN premises.

2.3.5.2 Work site means a location where covered operations are being performed, including real property rented or leased from DEN for the purpose of conducting Contractor's covered operations.

The Contractor shall be responsible for conferring with DEN Risk Management on any subcontractors providing work to the Project to obtain a formal determination if this coverage will be required.

#### 2.3.6 Cyber Liability

If required by DEN Risk Management for any specific Excluded Party based on their scope of work, Contractor shall maintain a minimum limit of \$1,000,000 per occurrence and \$1,000,000 annual policy aggregate covering claims involving privacy violations, information theft, damage to or destruction of electronic information, intentional and/or unintentional release of private information, alteration of electronic information, extortion, and network security.

The Contractor shall be responsible for conferring with DEN Risk Management on any subcontractors providing work to the Project to obtain a formal determination if this coverage will be required.



### 2.3.7 Technology Errors and Omissions, Network Security, and Privacy Liability (Cyber):

If required by DEN Risk Management for any specific Excluded Party based on their scope of work, Contractor shall maintain a limit no less than \$1,000,000 each claim and aggregate; \$1,000,000 each claim and aggregate for cyber extortion; and no less than \$250,000 each claim for invoice manipulation and email spoofing.

2.3.7.1 Coverage shall include, but not be limited to, liability arising from theft, dissemination and/or use of personal, private, confidential, information subject to a non-disclosure agreement, including information stored or transmitted, privacy or cyber laws, damage to or destruction of information, intentional and/or unintentional release of private information, alteration of information, extortion and network security, introduction of a computer virus into, or otherwise causing damage to, a customer's or third person's computer, computer system, network or similar computer related property and the data, software, and programs thereon, advertising injury, personal injury (including invasion of privacy) and intellectual property offenses related to internet.

The Contractor shall be responsible for conferring with DEN Risk Management on any subcontractors providing work to the Project to obtain a formal determination if this coverage will be required.

### 2.3.8 Unmanned Aerial Vehicle (UAV) Liability

If Contractor desires to use drones in any aspect of its work on DEN premises, the following requirements must be met prior to commencing any drone operations:

- 2.3.8.1 Express written permission must be granted by DEN.
- 2.3.8.2 Express written permission must be granted by the Federal Aviation Administration (FAA).
- 2.3.8.3 Drone equipment must be properly registered with the FAA.
- 2.3.8.4 Drone operator(s) must be properly licensed by the FAA.
- 2.3.8.5 Contractor must maintain UAV Liability including flight coverage, personal and advertising injury liability, and hired/non-owned UAV liability for its commercial drone operations with a limit no less than \$1,000,000 combined single limit each occurrence for bodily injury and property damage.

### 2.3.9 Excess/Umbrella Liability

Combination of primary and excess coverage may be used to achieve minimum required coverage limits. Excess/Umbrella policy(ies) must follow form of the primary policies with which they are related to provide the minimum limits and be verified as such on any submitted Certificate of Insurance.

## 2.4 Reference to Project and/or Contract

The DEN Project and/or Contract Number and project description shall be noted on the Certificate of Insurance.

## 2.5 Additional Insured

For all coverages required under this Agreement (excluding Workers' Compensation and Professional Liability, if required), Contractor's insurer(s) shall include the City and County of Denver, its elected and appointed officials, successors, agents, employees and volunteers as Additional Insureds by policy endorsement.

## 2.6 Waiver of Subrogation

For all coverages required under this Agreement (excluding Professional Liability, if required), Contractor's insurer(s) shall waive subrogation rights against the City and County of Denver, its elected and appointed officials, successors, agents, employees and volunteers by policy endorsement.

If Contractor will be completing all services to the City under this Agreement remotely and not be traveling to locations under direction of the City to perform services, this requirement is waived specific to Workers' Compensation coverage.

## 2.7 Notice of Material Change, Cancellation or Nonrenewal

Each certificate and related policy shall contain a valid provision requiring notification to the Certificate Holder in the event any of the required policies be canceled or non-renewed or reduction in required coverage before the expiration date thereof.

- 2.7.1 Such notice shall reference the DEN assigned contract number related to this Agreement.
- 2.7.2 Said notice shall be sent thirty (30) days prior to such cancellation, non-renewal or reduction in coverage unless due to non-payment of premiums for which notice shall be sent ten (10) days prior.
- 2.7.3 If such written notice is unavailable from the insurer or afforded as outlined above, Contractor and/or its insurance broker/agent shall provide written notice of cancellation, non-renewal and any reduction in coverage to the Certificate Holder within seven (7) business days of receiving such notice by its insurer(s) and include documentation of the formal notice received from its insurer(s) as verification. Contractor shall replace cancelled or nonrenewed policies with no lapse in coverage and provide an updated Certificate of Insurance to DEN.
- 2.7.4 In the event any general aggregate or other aggregate limits are reduced below the required minimum per occurrence limits, Contractor will procure, at its own expense, coverage at the requirement minimum per occurrence limits. If Contractor cannot replenish coverage within ten (10) calendar days, it must notify the City immediately.

## 2.8 Cooperation

Contractor agrees to fully cooperate in connection with any investigation or inquiry and accept any formally tendered claim related to this Agreement, whether received from the City or its representative. Contractor's failure to fully cooperate may, as determined in the City's sole discretion, provide cause for default under the Agreement. The City understands acceptance of a tendered claim does not constitute acceptance of liability.

## 2.9 Additional Provisions

- 2.9.1 Deductibles or any type of retention are the sole responsibility of the Contractor.
- 2.9.2 Defense costs shall be in addition to the limits of liability. If this provision is unavailable that limitation must be evidenced on the Certificate of Insurance.
- 2.9.3 Coverage required may not contain an exclusion related to operations on airport premises.
- 2.9.4 A severability of interests or separation of insureds provision (no insured vs. insured exclusion) is included under any policy requiring Additional Insured status.
- 2.9.5 A provision that coverage is primary and non-contributory with other coverage or self-insurance maintained by DEN, excluding Professional Liability and Workers' Compensation policies, if required.

- 2.9.6 The insurance requirements under this Agreement shall be the greater of (i) the minimum limits and coverage specified hereunder or (ii) the broader coverage and maximum limits of coverage of any insurance policy or proceeds available to the Contractor. It is agreed that the insurance requirements set forth herein shall not in any way act to reduce coverage that is broader or that includes higher limits than the minimums set forth in this Agreement.
- 2.9.7 All policies shall be written on an occurrence form when available and industry norm. If an occurrence form is unavailable and/or the industry norm, claims-made coverage may be accepted by DEN provided the retroactive date is on or before the Agreement Effective Date or the first date when any goods or services were provided to DEN, whichever is earlier, and continuous coverage will be maintained or an extended discovery period of three years beginning at the time work under this Agreement is completed or the Agreement is terminated, whichever is later.
- 2.9.8 Certificates of Insurance must specify the issuing companies, policy numbers and policy periods for each required form of coverage. The certificates for each insurance policy are to be signed by an authorized representative and must be submitted to the City at the time Contractor signed this Agreement.
- 2.9.9 The insurance shall be underwritten by an insurer licensed or authorized to do business in the State of Colorado and rated by A.M. Best Company as A- VIII or better.
- 2.9.10 Certificate of Insurance and Related Endorsements: The City's acceptance of a certificate of insurance or other proof of insurance that does not comply with all insurance requirements shall not act as a waiver of Contractor's breach of this Agreement or of any of the City's rights or remedies under this Agreement. All coverage requirements shall be enforced unless waived or otherwise modified in writing by DEN Risk Management. Contractor is solely responsible for ensuring all formal policy endorsements are issued by their insurers to support the requirements.
- 2.9.11 The City shall have the right to verify, at any time, all coverage, information, or representations, and the insured and its insurance representatives shall promptly and fully cooperate in any such audit the City may elect to undertake including provision of copies of insurance policies upon request. In the case of such audit, the City may be subject to a non-disclosure agreement and/or redactions of policy information unrelated to the required coverage and premium amounts.
- 2.9.12 No material changes, modifications, or interlineations to required insurance coverage shall be allowed without the review and written approval of DEN Risk Management.
- 2.9.13 Contractor shall be responsible for ensuring the City is provided updated Certificate(s) of prior to each policy renewal.
- 2.9.14 Contractor's failure to maintain required insurance shall be the basis for immediate suspension and cause for termination of this Agreement, at the City's sole discretion and without penalty to the City.

## 2.10 Part 230 and the DEN Airport Rules and Regulations

If the minimum insurance requirements set forth herein differ from the equivalent types of insurance requirements in Part 230 of the DEN Airport Rules and Regulations, the greater and broader insurance requirements shall supersede those lesser requirements, unless expressly excepted in writing by DEN Risk Management.

## 3. Insurance Requirements for ROCIP Enrolled Contractors and Subcontractors

### 3.1 Insurance Provided by the DEN ROCIP

DEN retains the right to have this Project insured under a ROCIP. ROCIP coverage shall provide: (i) Commercial General Liability, (ii) Workers' Compensation & Employer's Liability, (iii) Excess Liability, (iv) Contractor's Pollution Liability, and (v) Builder's Risk as outlined herein and as defined by the respective policies for each coverage, for the period from the start of Work through completion and final acceptance by DEN except as otherwise provided herein.

### 3.2 Enrollment Required

Parties performing labor or services at the Project Site are eligible to enroll in the DEN ROCIP, unless they are Ineligible Parties (as defined in ROCIP Insurance Manual Section 4). Participation is mandatory but not automatic. Parties eligible for enrollment shall follow the procedures and follow the instructions as provided in the DEN ROCIP Insurance Manual to enroll in the program. When the Contractor and subcontractors of any tier are properly enrolled, the DEN ROCIP Administrator will issue a Certificate of Insurance evidencing the coverages afforded to each Enrolled Party under the DEN ROCIP, prior to their commencing Work on the Project Site.

### 3.3 Exclusion of Contractor/Subcontractor Insurance Costs from Proposal and Bid Prices

Contractor shall exclude from Contractor's cost of work and ensure that each subcontractor of any tier exclude from their cost of work, normal costs for insurance for those coverages provided under the DEN ROCIP. As part of the enrollment process, Contractor and subcontractors shall provide policy declaration rate pages and deductible endorsements on the General Liability, Workers' Compensation, and Excess Liability policies as required in the DEN ROCIP Insurance Manual. The calculation of these costs will be determined by the ROCIP Program Administrator. The costs of DEN ROCIP coverage includes reductions in insurance premiums, all relevant taxes and assessments, markup on insurance premiums, and losses retained through large deductibles, self-insured retentions, or self-funded programs. Change orders shall also exclude the cost of ROCIP coverage.

Pre-employment substance abuse testing costs will be covered by DEN and should be removed from bid prices. Drug testing will be more thoroughly discussed in the ROCIP Safety Manual.

### 3.4 Insurance Premiums

DEN will pay the insurance premiums for the DEN ROCIP insurance policies. DEN is responsible for all adjustments to the premiums and will be the sole beneficiary of all dividends, retroactive adjustments, return premiums, and any other monies due through audits or otherwise. The Contractor assigns to DEN the right to receive all such adjustments and will require that each subcontractor of any tier assign to DEN all such adjustments. The Contractor and the subcontractors who are Enrolled Parties shall execute such further documentation as may be required by DEN to accomplish this assignment.

### 3.5 Off Site Operations Coverage Under ROCIP

The DEN ROCIP will provide certain insurance coverage for DEN, Contractor and Enrolled Parties, along with their Eligible Employees performing Work at the Project Site. Off-site operations shall be covered only if designated in writing by DEN and when all operations at such site are identified and solely dedicated to the Project. Contractors and subcontractors are responsible to notify the DEN ROCIP Administrator in writing, to request coverage for specified off-site operations. Coverage is not provided at the off-site location unless confirmed in writing by the DEN ROCIP Administrator.

### 3.6 DEN ROCIP Insurance Manual

As soon as practicable, the DEN ROCIP Insurance Manual will be sent to each Enrolled Party and will become a part of the Contract and Contractor's Subcontract with its subcontractor and its subcontractors' agreements with any lower-tier subcontractor. The DEN ROCIP Insurance Manual will contain the administrative and claim reporting procedures. Contractor agrees to and will require that its subcontractors of any tier to cooperate with the DEN ROCIP Administrator in providing all required information.

### 3.7 Conflicts

Descriptions of the DEN ROCIP coverages set forth in ROCIP Insurance Manual Section 4.6 are not intended to be complete or meant to alter or amend any provision of the DEN ROCIP insurance policies. The DEN ROCIP coverages, terms, conditions, and exclusions are set forth in full in their respective policy forms. In the event of a conflict or omission between the coverages provided in the DEN ROCIP insurance policies and the coverages summarized or described in the DEN ROCIP Insurance Manual, this Exhibit or elsewhere in the Contract Documents, the DEN ROCIP insurance policies shall govern. In the event of a conflict between the provisions of this Exhibit and the DEN ROCIP Insurance Manual, that does not involve any conflict with the provisions of the DEN ROCIP insurance policies, the provisions of this Exhibit shall govern.

### 3.8 ROCIP Insurance Coverage Provided to Enrolled Parties

#### 3.8.1 Insurance Provided by DEN

Unless otherwise provided herein, prior to commencement of the Work, DEN, at its sole option and expense, shall secure and maintain at all times during the performance of this Contract the insurance specified below, insuring DEN, Enrolled Parties and such other persons or interests as DEN may designate with limits not less than those specified below for each coverage.

##### 3.8.1.1 Workers' Compensation & Employer's Liability – On Site Only

DEN shall maintain the coverage as required by statute for the Project Site and shall maintain Employer's Liability insurance with limits no less than \$1,000,000 per occurrence for each bodily injury claim, \$1,000,000 per occurrence for each bodily injury caused by disease claim, and \$1,000,000 aggregate for all bodily injuries caused by disease claims.

##### 3.8.1.2 Commercial General Liability – On Site Only

DEN shall maintain insurance coverage including bodily injury, property damage, personal injury, advertising injury, and products and completed operations in minimum limits as listed below:

Coverage	Limit
Annual General Aggregate (Per Project and Reinstates Annually)	\$4,000,000
Products/Completed Operations Aggregate (Per Project and Statute of Repose)	\$4,000,000
Total Products/Completed Operations Aggregate (Statute of Repose)	\$20,000,000
Personal / Advertising Injury Limit	\$2,000,000
Each Occurrence Limit	\$2,000,000
Fire Damage Legal Liability (any one fire)	\$ 300,000
Medical Payments (any one person)	\$ 10,000

##### 3.8.1.3 Excess Liability Insurance

DEN shall maintain coverage following form with underlying policies of Commercial General Liability and Employer's Liability in minimum limits as listed below:

Coverage	Limit
Annual General Aggregate (Per Project and Reinstates Annually)	\$200,000,000
Products/Completed Operations Aggregate (Per Project)	\$20,000,000
Total Products/Completed Operations Aggregate (Policy Cap)	\$400,000,000
Each Occurrence Limit	\$200,000,000

DEN, in its sole discretion, may elect to provide higher limits, based on Project size. Excess Liability limits are shared by all Insured parties.

#### 3.8.1.4 Contractor's Pollution Liability

DEN shall maintain coverage for bodily injury, property damage, or environmental damage caused by a pollution event resulting from covered operations, including completed operations, at the Project Site with a limit no less than \$10,000,000 each occurrence and aggregate. Coverage includes microbial matter and legionella pneumophila in any structure on land and the atmosphere contained with the structure. Products/Completed Operations coverage may extend for the statute of limitations/repose after final completion of the Project.

#### 3.8.1.5 Builder's Risk Insurance

DEN shall maintain, Builder's Risk (and/or Installation Floater) in the amount of \$200,000,000 per occurrence subject to various sublimits (as defined in the Builders' Risk Policy). Such insurance shall end when the first of the following occurs: 1) DEN's interest in the Work ceases; 2) the policy expires or is cancelled; or 3) the Work is accepted by DEN.

Builder's Risk Insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss of damage including , theft, vandalism, malicious mischief, terrorism, rigging and hoisting for materials and equipment that are part of the Project, collapse, earthquake, flood, windstorm, falsework, testing and startup (as provided by the policy), temporary buildings and debris removal including demolition occasioned by enforcement of any applicable ordinance laws, and shall cover reasonable compensation for services and expenses required as a result of such insured loss.

This Builder's Risk Insurance shall cover portions of the Work stored off site, and also portions of the Work in transit.

DEN and Contractor shall waive all rights against (1) each other and any of their subcontractors of any tier, and all respective agents and employees, and (2) the architect, architect's consultants, separate contractors, if any, and any of their subcontractors of any tier, and all respective agents and employees, for damages caused by fire or other causes of loss to the extent covered by Builder's Risk Insurance obtained pursuant to this Section or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by DEN as fiduciary. DEN or Contractor, as appropriate, shall require of the architect, architect's consultants, separate contractors, and their subcontractors of any tier, and all respective agents and employees, by appropriate agreements, written where

legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

### 3.8.2 Claim Chargeback

A claim charge-back will be assessed, regardless of fault, for the amount of any loss payable under this program with the exception of Workers' Compensation and Excess Liability, up to a maximum of \$25,000 each loss. General Contractor may elect to pass no more than \$5,000 of this charge, each loss, through to any responsible subcontractor.

## 3.9 Other Insurance Provided By Enrolled Parties

At their own expense, the Enrolled Parties of all tiers must carry the following minimum coverage and limits and such insurance shall be evidenced to DEN and the DEN ROCIP Administrator as required in this Section 3.9.

### 3.9.1 Certificate Holder

Certificate(s) shall be issued to:

CITY AND COUNTY OF DENVER  
Denver International Airport  
8500 Peña Boulevard, Suite 8810  
Denver CO 80249  
Attn: Risk Management

and

CITY AND COUNTY OF DENVER  
Department of Aviation  
c/o Marsh USA, Inc.  
111 SW Columbia, Ste 500  
Portland, OR 97201

### 3.9.2 Acceptable Certificate of Insurance Form and Submission Instructions

Please read these requirements carefully to ensure proper documentation and receipt of your certificate(s) of insurance.

- ACORD FORM (or equivalent) certificate is required.
- SUBMIT via emailed in pdf format to: contractadmininvoices@flydenver.com and DenverAirport.ROCIP@marsh.com
- ELECTRONIC CERTIFICATES are required, hard copy documents will not be accepted.
- THIRD PARTY SOFTWARE may be implemented during the term of this Agreement to manage insurance compliance and documents with required use by Vendor of such system.
- REFERENCE on the certificate must include the DEN assigned Contract Number.

### 3.9.3 Other Insurance Requirements

Enrolled Contractors shall adhere to the same minimum insurance requirements as stated in Section 2 of this exhibit, with the following exceptions:

- Commercial General Liability coverage requirement is Off Site Only

- Workers' Compensation and Employer's Liability coverage requirement is Off Site Only
- Contractor's Pollution Legal Liability is not required

#### **4. Contractor Warranties and Agreements**

##### **4.1 Accuracy of Contractor-provided Information**

Contractor warrants that all information submitted to DEN or the DEN ROCIP Administrator is accurate and complete to the best of its knowledge. Contractor will notify DEN or the DEN ROCIP Administrator immediately in writing of any errors discovered during the performance of the Work.

##### **4.2 Contractor Responsible to Review Coverage**

Contractor acknowledges that all references to DEN ROCIP policy terms, conditions, and limits of liability in this document, as well as the DEN ROCIP Insurance Manual, are for reference only. Contractor and its subcontractors of any tier are responsible for conducting their own independent review and analysis of the DEN ROCIP insurance policies in formulating any opinion or belief as to the applicability of such coverage in the event of any loss or potential claim. Any type of insurance or increase of limits not described above, which the Contractor requires for its own protection or on account of statute, shall be its own responsibility and at its own expense.

##### **4.3 Audit**

Contractor agrees to make its records available for review and to cooperate with DEN, its insurers and insurance brokers, the City Auditor, and representatives of the aforesaid parties in the event of an audit. In the event that a DEN audit of Contractor's records, as permitted in the Contract or other DEN ROCIP documents, reveals a discrepancy in the insurance, payroll, safety, or any other information required to be provided to DEN or the DEN ROCIP Administrator, or reveals inclusion of costs for DEN ROCIP coverage or other coverage beyond what is described above in any payment for the Work, DEN will have the right to deduct from payments due Contractor all such insurance costs as well as all audit costs.

##### **4.4 Insurance Costs Removed**

Contractor warrants that the costs for insurance as provided under the DEN ROCIP were not included in Contractor's bid or proposal for the Work, the Contract Price/Contract Sum, and will not be included in any change order or any request for payment for the Work or extra work.

#### **5. Contractor Obligations**

##### **5.1 ROCIP Documents Shall be Provided to Subcontractor**

Contractor shall furnish each bidding subcontractor, vendor, supplier, material dealer or other party a copy of this Exhibit, the DEN ROCIP Insurance Manual and the DEN ROCIP Safety Manual and shall incorporate the terms of this Exhibit in all contracts and agreements entered into for performance of any portion of the Work.

##### **5.2 Timely Enrollment Required**

Contractor shall enroll in the DEN ROCIP within five (5) business days following a request by DEN or the DEN ROCIP Administrator. Contractor shall notify each subcontractor of the process for enrolling in DEN ROCIP and confirm that enrollment is mandatory, but not automatic. Contractor shall assure that subcontractors of any tier shall not commence Work until verification of enrollment is confirmed by the DEN ROCIP Administrator by the issuance of a Certificate of Insurance to each individual Enrolled Party.



### 5.3 Compliance with Conditions

Contractor shall not violate any condition of the policies of insurance provided by DEN under the terms of this Exhibit, the DEN ROCIP Insurance Manual or the DEN ROCIP Safety Manual. All requirements imposed by the subject policies and to be performed by Contractor shall likewise be imposed on, assumed, and performed by each subcontractor of any tier.

### 5.4 Claims Cooperation

Contractor shall participate in claim reporting procedures. Contractor agrees to assist and cooperate in every manner possible in connection with the adjustment of all claims arising out of operations within the scope of the Work required by the Contract, and to cooperate with DEN's insurer(s) in all claims and demands which DEN's insurer(s) is called upon to adjust or to defend against. Contractor shall take all necessary action to assure that its subcontractors of any tier comply with any request for assistance and cooperation. This obligation includes, without limitation, providing light or modified duty for injured workers, appearing in mediation, arbitration, or court proceedings and/or participating in settlement meetings, as may be required.

### 5.5 Monthly Payroll Submission

All Enrolled Parties shall submit monthly payrolls and worker-hour reports to DEN and/or the DEN ROCIP Administrator via the DEN ROCIP Administrator's online reporting system as outlined in the DEN ROCIP Insurance Manual. The online reporting instructions will be provided to all Contractors at time of enrollment. Failure to submit these reports may result in funds being held or delayed from monthly progress payments. Payroll must be submitted online for each month, including zero (0) payroll, if applicable, until completion of the Work under each Contract and Subcontract. For subcontractors of any tier performing Work under multiple Subcontracts, a separate payroll report is required for each Subcontract under which Work is being performed.

### 5.6 Response to Information Requests

All insurance underwriting, payroll, rating or loss history information requested by DEN or the DEN ROCIP Administrator shall be provided by the Contractor within three (3) business days of request. Contractor agrees (and will require each subcontractor to agree) that DEN, DEN's insurers or its representative may audit the Contractor's records or records of subcontractors of any tier to confirm the accuracy of all insurance information provided including, without limitation, any such information that may have any effect on insurance resulting from changes in the Work. At all times during performance of the Contract and Subcontracts, the Contractor and subcontractors of any tier shall cooperate with DEN, the DEN ROCIP Administrator and DEN's insurers.

### 5.7 Responsibility for Safety

Notwithstanding the DEN ROCIP, the Contractor shall initiate, maintain, and supervise all safety precautions and programs in connection with the Work. Contractor is solely responsible, at no adjustment to the contract sum payable or contract time, for initiating, maintaining, and supervising all safety precautions and programs relating to the conduct of Work including, without limitation, any safety programs or procedures that are required by any applicable state or federal laws, rules or regulations, or under the terms of the DEN ROCIP Safety Manual.

### 5.8 Duty of Care

Nothing herein shall relieve the Enrolled Parties of their respective obligations to exercise due care in the performance of their duties in connection with the Work or to complete the Work in strict compliance with this Contract and subsequent subcontracts.

## 6. Notices and Costs

### 6.1 Limitations on DEN Provided Coverage and DEN Right to Purchase Other Coverage

DEN assumes no obligations to provide insurance other than that evidenced by the policies referred to in Section 3.8. DEN, however, reserves the right to furnish insurance coverage of various types and limits provided that such coverage shall not be less than that specified in Section 3.8 and the costs of such insurance shall be paid by DEN. Apart from the DEN ROCIP, DEN may at its option purchase additional insurance coverages that insure the Project that may not necessarily insure the Contractor or the subcontractors. Without limitation, examples of such coverage may include pollution liability, excess professional liability, and excess automobile liability insurance.

### 6.2 Contractors Responsible for Own Equipment

Contractor and subcontractors are solely responsible for loss or damage of all construction tools and other equipment whether owned, leased, rented, borrowed, or used on Work at the Project Site. If an individual Enrolled Party purchases insurance on their tools and equipment, such insurance shall contain a waiver of subrogation in favor of the City and County of Denver, its elected and appointed officials, agents, employees and volunteers and all other Enrolled Parties. If an individual Enrolled Party does not purchase such insurance, that Enrolled Party will hold harmless the City and County of Denver, its elected and appointed officials, agents, employees and volunteers and other Enrolled Parties for loss or damage to its tools and equipment.

### 6.3 No Release; No Waiver of Immunity

The provision of the DEN ROCIP shall in no way be interpreted as relieving Contractor or subcontractors of any tier of any responsibility or liability under the Contract Documents, the DEN ROCIP insurance policies or applicable laws including, without limitation, Contractor's and subcontractor's responsibilities relative to indemnification and their obligation to exercise due care in the performance of the Work and to complete the Work in strict compliance with the Contract Documents. The parties hereto understand and agree that the City and County of Denver, its elected and appointed officials, agents, employees and volunteers are relying on, and do not waive or intend to waive by any provisions of this agreement, the monetary limitations or any other rights, immunities and protections provided by the Colorado Governmental Immunity Act, §§ 24-10-101 to 120, C.R.S., or otherwise available to DEN, its officers, officials and employees.

### 6.4 DEN Right to Withhold Payments

In addition to any other rights of withholding that DEN may have under the Contract Documents, DEN has the right to withhold any payments otherwise due to Contractor in the event of a failure by Contractor or any subcontractor to comply with the requirements of this Exhibit, the DEN ROCIP Insurance Manual or the DEN ROCIP Safety Manual. DEN may withhold from any payment owing to Contractor the costs of DEN ROCIP coverages if included in a request for payment. Such withholding by DEN shall not be deemed to be a default under the Contract. DEN shall withhold from Contractor the costs of DEN ROCIP coverages attributable to an increase in an Enrolled Party's total payroll for the Work over the amount reported to DEN and/or the DEN ROCIP Administrator at time of enrollment.

### 6.5 DEN Remedies

Without limitation upon any of DEN's other rights or remedies, any failure of an Enrolled Party to comply with any provision of this Exhibit, the DEN ROCIP Insurance Manual, or the DEN ROCIP Safety Manual shall be deemed a material breach of the Contract, thereby entitling DEN, at its option, upon notice to Contractor, to (1) suspend performance by Contractor and/or the offending subcontractor, without any adjustment to Contract Sum Payable or Contract Time, until there is full compliance, or (2) terminate this Contract for cause.

## 6.6 Off Site Storage

Unless otherwise provided in the Contract Documents, the property insurance provided by DEN shall not cover portions of the Work stored off the Site without written approval of DEN. Contractor shall be responsible for reporting such property or work if ownership has been transferred to DEN. If ownership rests with the Contractor, Contractor shall be responsible for obtaining insurance to protect its interests.

## 6.7 Partial Occupancy

Partial occupancy or use shall not commence until DEN insurer(s) providing Builders Risk and/or Property Insurance have consented to such partial occupancy or use by endorsement or otherwise. DEN and the Contractor shall take reasonable steps to obtain consent of the insurer(s) and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

## 6.8 DEN Right to Exclude Parties from the DEN ROCIP

DEN reserves the right to exclude any subcontractor from the DEN ROCIP, before or after enrollment by the subcontractor. If DEN elects to exclude a subcontractor from the DEN ROCIP, the Contractor will be responsible for ensuring the insurance coverages outlined in the Contractor's Subcontract Agreement are provided to DEN or the DEN ROCIP Administrator before the subcontractor can begin or resume Work on the Project.

## 6.9 DEN's Right to Modify or Discontinue DEN ROCIP Coverages

If DEN determines that modification or discontinuation of the DEN ROCIP is in the best interest of DEN, the Contractor and subcontractor will receive sixty (60) days advance written notice to secure and maintain such insurance as is required to provide replacement coverage comparable to that provided under the DEN ROCIP. Provided that the foregoing is not the result of any failure by the Contractor or any subcontractor to comply with the requirements of the Contract Documents, the DEN ROCIP Insurance Manual or DEN ROCIP Safety Manual, the costs of such replacement insurance shall be deemed a cost of Work for which the Contractor shall be entitled to a Contract Adjustment, without any sum added thereto for Allowable Markup. The form, content, limits of liability, cost and the rating of the insurer(s) issuing such replacement coverage shall be subject to DEN's prior written approval.

## 7. Definitions

Certificate of Insurance:	A document providing evidence of coverage for a particular insurance policy or policies. This will include certificates issued to Enrolled Parties evidencing the coverage afforded under the DEN ROCIP and certificates issued to DEN evidencing additional coverage "Provided by Enrolled Parties"
DEN:	City and County of Denver and Denver International Airport
Contract:	The written agreement between DEN and Contractor describing the Work, contract terms and conditions, or a portion thereof; also includes a written agreement between a Contractor and any subcontractor as well as between subcontractors and their subcontractors of any tier.
Contractor Insurance Cost:	The costs of ROCIP coverage are defined as the amount of Contractor's and eligible Subcontractors' of every tier reduction in insurance costs due to participation in the DEN ROCIP.

Rolling Owner Controlled Insurance Program (ROCIP): A coordinated insurance program providing certain coverage, as defined herein, for DEN, Contractor and Enrolled Subcontractors, along with their Eligible Employees, performing Work at the Project Site.

Eligible Employees: Employees of the Contractor and Enrolled Subcontractors who are not excluded from the ROCIP under the “Excluded Parties” definition.

Enrolled Parties: The Contractor and those subcontractors that have submitted all necessary enrollment information and been accepted into the ROCIP as evidenced by the issuance of a Certificate of Insurance.

Ineligible/Excluded Parties: Parties not covered by the ROCIP because of ineligibility or DEN explicit exclusion. No insurance coverage provided by DEN under the ROCIP shall extend to the activities or products of the following:

- Any person or organization that fabricates or manufactures products, materials or supplies away from a Project Site with no direct onsite installation responsibility

Exception: The ROCIP Insurer may agree to extend General Liability coverage only if the General Contractor has a written contract with the off-site fabricator or manufacturer to provide the pre-fabricated product. To consider extending coverage, the Insurer requires 30 days advance written notice to the ROCIP Administrator with details of the work/product and a copy of the contract between the General Contractor and the off-site fabricator or manufacturer. Approval must be obtained from the Insurer before enrolling in the ROCIP for General Liability coverage only.

- Scaffolding contractors (erecting and dismantling scopes of work only)
- Hazardous materials remediation, removal, or transportation companies and their consultants
- Architects, engineers, surveyors and their consultants
- Truckers, haulers, material dealers, vendors, suppliers, and others who merely transport, pick up, deliver, or carry materials, personnel, parts or equipment or any other items or persons to or from a Project Site including companies providing supplemental services
- Contractors, subcontractors and subconsultants who do not work at a Project Site
- Employees of an Enrolled Party who either (i) do not work on-site or (ii) occasionally visit a Project Site to make deliveries, pick-up supplies or personnel, to perform supervisory or progress inspections, or for any other reason

- Temporary labor employees (individuals working directly for the Contractor and not procured through a third party such as a Professional Employer Organization)

Exception: The ROCIP Insurer typically will accept including employees working for a contractor, or employed by temporary staffing agencies or professional employer organizations, as long as those employer-entities are enrolled as subcontractors to supply supplemental workforce.

Insured: (liability policies)	DEN, Contractor and Enrolled Parties and their Eligible Employees and any other party named in the insurance policies.
Insurers:	Those insurance companies providing the DEN ROCIP coverage. The insurers will be identified on the issued Certificate of Insurance and in the DEN ROCIP Insurance Manual.
Net Bid:	Contractor bids with insurance costs removed because of the obligation of any Enrolled Party to delete insurance costs for coverage provided by the ROCIP from its bid and all change orders. Net bids are subject to verification by the Administrator through the providing of contractors' rate and declaration pages from their Insurance policies.
ROCIP Administrator:	The DEN ROCIP Administrator will be identified in the DEN ROCIP Insurance Manual.
ROCIP Insurance Manual:	A reference document provided to Contractor and subcontractors of all tiers, which summarizes the terms and provisions of the DEN ROCIP and provides information about requirements and compliance.
ROCIP Safety Manual:	A reference document provided to Contractor and subcontractors of all tiers which contains workplace safety requirements of all Enrolled Parties.
Off Site Work:	Work performed away from the Project Site.
Payroll:	For purposes of the ROCIP only, refers to Unburdened Straight Time Payroll per Workers Compensation Class Code.
Policy Owner:	City and County of Denver and Denver International Airport
Project:	The Project as defined in the contract documents and as described in the Declarations of the DEN ROCIP insurance policies.

**Project Site:** Means those areas designated in writing by DEN in a Contract document for performance of the Work and such additional areas as may be designated in writing by DEN for Contractors' use in performance of the Work. Subject to the ROCIP Insurer(s) written approval, the term "Project Site" shall also include: (1) field office sites, (2) property used for bonded storage of material for the Project approved by DEN, staging areas dedicated to the Project, and (4) areas where activities incidental to the Project are being performed by Contractor or subcontractors covered by the DEN ROCIP Worker's Compensation policy (if included), but excluding any permanent locations of any Enrolled Party.

*Items 1 through 4 above must be approved by the ROCIP Insurer and listed on the DEN ROCIP insurance policies.*

**Subcontract:** The written agreement between Contractor and subcontractor, or between subcontractor and a lower tier subcontractor, describing the Work, subcontract terms and conditions, or a portion thereof.

**Subcontractor:** Includes those persons, firms, joint venture entities, corporations, or other parties that enter into a Subcontract with Contractor to perform Work at the Project Site and any of these subcontractor's lower-tier subcontractors.

**Work:** Operations, as fully described in the Contract and Subcontract, performed at the Project Site.

**VIII. ATTACHMENT 3, DIVERSITY AND INCLUSIVENESS IN CITY SOLICITATIONS**

For the City or the City Agency to consider a bid/Bid, Bidders must complete the on-line Diversity and Inclusiveness in City Solicitations Form – then **save an electronic copy of the completed form and include the electronic copy as part of its Bid. A Bid or response to a solicitation by a Bidder that does not include this completed form shall be deemed non-responsive.**

**Click on the following link to access the on-line form:**

<https://us.openforms.com/Form/57f3a8ea-39b7-4115-be17-1770f38d3cf6>

Using the form found in link above, please state whether you have a Diversity and Inclusiveness program for employment and retention, procurement and supply chain activities or customer service, and provide the additional information requested on the form. The information provided on the Diversity and Inclusiveness in City Solicitations Form will provide an opportunity for City Bidders to describe their own diversity and inclusiveness practices. Bidders are not expected to conduct intrusive examinations of their employees, managers, or business partners in order to describe diversity and inclusiveness measures. Rather, the City simply seeks a description of the Bidder's current practices, if any. Diversity and Inclusiveness information provided by City Bidders in response to City solicitations for services or goods will be collated, analyzed, and made available in reports consistent with City Executive Order No. 101. However, no personally identifiable information provided by or obtained from Bidders will be in such reports.

IX. ATTACHMENT 4, SAMPLE AGREEMENT

## SAMPLE AGREEMENT

The Sample Contract form and required Federal provisions are contained in the pages immediately following this page. The complete contract will include other exhibits and the Federal provisions.

These pages are not included in the page numbering of this contract document.

***Notice to Bidders: City Required Contract Provisions***

***The following contract provisions are required in every contract issued by the Department of Aviation. The language of each clause is drafted in accordance with Federal, State, and City law and policy and are not subject to modification. Accordingly, Bidders should carefully review this Sample Agreement provided with the Invitation for Bids, including these required provisions, in preparation of their Bids.***

- Standard Federal Provisions contained in the Contract and the Exhibit or Appendix
- Small Business Enterprise requirements
- SBE Prompt Pay and City Prompt Pay
- Prevailing Wage Ordinance
- City Minimum and Living Wage provisions; worker retention provision
- Insurance Requirements
- Defense and Indemnification (subject to very limited exceptions; Bidder must provide comments and provisions it **cannot accept with its Bid**)
- Disputes/Dispute Resolution (see D.R.M.C. § 5-17 and DEN Rules and Regulations Part 250)
- Compliance with All Laws and Regulations/with Patent, Trademark and Copyright Laws (subject to very limited exceptions) Compliance with all Executive Orders including drugs/alcohol/tobacco
- Governing Law and Venue
- Bond Ordinances
- Force Majeure
- Taxes and Costs
- Environmental Requirements
- Records Retention and Other Standard City Provisions, including but not limited to:
- Diversity and Inclusiveness
- No Discrimination in Employment
- Advertising and Public Disclosure
- Colorado Open Records Act
- Examination of Records and Audits, including Federal and City Auditor provisions
- Conflict of Interest
- Sensitive Security Information, DEN Security, Badging, and other Security Provisions



## CONTRACT FOR CONSTRUCTION

**THIS CONTRACT FOR CONSTRUCTION (“Contract”)** is made and entered into as of the date stated on the City’s signature page below (the **“Effective Date”**) by and between the **CITY AND COUNTY OF DENVER**, a municipal corporation of the State of Colorado acting on behalf of its Department of Aviation (the **“City”**), and **VENDOR NAME**, a Jurisdiction from the SOS website corporation and authorized to do business in the State of Colorado (**“Contractor”**) (collectively the **“Parties”**).

### WITNESSETH

**WHEREAS**, the City, for at least three (3) consecutive days, advertised that proposals would be received for furnishing all labor, tools, supplies, equipment, materials and everything necessary and required for the construction and installation of the work under Invitation for Bid No. 202366978-00, Gun Club On-Ramp to Peña Boulevard at Denver International Airport (**“DEN”**); and

**WHEREAS**, a proposal in response to said advertisement have been received by the Chief Executive Officer of DEN (the **“CEO”**), who has recommended that a contract for the work be made and entered into with Contractor, which was the lowest, responsive, qualified bidder; and

**WHEREAS**, Contractor is qualified, willing, and able to perform the work in accordance with its proposal and the Contract Documents defined below;

**NOW, THEREFORE**, for and in consideration of the compensation to be paid by the City to Contractor and the other terms and conditions of this Contract, the Parties agree as follows:

#### 1. CONTRACT DOCUMENTS:

It is agreed by the Parties that the instruments, drawings, and documents described below and whether attached to and bound with this Contract or not (the **“Contract Documents”**), are incorporated into the Contract by this reference, and are as fully a part of this Contract as if they were set out here verbatim and in full:

- Contract
- Notice to Proceed
- Form of Final Receipt
- Building Information Modeling (**“BIM”**) if applicable
- Change Directives
- Change Orders
- Exhibit A Federal Appendices
- Exhibit B Equal Employment Opportunity Provisions
- Exhibit C Insurance Requirements
- Exhibit D Prevailing Wage Schedules

- Exhibit E Special Conditions
- Exhibit F Standard Specifications for Construction General Contract Conditions (2011 Edition) (the “Yellow Book”) (“General Conditions”) (Table of Contents attached as Exhibit F)
- Exhibit G Performance Bond
- Exhibit H Payment Bond
- Exhibit I Technical Specifications
- Exhibit J Contract Drawings

In the event of an irreconcilable conflict between a provision of Section 1 through 31 of this Contract document and any other provisions of the Contract Documents such that it is impossible to give effect to both, the order of precedence to determine which document shall control to resolve such conflict is as follows, in descending order:

1. Exhibit A Federal Appendices
2. Contract
3. Change Directives
4. Change Orders
5. Exhibit B Equal Employment Opportunity Provisions
6. Exhibit E Special Conditions
7. Exhibit F Standard Specifications for Construction General Contract Conditions (2011 Edition) (the “**Yellow Book**”) (“**General Conditions**”) (Table of Contents attached as Exhibit F)
8. Exhibit C Insurance Requirements
9. Exhibit D Prevailing Wage Schedules
10. Exhibit I Technical Specifications
11. Exhibit J Contract Drawings
12. Exhibit G Performance Bond
13. Exhibit H Payment Bond
14. Notice to Proceed
15. Form of Final Receipt
16. Building Information Modeling (“**BIM**”) if applicable

The remaining order of precedence is established in General Conditions Title 4.

## 2. SCOPE OF WORK:

Contractor shall furnish all labor and tools, supplies, equipment, superintendence, materials, and everything necessary for and required to do, perform, and complete all of the work described, drawn, set forth, shown, and included in the Contract Documents (the “**Work**”).

## 3. TERM OF CONTRACT:

The Senior Vice President of Aviation – Airport Infrastructure Management (the “**SVP-AIM**”) will issue a written notice to proceed to Contractor (the “**Notice to Proceed**”), and

Contractor shall begin performing the Work required under this Contract within ten (10) days of such Notice to Proceed (the “**Commencement Date**”). Contractor shall fully complete the Work in its entirety within 341 consecutive calendar days from the date of the Notice to Proceed (“**Contract Time**”). Contractor is not authorized to commence work prior to its receipt of the Notice to Proceed.

#### 4. **TERMS OF PAYMENT:**

The City agrees to pay Contractor for the performance and completion of all of the Work as required by the Contract Documents, and Contractor agrees to accept as its full and only compensation therefor, a total amount of **Contract Amount Dollars and Amount Cents (\$Click here to enter text.00)** (the “**Maximum Contract Amount**”). In no event will the City’s liability exceed the Maximum Contract Amount, as adjusted by duly authorized Change Orders in accordance with this Contract. The Parties specifically agree that any performance by Contractor hereunder shall not subject the City to any cost, charge, or fee not specified above.

#### 5. **VERIFIED STATEMENT OF CLAIMS:**

Colorado Revised Statutes § 38-26-107 (“**C.R.S.**”) requires that, in the event any person or company files a verified statement of amounts due and unpaid in connection with a claim for labor and materials supplied on this project, the City shall withhold from payments to Contractor sufficient funds to insure the payment of any such claims. Should the City be made a party to any lawsuit to enforce such unpaid claims or any lawsuit arising out of or relating to such withheld funds, Contractor agrees to pay to the City its costs and a reasonable attorney’s fee incurred in any such lawsuit. Because the City Attorney Staff does not bill the City for legal services on an hourly basis, Contractor agrees a reasonable fee shall be computed at the rate of two hundred dollars and no cents (\$200.00) per hour of City Attorney time.

#### 6. **DISPUTES:**

All disputes arising under or related to this Contract shall be resolved by administrative hearing under the procedures described in *Exhibit F*, as modified by *Exhibit E*, if any, and the Denver Revised Municipal Code § 5-17 (“**D.R.M.C.**”) and all related rules and procedures, including but not limited to DEN Rule 250. The determination resulting from said administrative hearing shall be final, subject only to Contractor’s right to appeal the determination under Colorado Rule of Civil Procedure, Rule 106.

#### 7. **DEFENSE AND INDEMNIFICATION:**

**A.** To the fullest extent permitted by law, Contractor hereby agrees to defend, indemnify, reimburse and hold harmless City, its appointed and elected officials, agents and employees for, from and against all liabilities, claims, judgments, suits or demands for damages to persons or property arising out of, resulting from, or related to the work performed under this Contract that are due to the negligence or fault of the Contractor or the Contractor’s agents, representatives, subcontractors, or suppliers (“**Claims**”). This indemnity shall be interpreted in the

broadest possible manner consistent with the applicable law to indemnify the City.

**B.** Contractor's duty to defend and indemnify City shall arise at the time written notice of the Claim is first provided to City regardless of whether suit has been filed and even if Contractor is not named as a Defendant.

**C.** Contractor will defend any and all Claims which may be brought or threatened against City and will pay on behalf of City any expenses incurred by reason of such Claims including, but not limited to, court costs and attorney fees incurred in defending and investigating such Claims or seeking to enforce this indemnity obligation, including but not limited to time expended by the City Attorney Staff, whose costs shall be computed at the rate specified in Section 5. Such payments on behalf of City shall be in addition to any other legal remedies available to City and shall not be considered City's exclusive remedy.

**D.** Insurance coverage requirements specified in this Contract shall in no way lessen or limit the liability of the Contractor under the terms of this indemnification obligation. The Contractor shall obtain, at its own expense, any additional insurance that it deems necessary for the City's protection.

**E.** This defense and indemnification obligation shall survive the expiration or termination of this Contract.

**8. WAIVER OF C.R.S. § 13-20-801, *et seq.*:**

Notwithstanding any other provision of this Contract, Contractor specifically waives all of the provisions of C.R.S. §§ 13-20-801 *et seq.* as they may relate to Contractor's performance under this Contract.

**9. LIQUIDATED DAMAGES:**

If Contractor fails to achieve Substantial Completion of the Work within the Contract Time or fails to substantially complete the Work described in the Scope of Work within the time set forth in the Special Conditions, the City will suffer substantial damages, which damages would be difficult to accurately determine. The Parties hereto have considered the possible elements of damages and have agreed that the amount of liquidated damages for Contractor's failure to substantially complete the work within the Contract Time or to substantially complete the work described in Milestone Areas within the time set forth in the Special Conditions shall be as provided in the Special Conditions. If Contractor shall fail to pay such liquidated damages promptly upon demand therefor, the Surety on its Performance Bond and Payment Bond shall pay such damages. Also, the City may withhold all, or any part of, such liquidated damages from any payment due to Contractor. Additional provisions relating to liquidated damages are set forth in the Construction Contract General Conditions and Special Conditions.

**10. INSURANCE REQUIREMENTS:**

**A.** Contractor shall obtain and keep in force all of the minimum insurance coverage

forms and amounts set forth in **Exhibit C** (“**Insurance Requirements**”) during the entire Term of this Agreement, including any extensions of the Agreement or other extended period stipulations stated in **Exhibit C**. All certificates of insurance must be received and accepted by the City before any airport access or work commences.

**B.** Contractor shall ensure and document that all subcontractors performing services or providing goods hereunder procure and maintain insurance coverage that is appropriate to the primary business risks for their respective scopes of performance. At minimum, such insurance must conform to all applicable requirements of DEN Rules and Regulations Part 230 and all other applicable laws and regulations.

**C.** The City in no way warrants or represents the minimum limits contained herein are sufficient to protect Contractor from liabilities arising out of the performance of the terms and conditions of this Contract by Contractor, its agents, representatives, employees, or subcontractors. Contractor shall assess its own risks and maintain higher limits and/or broader coverage as it deems appropriate and/or prudent. Contractor is not relieved of any liability or other obligations assumed or undertaken pursuant to this Contract by reason of its failure to obtain or maintain insurance in sufficient amounts, duration, or types.

**D.** In no event shall the City be liable for any of the following: (i) business interruption or other consequential damages sustained by Contractor; (ii) damage, theft, or destruction of Contractor's inventory, or property of any kind; or (iii) damage, theft, or destruction of an automobile, whether or not insured.

**E.** The Parties understand and agree that the City, its elected and appointed officials, employees, agents and volunteers are relying on, and do not waive or intend to waive by any provisions of this Contract, the monetary limitations and any other rights, immunities and protections provided by the Colorado Governmental Immunity Act, C.R.S. §§ 24-10-101, *et seq.*, or otherwise available to the City, its elected and appointed officials, employees, agents and volunteers.

## **11. CONTRACT BINDING:**

It is agreed that this Contract shall be binding on and inure to the benefit of the Parties hereto, their heirs, executors, administrators, assigns, and successors.

## **12. SEVERABILITY:**

If any part, portion, or provision of this Contract shall be found or declared null, void, or unenforceable for any reason whatsoever by any court of competent jurisdiction or any governmental agency having authority thereover, only such part, portion, or provision shall be affected thereby and all other parts, portions, and provisions of this Contract shall remain in full force and effect.

## **13. ASSIGNMENT:**

Contractor shall not assign, pledge or transfer its duties, obligations, and rights under this Contract, in whole or in part, without first obtaining the written consent of the CEO or their authorized representative. Any attempt by Contractor to assign or transfer its rights hereunder without such prior written consent shall, at the option of the CEO or their authorized representative, automatically terminate this Contract and all rights of Contractor hereunder.

**14. APPROPRIATIONS:**

Payment will be in accordance with the provisions of the Contract Documents, including Title 9 of the General Conditions, and will be made solely and exclusively from funds appropriated or otherwise lawfully made available for the purposes of this Contract from the Airport System Funds. The City has no obligation to make payments from any other fund or source or to make additional appropriations or allocations to such fund to satisfy such costs or other obligations.

**15. APPROVALS:**

In the event this Contract calls for the payment by the City of Five Million Dollars and no cents (\$5,000,000.00) or more, approval by the Denver City Council, acting by Resolution in accordance with Section 3.2.6 of the Charter of the City and County of Denver, is and shall be an express condition precedent to the lawful and binding execution and performance of this Contract.

**16. JOINT VENTURE:**

If Contractor is a Joint Venture, the partners to the Joint Venture shall be jointly and severally liable to the City for the performance of all duties and obligations of Contractor which are set forth in the Contract.

**17. NO DISCRIMINATION IN EMPLOYMENT:**

In connection with the performance of work under the Agreement, the Contractor may not refuse to hire, discharge, promote, demote, or discriminate in matters of compensation against any person otherwise qualified, solely because of race, color, religion, national origin, ethnicity, citizenship, immigration status, gender, age, sexual orientation, gender identity, gender expression, marital status, source of income, military status, protective hairstyle, or disability. The Contractor shall insert the foregoing provision in all subcontracts.

**18. COORDINATION OF SERVICES:**

Contractor agrees to perform its work under this Contract in accordance with the operational requirements of DEN, and all work and movement of personnel or equipment on areas included within the DEN site shall be subject to the regulations and restrictions established by the City or its authorized agents.

**19. COMPLIANCE WITH ALL LAWS AND REGULATIONS:**

A. Contractor and its subcontractor(s) shall perform all work under this Contract in

compliance with all existing and future applicable laws, rules, regulations, and codes of the United States and the State of Colorado and with the City Charter, ordinances, Executive Orders, and rules and regulations of the City.

**B.** Contractor shall perform all work in compliance with Executive Order 123 regarding Sustainability as may be directed by the City, including the requirement that all new City buildings and major renovations will be certified to the applicable LEED Gold Certification, with the goal of achieving LEED Platinum where economically feasible. Contractor also shall comply with all applicable DEN design and construction standards, including the DEN Design Standards Manuals, which are incorporated herein by reference. Current versions can be found at: <https://business.flydenver.com/bizops/bizRequirements.asp>.

## **20. PREVAILING WAGE REQUIREMENTS:**

**A.** Contractor shall comply with, and agrees to be bound by, all requirements, conditions and determinations of the City regarding the Payment of Prevailing Wages Ordinance, D.R.M.C. §§20-76 through 20-79, including, but not limited to, the requirement that every covered worker working on a City-owned or leased building or on City-owned land shall be paid no less than the prevailing wages and fringe benefits in effect on the date the bid or request for proposal was advertised. In the event a request for bids, or a request for proposal, was not advertised, Contractor shall pay every covered worker no less than the prevailing wages and fringe benefits in effect on the date funds for the Contract were encumbered.

Date bid or proposal issuance was advertised March 20, 2023.

**B.** Prevailing wage and fringe rates will adjust on the yearly anniversary of the actual date of bid or proposal issuance, if applicable, or the date of the written encumbrance if no bid/proposal issuance date is applicable. Unless expressly provided for in this Contract, Contractor will receive no additional compensation for increases in prevailing wages or fringe rates.

**C.** Contractor shall provide the Auditor of the City and County of Denver with a list of all subcontractors providing any services under the Contract.

**D.** Contractor shall provide the Auditor with electronically-certified payroll records for all covered workers employed under the Contract in a manner specified by the Auditor.

**E.** Contractor shall prominently post at the work site the current prevailing wage and fringe rates. The posting must inform workers that any complaints regarding the payment of prevailing wages or fringe benefits may be submitted to the Denver Auditor by calling 720-913-5000 or emailing [auditor@denvergov.org](mailto:auditor@denvergov.org).

**F.** If Contractor fails to pay workers as required by the Prevailing Wage Ordinance, Contractor will not be paid until documentation of payment satisfactory to the Auditor has been provided. The Auditor may enforce the Prevailing Wage Ordinance in a manner provided by law, including the Prevailing Wage Ordinance. The City also may, by written notice, suspend or terminate work if Contractor fails to pay required wages and fringe rates.

## **21. CITY PROMPT PAYMENT:**

**A.** The City will make monthly progress payments to the Contractor for all services performed under this Contract based upon the Contractor's monthly invoices or shall make payments as otherwise provided in this Contract. The City's Prompt Payment Ordinance, D.R.M.C. §§ 20-107 to 20-118, applies to invoicing and payment under this Contract.

**B.** Final Payment to the Contractor shall not be made until after the Project is accepted, and all certificates of completion, record drawings and reproducible copies, and other deliverables are delivered to the City, and the Contract is otherwise fully performed by the Contractor. The City may, at the discretion of the SVP, withhold reasonable amounts from billing and the entirety of the final payment until all such requirements are performed to the satisfaction of the SVP.

## **22. OWNERSHIP AND DELIVERABLES:**

Upon payment to Contractor, all records, data, deliverables, and any other work product prepared by Contractor or any custom development work performed by Contractor for the purpose of performing this Contract on or before the day of the payment, whether a periodic or final payment, shall become the sole property of the City. Upon request by the City, or based on any schedule agreed to by Contractor and the City, Contractor shall provide the City with copies of the data/files that have been uploaded to any database maintained by or on behalf of Contractor or otherwise saved or maintained by Contractor as part of the services provided to the City under this Contract. All such data/files shall be provided to the City electronically in a format agreed to by the Parties. Contractor also agrees to allow the City to review any of the procedures Contractor uses in performing any work or other obligations under this Contract, and to make available for inspection any and all notes, documents, materials, and devices used in the preparation for or performance of any of the scope of work, for up to six (6) years after termination of this Contract. Upon written request from the City, Contractor shall deliver any information requested pursuant to this Section within ten (10) business days in the event a schedule or otherwise agreed-upon timeframe does not exist.

## **23. COLORADO OPEN RECORDS ACT:**

**A.** Contractor acknowledges that the City is subject to the provisions of the Colorado Open Records Act ("**CORA**"), C.R.S. §§ 24-72-201 *et seq.*, and Contractor agrees that it will fully cooperate with the City in the event of a request or lawsuit arising under such act for the disclosure of any materials or information which Contractor asserts is confidential or otherwise exempt from disclosure. Any other provision of this Contract notwithstanding, all materials, records, and information provided by Contractor to the City shall be considered confidential by the City only to the extent provided in CORA, and Contractor agrees that any disclosure of information by the City consistent with the provisions of CORA shall result in no liability of the City.

**B.** In the event of a request to the City for disclosure of such information, time and circumstances permitting, the City will make a good faith effort to advise Contractor of such request in order to give Contractor the opportunity to object to the disclosure of any material



Contractor may consider confidential, proprietary, or otherwise exempt from disclosure. In the event Contractor objects to disclosure, the City, in its sole and absolute discretion, may file an application to the Denver District Court for a determination of whether disclosure is required or exempted. In the event a lawsuit to compel disclosure is filed, the City may tender all such material to the court for judicial determination of the issue of disclosure. In both situations, Contractor agrees it will either waive any claim of privilege or confidentiality or intervene in such legal process to protect materials Contractor does not wish disclosed. Contractor agrees to defend, indemnify, and hold harmless the City, its officers, agents, and employees from any claim, damages, expense, loss, or costs arising out of Contractor's objection to disclosure, including prompt reimbursement to the City of all reasonable attorney's fees, costs, and damages the City may incur directly or may be ordered to pay by such court, including but not limited to time expended by the City Attorney Staff, whose costs shall be computed at the rate specified in Section 5.

#### **24. EXAMINATION OF RECORDS AND AUDITS:**

**A.** Any authorized agent of the City, including the City Auditor or his or her representative, has the right to access, and the right to examine, copy and retain copies, at City's election in paper or electronic form, any pertinent books, documents, papers and records related to Contractor's performance pursuant to this Contract, provision of any goods or services to the City, and any other transactions related to this Contract. Contractor shall cooperate with City representatives and City representatives shall be granted access to the foregoing documents and information during reasonable business hours and until the latter of six (6) years after the final payment under the Contract or expiration of the applicable statute of limitations. When conducting an audit of this Contract, the City Auditor shall be subject to government auditing standards issued by the United States Government Accountability Office by the Comptroller General of the United States, including with respect to disclosure of information acquired during the course of an audit. No examination of records and audits pursuant to this paragraph shall require Contractor to make disclosures in violation of state or federal privacy laws. Contractor shall at all times comply with D.R.M.C. § 20-276.

**B.** Additionally, Contractor agrees until the expiration of six (6) years after the final payment under this Contract, any duly authorized representative of the City, including the CEO or their representative, shall have the right to examine any pertinent books, documents, papers and records of Contractor related to Contractor's performance of this Contract, including communications or correspondence related to Contractor's performance, without regard to whether the work was paid for in whole or in part with federal funds or was otherwise related to a federal grant program.

**C.** In the event the City receives federal funds to be used toward the services performed under this Contract, the Federal Aviation Administration ("FAA"), the Comptroller General of the United States and any other duly authorized representatives shall have access to any books, documents, papers and records of Contractor which are directly pertinent to a specific grant program for the purpose of making audit, examination, excerpts and transcriptions. Contractor further agrees that such records will contain information concerning the hours and specific services

performed along with the applicable federal project number.

## **25. MINIMUM WAGE REQUIREMENTS:**

To the extent required by law, Contractor shall comply with and agrees to be bound by all requirements, conditions, and City determinations regarding the City's Minimum Wage Ordinance, D.R.M.C. §§ 20-82 through 20-84, including, but not limited to, the requirement that every covered worker shall be paid no less than the City Minimum Wage in accordance with the City's Minimum Wage Ordinance. By executing this Contract, Contractor expressly acknowledges that Contractor is aware of the requirements of the City's Minimum Wage Ordinance and that any failure by Contractor, or any other individual or entity acting subject to this Contract, to strictly comply with the foregoing D.R.M.C. Sections shall result in the penalties and other remedies authorized therein.

## **26. COMPLIANCE WITH SMALL BUSINESS ENTERPRISE REQUIREMENTS:**

**A.** This Agreement is subject to D.R.M.C. Article VII of Chapter 28, designated as §§ 28-201 to 28-236 (the "**SBE Ordinance**"), and the Rules and Regulations promulgated pursuant thereto. This Agreement is also subject to the defined selection pool requirements of the SBE Ordinance. The Contractor is a certified Small Business Enterprise ("**SBE**") and pursuant to § 28-208, D.R.M.C., the Contractor is required to self-perform a minimum of 30% of the contract work.

**B.** Under § 28-222, D.R.M.C., the Contractor has an ongoing, affirmative obligation for the duration of this Agreement to comply with the SBE defined selection pool requirements and with the SBE self-performance requirements upon which this Agreement was awarded, unless the City initiates a material modification to the scope of work affecting this Agreement through change order, contract amendment, force account, or other modification under § 28-223, D.R.M.C. The Contractor acknowledges that:

- (1) It must establish and maintain records and submit regular reports, as required, which will allow the City to assess the Contractor's compliance with the defined selection pool requirements and SBE self-performance requirements.
- (2) Contractor shall have a continuing obligation to promptly inform DSBO in writing of any agreed upon increase or decrease in the scope of work of this Agreement, upon any of the bases under § 28-223, D.R.M.C., regardless of whether such increase or decrease in scope of work has been reduced to writing at the time of notification of the change to the City. Any increase in the scope of services of this Agreement, whether by amendment or other modification, which increases the dollar value of the Agreement, if such change is within the scope of work designated for performance by the Contractor at the time of award of this Agreement, shall be promptly submitted to the DSBO.

- (3) The Contractor shall achieve defined selection pool requirements and self-performance requirements with respect to such changed scope of work by performing such work.
- (4) The Contractor shall supply to DSBO documentation required by ordinance with respect to the increased dollar value of this Agreement. The Contractor shall not, during the term of this Agreement:
  - (i) Fail to in fact perform as an SBE to achieve the work scope originally listed at proposal submission in order to achieve defined selection pool and self-performance requirements; or
  - (ii) Modify or eliminate all or any portion of the scope of work upon which self-performance is based and the contract was awarded, unless directed by the City.
- (5) Failure to comply with these provisions may subject the Contractor to sanctions set forth in § 28-229 of the SBE Ordinance.
- (6) Should any questions arise regarding SBE and DSBO requirements the Contractor should consult the SBE Ordinance or may contact the DSBO representative at (720) 913-1999.

## **27. SENSITIVE SECURITY INFORMATION:**

Contractor acknowledges that, in the course of performing its work under this Contract, Contractor may be given access to Sensitive Security Information (“SSI”), as material is described in the Code of Federal Regulations, 49 C.F.R. Part 1520. Contractor specifically agrees to comply with all requirements of the applicable federal regulations, including but not limited to, 49 C.F.R. Parts 15 and 1520. Contractor understands any questions it may have regarding its obligations with respect to SSI must be referred to DEN’s Security Office.

## **28. DEN SECURITY:**

**A.** Contractor, its officers, authorized officials, employees, agents, subcontractors, and those under its control, shall comply with safety, operational, or security measures required of Contractor or the City by the FAA or TSA (“**Transportation Security Administration**”). If Contractor, its officers, authorized officials, employees, agents, subcontractors or those under its control, fail or refuse to comply with said measures and such non-compliance results in a monetary penalty being assessed against the City, then, in addition to any other remedies available to the City, Contractor shall fully reimburse the City any fines or penalties levied against the City, and any attorney fees or related costs paid by the City as a result of any such violation. Contractor must pay this amount within fifteen (15) days from the date of the invoice or written notice. Any fines and fees assessed by the FAA or TSA against the City due to the actions of Contractor and/or its agents will be deducted directly from the invoice for that billing period.

**B.** Contractor is responsible for compliance with Airport Security regulations and 49 C.F.R. Parts 1542 (Airport Security) and 14 C.F.R. Parts 139 (Airport Certification and

Operations). Any and all violations pertaining to Parts 1542 and 139 resulting in a fine will be passed on to and borne by Contractor. The fee/fine will be deducted from the invoice at time of billing.

## **29. FEDERAL RIGHTS:**

**A.** This Contract is subject and subordinate to the terms, reservations, restrictions and conditions of any existing or future contracts between the City and the United States, the execution of which has been or may be required as a condition precedent to the transfer of federal rights or property to the City for airport purposes, and the expenditure of federal funds for the extension, expansion or development of the Airport System.

(i) General Civil Rights: Contractor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal Assistance. This provision binds Contractor and subcontractors from the bid solicitation period through the completion of the Contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

(ii) Federal Fair Labor Standards Act: This Contract incorporates by reference the provisions of 29 C.F.R. Part 201, the Federal Fair Labor Standards Act (“**FLSA**”), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part-time workers. Contractor agrees to incorporate by reference the provisions of FLSA in all contracts and subcontracts resulting from this Contract. Contractor has full responsibility to monitor compliance to the referenced regulation. Contractor must address any claims or disputes arising from this requirement directly with the U.S. Department of Labor – Wage and Hour Division.

(iii) Occupational Safety and Health Act: This Contract incorporates by reference the requirements of 29 C.F.R. Part 1910 with the same force and effect as if given in full text. Contractor must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. Contractor retains full responsibility to monitor its compliance and any subcontractor’s compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (29 C.F.R. Part 1910). Contractor must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

(iv) Contractor covenants it will include the provisions of this section in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Federal Acts, Regulations and directives issued pursuant thereto. Contractor covenants it will take action with respect to any subcontract or procurement as the City or the FAA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, Contractor may request

the City to enter into any litigation to protect the interests of the City. In addition, Contractor may request the United States to enter into the litigation to protect the interests of the United States.

**30. CITY EXECUTION OF CONTRACT:**

This Contract is expressly subject to, and shall become effective upon, the execution of all signatories of the City and, if required, the approval of Denver City Council. This Contract may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same.

**31. ELECTRONIC SIGNATURES AND ELECTRONIC RECORDS:**

The Contract, and any other documents requiring a signature hereunder, may be signed electronically by the City and/or Contractor in the manner specified by the City. The Parties agree not to deny the legal effect or enforceability of the Contract solely because it is in electronic form or because an electronic record was used in its formation. The Parties agree not to object to the admissibility of the Contract in the form of an electronic record, or a paper copy of an electronic document, or a paper copy of a document bearing an electronic signature, on the ground that it is an electronic record or electronic signature or that it is not in its original form or is not an original.

**[SIGNATURE PAGES FOLLOW]**

## **EXHIBIT A**

### **Federal Title VI Assurances**

## COMPLIANCE WITH NONDISCRIMINATION REQUIREMENTS:

During the performance of this contract, the Consultant, for itself, its assignees, and successors in interest (hereinafter collectively referred to as the “Consultant”), agrees as follows:

1. **Compliance with Regulations:** The Consultant (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Nondiscrimination:** The Consultant, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Consultant will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.
3. **Solicitations for Subcontracts, including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding or negotiation made by the Consultant for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Consultant of the Consultant’s obligations under this contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.
4. **Information and Reports:** The Consultant will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities and instructions. Where any information required of a Consultant is in the exclusive possession of another who fails or refuses to furnish the information, the Consultant will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a Consultant’s noncompliance with the non-discrimination provisions of this contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:
  - a. Withholding payments to the Consultant under the contract until the Consultant complies; and/or
  - b. Cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The Consultant will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations, and directives issued pursuant

thereto. The Consultant will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Consultant becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Consultant may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the Consultant may request the United States to enter into the litigation to protect the interests of the United States.

## **TITLE VI LIST OF PERTINENT NONDISCRIMINATION ACTS AND AUTHORITIES**

During the performance of this contract, the Consultant, for itself, its assignees, and successors in interest (hereinafter referred to as the “Consultant”) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 USC § 2000d et seq., 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR part 21 (Non-discrimination in Federally-assisted programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act of 1964);
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 USC § 4601) (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973 (29 USC § 794 et seq.), as amended (prohibits discrimination on the basis of disability); and 49 CFR part 27;
- The Age Discrimination Act of 1975, as amended (42 USC § 6101 et seq.) (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982 (49 USC § 471, Section 47123), as amended (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987 (PL 100-209) (broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, the Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 USC §§ 12131 – 12189) as implemented by U.S. Department of Transportation regulations at 49 CFR parts 37 and 38;
- The Federal Aviation Administration’s Nondiscrimination statute (49 USC § 47123)



(prohibits discrimination on the basis of race, color, national origin, and sex);

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 USC 1681 et seq).

**EXHIBIT B**

**CITY AND COUNTY OF DENVER  
RULES AND REGULATIONS AND BID  
CONDITIONS OF THE  
MANAGER OF PUBLIC WORKS**

**PERTAINING TO EQUAL EMPLOYMENT OPPORTUNITY  
IN THE CITY AND COUNTY OF DENVER**

APPROVED FOR LEGALITY:

APPROVED AND ADOPTED:

/s/ \_\_\_\_\_  
Attorney for the City and  
County of Denver

/s/ \_\_\_\_\_  
Manager of Public Works

Adopted and Published Pursuant to Article 111, Division 2 of Chapter 28  
the Revised Municipal Code  
of the City and County of Denver

These Rules and Regulations cancel and supersede any and all previous issued Rules and  
Regulations on the subject

**RULES AND REGULATIONS**  
**REGARDING**  
**EQUAL EMPLOYMENT OPPORTUNITY**

Promulgated and adopted by the Manager of Public Works pursuant to and by authority of Article III, Division 2, Chapter 28 of the Revised Municipal Code of the City and County of Denver, and for the purpose of insuring that contractors, subcontractors and suppliers soliciting and receiving compensation for contract work from or through the City and County of Denver provide equal opportunity in employment without regard to race, color, creed, sex, national origin, age, religion, marital status, political opinion or affiliation or mental or physical handicap and meet certain requirements for the hiring, training, promotion and treatment during employment of members of ethnic groups subjected to differential treatment, including persons of African descent (Black), Spanish-surnamed (Hispanic), Asian-American and American Indian groups.

**RULE I**  
**DEFINITIONS**

- A. "City" means the City and County of Denver.
- B. "Manager" shall mean the Manager of Public Works for the City and County of Denver.
- C. "Contract" means a contract entered into with the City and County of Denver, financed in whole or in part by local resources or funds of the City and County of Denver, for the construction of any public building or prosecution or completion of any public work.
- D. "Contractor" means the original party to a contract with the City and County of Denver, also referred to as the "general" or "prime" contractor.
- E. "Director" means the Director of the Mayor's Office of Contract Compliance.
- F. "Subcontractor" means any person, company, association, partnership, corporation, or other entity which assumes by subordinate agreement some or all of the obligations of the general or prime contractor.
- G. The Phrase "Bidding Specifications" as used in Article 111, Division 2 of Chapter 28 of the Revised Municipal Code shall include BID CONDITION, INVITATION TO BID AND NOTICE OF PROPOSAL.
- H. "Affirmative Action Program" means a set of specific and result-oriented procedures or steps to which a contractor commits himself to apply every good faith effort to employ members of ethnic minority groups, to include persons of African descent (Black), Spanish surnamed (Hispanic), Asian-American, American Indians, and persons with mental or physical handicap.
- I. "Mayor's Office of Contract Compliance" means the City agency established pursuant to Article III, Division 1 of Chapter 28 of the Denver Revised Municipal Code.

**RULE II**  
**NOTICE OF HEARING**

When results of conciliation efforts are unsatisfactory to the Manager and he is informed in accordance with Article III, Division 2 of Chapter 28 of the Revised Municipal Code that a contractor or subcontractor has apparently failed to meet affirmative action and equal employment opportunity requirements after a reasonable period of notice to correct deficiencies, the Manager will, prior to imposition of any sanctions, afford the general contractor a hearing in order to determine whether the contractor or his subcontractors have failed to comply with the affirmative action and equal employment opportunity requirements of Article III, Division 2 of Chapter 28 of the Revised Municipal Code or of the contract. Written notice of such hearing shall be delivered personally or sent by certified mail return receipt requested, to the contractor and to any subcontractor involved at least ten days prior to the date scheduled for the hearing.

**RULE III**  
**HEARING**

- A. Contractors will appear at hearings and may be represented by counsel, and may present testimony orally and other evidence.
- B. Hearings shall be conducted by one or more hearing examiners designated as such by the Manager.
- C. The Director of the Mayor's Office of Contract Compliance may participate in hearings as a witness.
- D. Hearings shall be held at the place specified in the notice of hearing.
- E. All oral testimony shall be given under oath or affirmation and a record of such proceedings shall be made.
- F. All hearings shall be open to the public.
- G. The hearing officer shall make recommendations to the Manager who shall make a final decision.

**REGULATIONS**

**REGULATION NO. 1. ORDINANCE:** The Rules and Regulations of the Manager shall be inserted in the bidding specifications for every contract for which bidding is required.

**REGULATION NO. 2. EXEMPTIONS:** Each contract and subcontract, regardless of dollar amount, shall be subject to affirmative action requirements unless specifically exempted in writing individually by the Manager. Exemptions apply only to "affirmative action" in equal employment opportunity, and are not to be construed as condonation in any manner of "discrimination" or "discriminatory practices" in employment because of race, color, creed sex age national origin, religion, marital status, political opinion or mental or physical handicap.

**REGULATION NO. 3. DIRECTOR OF CONTRACT COMPLIANCE:** The Director of the Mayor's Office of Contract Compliance shall perform the duties assigned to such official by Article III, Division 2 of Chapter 28 of the Revised Municipal Code and by the Manager. (1) The Director of the Mayor's Office of Contract Compliance or designated representatives shall inform bidders and contractors of affirmative action procedures, programs, and goals in accordance with the ordinance at pre-bid and pre-construction conference; (2) make regular on-site inspections; (3) supply contractors and subcontractors with report forms to be completed by them when requested, and furnished to the Director of the Mayor's Office of Contract Compliance; and (4) review payroll records, employment records and practices of general contractors and their subcontractors and suppliers during the performance of any contract. The Director of the Mayor's Office of Contract Compliance shall promptly report apparent affirmative action deficiencies to the Manager.

**REGULATION NO. 4. GOALS AND TIMETABLES:** In general, goals and timetables should take into account anticipated vacancies and the availability of skills in the market place from which employees should be drawn. In addition, where discrimination in employment by a general contractor or any of his subcontractors is indicated, a corrective action program will take into account the need by the general contractor and his subcontractors to correct past discriminatory practices and reach goals of minority manpower utilization on a timely basis through such recruiting and advertising efforts as are necessary and appropriate.

**REGULATION NO.5. AWARD OF CONTRACTS:** It shall be the responsibility of the Director of the Mayor's Office of Contract Compliance to determine the affirmative action capability of bidders, contractors and subcontractors and to recommend to the Manager the award of contracts to those bidders, contractors and subcontractors and suppliers who demonstrate the ability and willingness to comply with the terms of their contract.

**REGULATION NO. 6. PUBLICATION AND DUPLICATION:** Copies of these Rules and Regulations as amended by the Manager from time to time, shall as soon as practicable and after Notice being published will be made a part of all City Contracts.

**REGULATION NO. 7. NOTICE TO PROCEED:** Prior to issuance of Notice to Proceed a sign-off will be required of the Director of the Mayor's Office of Contract Compliance or his designee.

**REGULATION NO. 8. CONTRACTS WITH SUBCONTRACTORS:** To the greatest extent possible the contractor shall make a good faith effort to contract with minority contractors, subcontractors and suppliers for services and supplies by taking affirmative actions which include but are not limited to the following:

1. Advertise invitations for subcontractor bids in minority community news media.
2. Contact minority contractor organizations for referral of prospective subcontractors.
3. Purchase materials and supplies from minority material suppliers.

**REGULATION NO. 9. AGENCY REFERRALS:** it shall be no excuse that the union with which the contractor or subcontractor has an agreement providing for referral, exclusive or otherwise, failed to refer minority employees.

**REGULATION NO. 10. CLAUSES:** The Manager shall include the appropriate clauses in every contract and the contractor shall cause to be inserted in every subcontract the appropriate clauses:

1. **APPENDIX A:** City and County of Denver Equal Opportunity Clause-ALL CONTRACTS funded only with City & County of Denver monies.
2. **APPENDIX B:** Equal Opportunity Clause (11246)-ALL FEDERAL ASSISTED
3. **APPENDIX C:** Section 3-Assurance of Compliance-HUD ASSISTED PROJECTS.
4. **APPENDIX D:** Section 3-Clause-HUD ASSISTED PROJECTS.

All amendments to the appendices shall be included by reference.

**REGULATION NO. 11. SHOW CAUSE NOTICES:** When the Manager has reasonable cause to believe that a contractor has violated Article III, Division 2 of Chapter 28 of the Revised Municipal Code, he may issue a notice requiring the contractor to show cause, within fifteen days why enforcement procedures, or other appropriate action to insure compliance, should not be instituted.

**REGULATION NO. 12.    **BID CONDITIONS-AFFIRMATIVE ACTION  
REQUIREMENTS-  
EQUAL EMPLOYMENT OPPORTUNITY:****

**1. APPENDIX E:**

The Bid Conditions- Affirmative Action Requirements-Equal Employment Opportunity as amended and published by the U.S. Department of Labor, Employment Standards Administration, Office of Federal Contract Compliance, shall be inserted verbatim for bidding specification for every non-exempt contract involving the use of Federal funds.

**2. APPENDIX F:**

The Bid Conditions- Affirmative Action Requirements-Equal Employment Opportunity as published by the Department of Public Works, City and County of Denver shall be inserted verbatim as bidding specifications for every non-exempt contract using City funds.

## APPENDIX A

### **CITY AND COUNTY OF DENVER EQUAL OPPORTUNITY CLAUSE-ALL CONTRACTS**

1. The contractor will not discriminate against any employee or applicant for employment because of race creed, color, sex, age, national origin, religion, marital status, political opinion or affiliation, or mental or physical handicap. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, creed, color, sex, age, national origin, religion, marital status, political opinion or affiliation, or mental or physical handicap. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
2. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, sex, age, national origin, religion, marital status, political opinion or affiliation, or mental or physical handicap.
3. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided, advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. Each contractor will comply with all provisions of Article III, Division 2, Chapter 28 of the Revised Municipal Code, and the rules, regulations, and relevant orders of the Manager and Director.
5. The contractor will furnish all information and reports required by Article III, Division 2, Chapter 28 of the Revised Municipal Code, and by rules, regulations and orders of the Manager and Director or pursuant thereto, and will permit access to his books, records, and accounts by the Manager, Director or their designee for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
6. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations or orders this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further City contracts in accordance with procedures authorized in Article III, Division 2, Chapter 28 of the Revised Municipal Code, or by rules, regulations, or order of the Manager.
7. The contractor will include Regulation 12 Paragraph 2 and the provisions of paragraphs (1) through (6) in every subcontract or purchase order unless, exempted by rules, regulations, or orders of the Manager issued pursuant to Article III, Division 2, Chapter 28 of the Revised Municipal Code, so that such provisions will be binding upon each subcontractor or suppliers. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance.

The applicant further agrees to be bound by the above equal opportunity clauses with respect to its own employment practices when it participates in City contracts. The contractor agrees to assist and cooperate actively with the Manager and the Director in obtaining compliance of subcontractors and suppliers with the equal opportunity clause and the rules, regulations and relevant orders of the Manager, and will furnish the Manager and the Director such information as they may require for the supervision of compliance, and will otherwise assist the Manager and Director in the discharge of the City's primary responsibility for securing compliance. The contractor further agrees to refrain from entering into any contract or contract modification subject to Article III, Division 2, Chapter 28 of the Revised Municipal Code with a contractor debarred from, or who has not demonstrated eligibility for, City contracts.

The contractor will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the Manager and Director. In addition, the contractor agrees that failure or refusal to comply with these undertakings the Manager may take any or all of the following actions:

- A. Cancellation, termination, or suspension in whole or in part of this contract.
- B. Refrain from extending any further assistance to the applicant under the program with respect to which the failure occurred until satisfactory assurance of future compliance has been received from such applicant.
- C. Refer the case to the City Attorney for appropriate legal proceedings.

**SUBCONTRACTS:** Each prime contractor or subcontractor shall include the equal opportunity clause in each of its subcontracts.



**APPENDIX F  
BID CONDITIONS  
AFFIRMATIVE ACTION REQUIREMENTS  
EQUAL EMPLOYMENT OPPORTUNITY**

For all Non-Exempt Construction Contracts to be Awarded by  
the City and County of Denver, Department of Public Works

**NOTICE**

EACH BIDDER, CONTRACTOR OR SUBCONTRACTOR (HEREINAFTER THE CONTRACTOR) MUST FULLY COMPLY WITH THE REQUIREMENTS OF THESE BID CONDITIONS AS TO EACH CONSTRUCTION TRADE IT INTENDS TO USE ON THIS CONSTRUCTION CONTRACT, AND ALL OTHER CONSTRUCTION WORK (BOTH CITY AND NON-CITY) IN THE DENVER AREA DURING THE PERFORMANCE OF THIS CONTRACT OR SUBCONTRACT. THE CONTRACTOR COMMITS ITSELF TO THE GOALS FOR MINORITY MANPOWER UTILIZATION, AS APPLICABLE, AND ALL OTHER REQUIREMENTS, TERMS AND CONDITION OF THESE BID CONDITIONS BY SUBMITTING A PROPERLY SIGNED BID.

THE CONTRACTOR SHALL APPOINT A COMPANY EXECUTIVE TO ASSUME THE RESPONSIBILITY FOR THE IMPLEMENTATION OF THE REQUIREMENTS, TERMS AND CONDITIONS OF THESE BID CONDITIONS.

EULOIS CLECKLEY  
Manager of Public Works  
City and County of Denver

**A. REQUIREMENTS --AN AFFIRM ATIVE ACTION PLAN:**

Contractors shall be subject to the provisions and requirements of these bid conditions including the goals and timetables for minority' and female utilization, and specific affirmative action steps set forth by the Office of Contract Compliance. The contractor's commitment to the goals for minority, and female utilization as required constitutes a commitment that it will make every good faith effort to meet such goals.

**1. GOALS AND TIMETABLES:**

The goals and timetables for minority<sup>1</sup> and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade are as follows:

**GOALS FOR MINORITY PARTICIPATION  
FOR EACH TRADE**

From January 1, 1982  
to 21.7% - 23.5%  
Until Further Notice

**GOALS FOR FEMALE PARTICIPATION  
FOR EACH TRADE**

From January 1, 1982  
to 6.9%  
Until Further Notice

The goals for minority and female utilization above are expressed in terms of hours of training and employment as a proportion of the total number of hours to be worked by the contractor's aggregate workforce, which includes all supervisory personnel, in each trade, on all projects for the City and County of Denver during the performance of its contract (i.e., The period beginning with the first day of work on the City and County of Denver funded construction contract and ending with the last day of work).

The hours of minority and female employment and training must be substantially uniform throughout the length of the contract in each trade and minorities and females must be employed evenly on each of a contractor's projects. Therefore, the transfer of minority or female employees from contractor to contractor or from project to project for the purpose of meeting the contractor's goals shall be a violation of these Bid Conditions.

If the contractor counts the nonworking hours of apprentices they must be employed by the contractor during the training period; the contractor must have made a commitment to employ apprentices at the completion of their training subject to the availability of employment opportunities; and the apprentices must be trained pursuant to training programs approved by the Bureau of Apprenticeship and Training.

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<sup>1</sup> "Minority" is defined as including, Blacks, Spanish Surname Americans, Asian-Americans, and American Indians, and includes both men and Minority women.

## 2. **SPECIFIC AFFIRMATIVE ACTION STEPS:**

No contractor shall be found to be in noncompliance solely on account of its failure to meet its goals, but will be given an opportunity to demonstrate that the contractor has instituted all the specific affirmative action steps specified and has made every good faith effort to make these steps work toward the attainment of its goals within the timetables, all to the purpose of expanding minority and female utilization in its aggregate workforce. A contractor, who fails to comply with its obligation under the Equal Opportunity Clause of its contract and fails to achieve its commitments to the goals for minority and female utilization has the burden of proving that it has engaged in an Affirmative Action Program directed at increasing minority and female utilization and that such efforts were at least as extensive and as specific as the following:

- a. The contractor should have notified minority and female organizations when employment opportunities were available and should have maintained records of the organization's response.
- b. The contractor should have maintained a file of the names and addresses of each minority and female referred to it by any individual or organization and what action was taken with respect to each such referred individual, and if the individual was not employed by the contractor, the reasons. If such individual was sent to the union hiring hall for referral and not referred back by the union or if referred, not employed by the contractor, the file should have documented this and their reasons.
- c. The contractor should have promptly notified the Department of Public Works, and Mayor's Office of Contract Compliance when the union or unions with which the contractor has collective bargaining agreements did not refer to the contractor a minority or female sent by the contractor, or when the contractor has other information that the union referral process has impeded efforts to meet its goals.
- d. The contractor should have disseminated its EEO policy within its organization by including it in any employee handbook or policy manual; by publicizing it in company newspapers and annual reports and by advertising such policy at reasonable intervals in union publications. The EEO policy should be further disseminated by conducting staff meetings to explain and discuss the policy; by posting of the policy; and by review of the policy with minority and female employees.
- e. The contractor should have disseminated its EEO policy externally by informing and discussing it with all recruitment sources; by advertising in news media, specifically including minority and female news media; and by notifying and discussing it with all subcontractors.
- f. The contractor should have made both specific and reasonably recurrent written and oral recruitment efforts. Such efforts should have been directed at minority and female organizations, schools with substantial minority and female enrollment, and minority and female recruitment and training organizations within the contractor's recruitment area.

- g. The contractor should have evidence available for inspection that all tests and other selection techniques used to select from among candidates for hire, transfer, promotion, training, or retention are being used in a manner that does not violate the OFCCP Testing Guidelines in 41 CFR Part 60-3.
- h. The contractor should have made sure that seniority practices and job classifications do not have a discriminatory effect.
- i. The contractor should have made certain that all facilities are not segregated by race.
- j. The contractor should have continually monitored all personnel activities to ensure that its EEO policy was being carried out including the evaluation of minority and female employees for promotional opportunities on a quarterly basis and the encouragement of such employees to seek those opportunities.
- k. The contractor should have solicited bids for subcontracts from available minority and female subcontractors engaged in the trades covered by these Bid conditions, including circulation of minority and female contractor associations.

**NOTE:** The Director and the Mayor's Office of Contract Compliance will provide technical assistance on questions pertaining to minority and female recruitment sources, minority and female community organizations, and minority and female news media upon receipt of a request for assistance from a contractor.

**3. NON-DISCRIMINATION:**

In no event may a contractor utilize the goals and affirmative action steps required in such a manner as to cause or result in discrimination against any person on account of race, color, religion, sex, marital status, national origin, age, mental or physical handicap, political opinion or affiliation.

**4. COMPLIANCE AND ENFORCEMENT:**

In all cases, the compliance of a contractor will be determined in accordance with its obligations under the terms of these Bid Conditions. All contractors performing or to perform work on projects subject to these Bid Conditions hereby agree to inform their subcontractors in writing of their respective obligations under the terms and requirements of these Bid Conditions, including the provisions relating to goals of minority and female employment and training.

**A. Contractors Subject to these Bid Conditions:**

In regard to these Bid Conditions, if the contractor meets the goals set forth therein or can demonstrate that it has made every good faith effort to meet these goals, the contractor shall be presumed to be in compliance with Article III, Division 2, Chapter 28 of the Revised Municipal Code, the implementing regulations and its obligations under these Bid Conditions. In the event, no formal sanctions or proceedings leading toward sanctions shall be instituted unless the contracting or administering agency otherwise determines that the contractor is violating the Equal Opportunity Clause.

- 1. Where the Office of Contract Compliance finds that a contractor failed to comply with the requirements of Article 111, Division 2, Chapter 28 of the Revised Municipal

Code or the implementing regulations and the obligations under these Bid Conditions, and so informs the Manager, the Manager shall take such action and impose such sanctions, which include suspension, termination, cancellation, and debarment, as may be appropriate under the Ordinance and its regulations. When the Manager proceeds with such formal action it has the burden of proving that the contractor has not met the goals contained in these Bid Conditions. The contractor's failure to meet its goals shall shift to it the requirement to come forward with evidence to show that it has met the good faith requirements of these Bid Conditions.

2. The pendency of such proceedings shall be taken into consideration by the Department of Public Works in determining whether such contractor can comply with the requirements of Article 111, Division 2, Chapter 28 of the Revised Municipal Code, and is therefore a "responsible prospective contractor".
3. The Mayor's Office of Contract Compliance shall review the contractor's employment practices during the performance of the contract. If the Mayor's Office of Contract Compliance determines that the contractor's Affirmative Action Plan is no longer an acceptable program, the Director shall notify the Manager.

**B. Obligations Applicable to Contractors:**

It shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority or female employees. Discrimination in referral for employment, even if pursuant to provisions of a collective bargaining agreement, is prohibited by the National Labor Relations Act, as amended, Title VI of the Civil Rights Act of 1964, as amended, and Article III, Division 2, Chapter 28 of the Revised Municipal Code. It is the policy of the Department of Public Works that contractors have a responsibility to provide equal employment opportunity, if they wish to participate in City and County of Denver contracts. To the extent they have delegated the responsibility for some of their employment practices to a labor organization and, as a result, are prevented from meeting their obligations pursuant to Article III, Division 2, Chapter 28 of the Revised Municipal Code, such Contractors cannot be considered to be in compliance with Article III, Division 2, Chapter 28 of the Revised Municipal Code, or its implementing rules and regulations.

**C. General Requirements**

Contractors are responsible for informing their subcontractors in writing regardless of tier, as to their respective obligations. Whenever a contractor subcontracts a portion of work in any trade covered by these Bid Conditions, it shall include these Bid Conditions in such subcontracts and each subcontractor shall be bound by these Bid Conditions to the full extent as if it were the prime contractor. The contractor shall not, however, be held accountable for the failure of its subcontractors to fulfill their obligations under these Bid Conditions. However, the prime contractor shall give notice to the Director of any refusal or failure of any subcontractor to fulfill the obligations under these Bid Conditions. A subcontractor's failure to comply will be treated in the same manner as such failure by a prime contractor.

1. Contractors hereby agree to refrain from entering into any contract or contract modification subject to Article 111, Division 2, Chapter 28 of the Revised Municipal Code with a contractor debarred from, or who is determined not to be a "responsive" bidder for the City and County of Denver contracts pursuant to the Ordinance.
2. The contractor shall carry out such sanctions and penalties for violation of these Bid Conditions and the Equal Opportunity Clause including suspension, termination and cancellation of existing subcontracts and debarment from future contracts as may be ordered by the Manager pursuant to Article 111, Division 2, Chapter 28 of the Revised Municipal Code and its implementing regulations.
3. Nothing herein is intended to relieve any contractor during the term of its contract from compliance with Article III, Division 2, Chapter 28 of the Revised Municipal Code, and the Equal Opportunity Clause of its contract with respect to matters not covered in these Bid Conditions.
4. Contractors must keep such records and file such reports relating to the provisions of these Bid Conditions as shall be required by the Office of Contract Compliance.
5. Requests for exemptions from these Bid Conditions must be made in writing, with justification, to the Manager of Public Works, City and County Building, Room 379, Denver, Colorado 80202, and shall be forwarded through and with the endorsement of the Director.

**X. ATTACHMENT 5, PERFORMANCE AND PAYMENT BOND****PERFORMANCE BOND**

**KNOW ALL MEN BY THESE PRESENTS**, that we, the undersigned \_\_\_\_\_ [Bidder name], a corporation organized under the laws of the State of \_\_\_\_\_ [Bidder state], hereinafter referred to as the "Contractor" and \_\_\_\_\_ [Bond issuer], a corporation organized under the laws of the State of \_\_\_\_\_ [Bond company state], and authorized to transact business in the State of Colorado, hereinafter referred to as Surety, are held and firmly bound unto the CITY AND COUNTY OF DENVER, a municipal corporation of the State of Colorado, hereinafter referred to as the "CITY", in the penal sum of \_\_\_\_\_ [Bid amount text] Dollars (\$ \_\_\_\_\_), lawful money of the United States of America, for the payment of which sum the Contractor and Surety bind themselves and their heirs, executors, administrators, successors and assigns, jointly and severally by these presents.

**WHEREAS**, the above Contractor has, as of the date of execution listed on the contract signature page, entered into a written contract with the City for furnishing all labor, materials, equipment, tools, superintendence, and other facilities and accessories for the construction of 202366978, Gun Club On-Ramp to Peña Boulevard, Denver International Airport, in accordance with the Technical Specifications, Contract Drawings and all other Contract Documents therefor which are incorporated herein by reference and made a part hereof, and are herein referred to as the Contract.

**NOW, THEREFORE**, the condition of this performance bond is such that if the Contractor:

1. Promptly and faithfully observes, abides by, and performs each and every covenant, condition, and part of said Contract, including, but not limited to, its warranty provisions, in the time and manner prescribed in the Contract, and
2. Pays the City all losses, damages (liquidated or actual, including, but not limited to, damages caused by delays in the performance of the Contract), expenses, costs and attorneys' fees, that the City sustains resulting from any breach or default by the Contractor under the Contract, then this bond is void; otherwise, it shall remain in full force and effect.

**IN ADDITION**, if said Contractor fails to duly pay for any labor, materials, team hire, sustenance, provisions, provender, or any other supplies used or consumed by said Contractor or its subcontractors in its performance of the work contracted to be done or fails to pay any person who supplies rental machinery, tools, or equipment, all amounts due as the result of the use of such machinery, tools, or equipment in the prosecution of the work, the Surety shall pay the same in an amount not exceeding the amount of this obligation, together with interest as provided by law.

**PROVIDED FURTHER**, that the said Surety, for value received, hereby stipulates, and agrees that any and all changes in the Contract or compliance or noncompliance with the formalities in the Contract for making such changes shall not affect the Surety's obligations under this bond and the Surety hereby waives notice of any such changes.

(End of Page)

**IN WITNESS WHEREOF**, said Contractor and said Surety have executed these presents as of this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
CONTRACTOR

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

\_\_\_\_\_  
SURETY

By: \_\_\_\_\_  
Attorney-in-Fact

(Accompany this bond with Attorney-in-Fact's authority from the Surety to execute bond, certified to include the date of the bond.)

**CITY AND COUNTY OF DENVER**

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

By: \_\_\_\_\_  
Chief Executive Officer  
Denver International Airport

**APPROVED AS TO FORM:**

KERRY TIPPER, Attorney for the  
City and County of Denver

By: \_\_\_\_\_  
Assistant City Attorney



**PAYMENT BOND**

**KNOW ALL MEN BY THESE PRESENTS**, that we, the undersigned \_\_\_\_\_  
[Bidder name], a corporation organized under the laws of the State of \_\_\_\_\_ [Bidder state],  
hereinafter referred to as the "Contractor" and \_\_\_\_\_ [Bonding company  
name], a corporation organized under the laws of the State of \_\_\_\_\_ [Bonding company  
state], and authorized to transact business in the State of Colorado, hereinafter referred to as Surety, are  
held and firmly bound unto the CITY AND COUNTY OF DENVER, a municipal corporation of the State of  
Colorado, hereinafter referred to as the "CITY", in the penal sum of  
\_\_\_\_\_ [Bid amount text] Dollars  
(\$ \_\_\_\_\_), lawful money of the United States of America, for the payment of which sum  
the Contractor and Surety bind themselves and their heirs, executors, administrators, successors and  
assigns, jointly and severally, firmly by these presents.

**WHEREAS**, the above Contractor has entered into a written contract with the City for furnishing all labor,  
materials, tools, superintendence, and other facilities and accessories for the construction of Contract No.  
202366978, Denver International Airport, in accordance with the Technical Specifications, Contract  
Drawings and all other Contract Documents therefor which are incorporated herein by reference and  
made a part hereof and are herein referred to as the Contract.

**NOW, THEREFORE**, the condition of this payment bond obligation is such that if the Contractor shall at all  
times promptly make payments of all amounts lawfully due to all persons supplying or furnishing it or its  
subcontractors with labor and materials, rental machinery, tools, or equipment, used or performed in the  
prosecution of work provided for in the above Contract and shall indemnify and save harmless the City to  
the extent of any and all payments in connection with the carrying out of such Contract which the City  
may be required to make under the law, then this obligation shall be null and void, otherwise, it shall  
remain in full force and effect;

**PROVIDED FURTHER**, that the said Surety, for value received, hereby stipulates, and agrees that any and  
all changes in the Contract, or compliance or noncompliance with the formalities in the Contract for  
making such changes shall not affect the Surety's obligations under this bond and the Surety hereby  
waives notice of any such changes.

[END OF PAGE]

**IN WITNESS WHEREOF**, said Contractor and said Surety have executed these presents as of this \_\_\_\_  
day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
CONTRACTOR

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

\_\_\_\_\_  
SURETY

By: \_\_\_\_\_  
Attorney-in-Fact

(Accompany this bond with Attorney-in-Fact's authority from the Surety to execute bond, certified to include the date of the bond.)

CITY AND COUNTY OF DENVER

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

By: \_\_\_\_\_  
Chief Executive Officer  
Denver International Airport

APPROVED AS TO FORM:

KERRY TIPPER, Attorney for the  
City and County of Denver

By: \_\_\_\_\_  
Assistant City Attorney

**XI. ATTACHMENT 6, PREVAILING WAGES**

## **PREVAILING WAGES**

Prevailing Wage information is contained in the pages immediately following this page.

These pages are not included in the page numbering of this Contract document

**XII. ATTACHMENT 7, LIEN RELEASE FORMS**

## DENVER INTERNATIONAL AIRPORT

### PARTIAL LIEN RELEASE – CONSTRUCTION

Project: \_\_\_\_\_

Date: \_\_\_\_\_

City Contract No. \_\_\_\_\_

Current Subcontract

Amount: \$ \_\_\_\_\_

FROM:

Subcontractor \_\_\_\_\_

(1) Last Progress Payment for billing  
period ending \_\_\_\_\_ 20\_\_\_\_

Address: \_\_\_\_\_

\$ \_\_\_\_\_

City/State: \_\_\_\_\_

(2) Progress invoiced for previous billing  
period (if unpaid) \_\_\_\_\_ 20\_\_\_\_

Telephone: \_\_\_\_\_

\$ \_\_\_\_\_

TO:

Contractor \_\_\_\_\_

(3) Progress invoiced for current billing  
period ending \_\_\_\_\_ 20\_\_\_\_

Address: \_\_\_\_\_

\$ \_\_\_\_\_

City/State: \_\_\_\_\_

(4) **Total Paid to Date:**

\$ \_\_\_\_\_

( ) MBE/WBE ( ) SBE ( ) DBE ( ) Non

The Undersigned hereby certifies that all costs, charges, or expenses incurred by the undersigned or on behalf of the undersigned for any work, labor or services performed and for any materials, supplies or equipment provided on the above referenced Project or used in connection with the above referenced Subcontract (the "Work Effort") have been duly paid in full to date.

The Undersigned further certifies that each of the undersigned's subcontractors and suppliers that incurred or caused to be incurred, on their behalf, costs, charges, or expenses in connection with the undersigned's Work Effort on the above referenced Project have been duly paid in full to date.

The Undersigned hereby (1) acknowledges receipt of the progress payment referred to above as the Last Progress Payment which, when added to the total of all previous progress payments, constitutes full payment, less retainage, for all labor, services, material and supplies which the undersigned has provided for use in and upon the project described above through \_\_\_\_\_, 20\_\_\_\_ and, (2) hereby releases the Contractor, surety, the City and County of Denver, and any intermediate subcontractor or supplier of any tier from any and all claims prior to the above mentioned date, except for the withheld retainage.

The Undersigned also hereby agrees that the Contractor, Surety, the City and County of Denver, and any intermediate subcontractor or supplier of any tier shall be released from any and all claims arising out of its performance or non-performance of any contract associated with the above project through \_\_\_\_\_, 20\_\_\_\_, except for withheld retainage after it has received full payment, less retainage, of the amount invoiced for the current billing period.

As additional consideration for the payments referenced above, the undersigned agrees to defend, indemnify and hold harmless the City, its officers, employees, agents and assigns and the above-referenced Contractor from and against all costs, losses, damages, causes of action, judgments under the subcontract and expenses arising out of or in connection with any claim or claims against the City or the Contractor which arise out of the Undersigned's performance of the Work Effort and which may be asserted by the Undersigned or any of its suppliers or subcontractors of any tier or any of their representatives, officers, agents, or employees.

It is acknowledged that this release is for the benefit of and may be relied upon by the City and the referenced Contractor.

The foregoing shall not relieve the undersigned of any obligation under the provisions of the Undersigned's subcontract, as the subcontract may have been amended, which by their nature survive completion of the Undersigned's work effort including, without limitation, warranties, guarantees, insurance requirements and indemnities.

Subcontractor: \_\_\_\_\_

Certified by: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



**TO:** All Users of the City and County of Denver Prevailing Wage Schedules  
**FROM:** Alex Marvin, Classification and Compensation Analyst Staff  
**DATE:** March 2, 2023  
**SUBJECT:** Latest Change to Prevailing Wage Schedules

The effective date for this publication will be **Friday, February 24, 2023**, and applies to the City and County of Denver for **HIGHWAY CONSTRUCTION PROJECTS** in accordance with the Denver Revised Municipal Code, Section 20-76(c).

General Wage Decision No. CO20230009  
Superseded General Decision No. CO20220009  
Modification No. 1  
Publication Date: 02/24/2023  
(7 pages)

Unless otherwise specified in this document, apprentices shall be permitted only if they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor (DOL). The employer and the individual apprentice must be registered in a program which has received prior approval by the DOL. Any employer who employs an apprentice and is found to be in violation of this provision shall be required to pay said apprentice the full journeyman scale.

Attachments as listed above.

**\*Career Service Board approved to adjust all Davis Bacon classifications under \$17.29 to comply with the city's minimum wage. The effective date is January 1, 2023. See page 7 for reference.**

Office of Human Resources  
201 W. Colfax Ave. Dept. 412 | Denver, CO 80202  
p: 720.913.5751 | f: 720.913.5720  
[www.denvergov.org/humanresources](http://www.denvergov.org/humanresources)

"General Decision Number: CO20230009 02/24/2023

Superseded General Decision Number: CO20220009

State: Colorado

Construction Type: Highway

Counties: Denver and Douglas Counties in Colorado.

#### HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658.

Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

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If the contract is entered	. Executive Order 14026
into on or after January 30,	generally applies to the
2022, or the contract is	contract.
renewed or extended (e.g., an	. The contractor must pay
option is exercised) on or	all covered workers at
after January 30, 2022:	least \$16.20 per hour (or
	the applicable wage rate
	listed on this wage
	determination, if it is

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker



protections under the Executive Orders is available at  
<http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/06/2023
1	02/24/2023

CARP9901-008 11/01/2019

	Rates	Fringes
CARPENTER (Form Work Only) .....	\$ 26.50	10.32

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ELEC0068-016 03/01/2011

	Rates	Fringes
TRAFFIC SIGNALIZATION:		
Traffic Signal Installation		
Zone 1 .....	\$ 26.42	4.75%+8.68
Zone 2 .....	\$ 29.42	4.75%+8.68

#### TRAFFIC SIGNAL INSTALLER ZONE DEFINITIONS

Zone 1 shall be a 35 mile radius, measured from the following

addresses in each of the following cities:

Colorado Springs - Nevada & Bijou

Denver - Ellsworth Avenue & Broadway

Ft. Collins - Prospect & College

Grand Junction - 12th & North Avenue

Pueblo - I-25 & Highway 50

All work outside of these areas shall be paid Zone 2 rates.

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\* ENGI0009-008 05/01/2022

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
(3)-Hydraulic Backhoe		

(Wheel Mounted, under 3/4 yds), Hydraulic Backhoe (Backhoe/Loader combination), Drill Rig Caisson (smaller than Watson 2500 and similar), Loader (up to and including 6 cu. yd.).....\$ 33.14	13.30
(3)-Loader (under 6 cu. yd.)	
Denver County.....\$ 33.14	13.30
(3)-Motor Grader (blade-rough)	
Douglas County.....\$ 33.14	13.30
(4)-Crane (50 tons and under), Scraper (single bowl, under 40 cu. yd).....\$ 33.83	13.30
(4)-Loader (over 6 cu. yd)	
Denver County.....\$ 33.30	13.30
(5)-Drill Rig Caisson (Watson 2500 similar or larger), Crane (51-90 tons), Scraper (40 cu.yd and over),.....\$ 33.48	13.30
(5)-Motor Grader (blade-finish)	
Douglas County.....\$ 33.65	13.30
(6)-Crane (91-140 tons).....\$ 35.28	13.30

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 \* SUCO2011-004 09/15/2011

	Rates	Fringes
CARPENTER (Excludes Form Work)...	\$ 19.27	5.08
CEMENT MASON/CONCRETE FINISHER		
Denver.....	\$ 20.18	5.75
Douglas.....	\$ 18.75	3.00
ELECTRICIAN (Excludes Traffic Signal Installation).....	\$ 35.13	6.83
FENCE ERECTOR (Excludes		

Link/Cyclone Fence Erection).....\$	13.02 **	3.20
GUARDRAIL INSTALLER.....\$	12.89 **	3.20
HIGHWAY/PARKING LOT STRIPING:Painter		
Denver.....\$	12.62 **	3.21
Douglas.....\$	13.89 **	3.21
IRONWORKER, REINFORCING (Excludes Guardrail Installation).....\$	16.69	5.45
IRONWORKER, STRUCTURAL (Includes Link/Cyclone Fence Erection, Excludes Guardrail Installation).....\$	18.22	6.01
LABORER		
Asphalt Raker.....\$	16.29	4.25
Asphalt Shoveler.....\$	21.21	4.25
Asphalt Spreader.....\$	18.58	4.65
Common or General		
Denver.....\$	16.76	6.77
Douglas.....\$	16.29	4.25
Concrete Saw (Hand Held)....\$	16.29	6.14
Landscape and Irrigation....\$	12.26 **	3.16
Mason Tender- Cement/Concrete		
Denver.....\$	16.96	4.04
Douglas.....\$	16.29	4.25
Pipelayer		
Denver.....\$	13.55 **	2.41
Douglas.....\$	16.30	2.18
Traffic Control (Flagger)....\$	9.55 **	3.05
Traffic Control (Sets Up/Moves Barrels, Cones, Install Signs, Arrow Boards and Place Stationary Flags) (Excludes Flaggers).....\$	12.43 **	3.22
PAINTER (Spray Only).....\$	16.99	2.87

## POWER EQUIPMENT OPERATOR:

Asphalt Laydown		
Denver.....	\$ 22.67	8.72
Douglas.....	\$ 23.67	8.47
Asphalt Paver		
Denver.....	\$ 24.97	6.13
Douglas.....	\$ 25.44	3.50
Asphalt Roller		
Denver.....	\$ 23.13	7.55
Douglas.....	\$ 23.63	6.43
Asphalt Spreader.....	\$ 22.67	8.72
Backhoe/Trackhoe		
Douglas.....	\$ 23.82	6.00
Bobcat/Skid Loader.....	\$ 15.37 **	4.28
Boom.....	\$ 22.67	8.72
Broom/Sweeper		
Denver.....	\$ 22.47	8.72
Douglas.....	\$ 22.96	8.22
Bulldozer.....	\$ 26.90	5.59
Concrete Pump.....	\$ 21.60	5.21
Drill		
Denver.....	\$ 20.48	4.71
Douglas.....	\$ 20.71	2.66
Forklift.....	\$ 15.91 **	4.68
Grader/Blade		
Denver.....	\$ 22.67	8.72
Guardrail/Post Driver.....	\$ 16.07 **	4.41
Loader (Front End)		
Douglas.....	\$ 21.67	8.22
Mechanic		
Denver.....	\$ 22.89	8.72
Douglas.....	\$ 23.88	8.22
Oiler		
Denver.....	\$ 23.73	8.41
Douglas.....	\$ 24.90	7.67
Roller/Compactor (Dirt and Grade Compaction)		
Denver.....	\$ 20.30	5.51
Douglas.....	\$ 22.78	4.86
Rotomill.....	\$ 16.22	4.41
Screed		
Denver.....	\$ 22.67	8.38
Douglas.....	\$ 29.99	1.40
Tractor.....	\$ 13.13 **	2.95

## TRAFFIC SIGNALIZATION:

## Groundsman

Denver.....	\$ 17.90	3.41
Douglas.....	\$ 18.67	7.17

## TRUCK DRIVER

## Distributor

Denver.....	\$ 17.81	5.82
Douglas.....	\$ 16.98	5.27

## Dump Truck

Denver.....	\$ 15.27 **	5.27
Douglas.....	\$ 16.39	5.27

## Lowboy Truck.....

\$ 17.25	5.27
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## Mechanic.....

\$ 26.48	3.50
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Multi-Purpose Specialty &  
Hoisting Truck

Denver.....	\$ 17.49	3.17
Douglas.....	\$ 20.05	2.88

## Pickup and Pilot Car

Denver.....	\$ 14.24 **	3.77
Douglas.....	\$ 16.43	3.68

## Semi/Trailer Truck.....

\$ 18.39	4.13
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## Truck Mounted Attenuator....

\$ 12.43 **	3.22
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## Water Truck

Denver.....	\$ 26.27	5.27
Douglas.....	\$ 19.46	2.58

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WELDERS - Receive rate prescribed for craft performing  
operation to which welding is incidental.

**Office of Human Resources  
Supplemental Rates  
(Specific to the Denver Projects)  
Revised 01/01/2023)**

<b>Classification</b>		<b>Base</b>	<b>Fringe</b>
Guard Rail Installer		\$17.29	\$3.20
Highway Parking Lot Striping: Painter		\$17.29	\$3.21
Ironworker (Ornamental)		\$26.05	\$12.00
Laborer	Removal of Asbestos	\$21.03	\$8.55
Laborer (Landscape & Irrigation)		\$17.29	\$3.16
Laborer: Traffic Control (Flagger)		\$17.29	\$3.05
Laborer: Stationary Flags (excludes Flaggers)		\$17.29	\$3.22
Line Construction	Lineman, Gas Fitter/Welder	\$36.88	\$9.55
	Line Eq Operator/Line Truck Crew	\$25.74	\$8.09
Millwright		\$28.00	\$10.00
Pipefitter		\$30.45	\$12.85
Plumber		\$30.19	\$13.55
Power Equipment Operator (Tunnels Above and Below Ground, shafts and raises):	Group 1	\$25.12	\$10.81
	Group 2	\$25.47	\$10.85
	Group 3	\$25.57	\$10.86
	Group 4	\$25.82	\$10.88
	Group 5	\$25.97	\$10.90
	Group 6	\$26.12	\$10.91
	Group 7	\$26.37	\$10.94
Power Equipment Operator	Group 1	\$22.97	\$10.60
	Group 2	\$23.32	\$10.63
	Group 3	\$23.67	\$10.67
	Group 4	\$23.82	\$10.68
	Group 5	\$23.97	\$10.70
	Group 6	\$24.12	\$10.71
	Group 7	\$24.88	\$10.79
Truck Driver	Group 1	\$18.42	\$10.00
	Group 2	\$19.14	\$10.07
	Group 3	\$19.48	\$10.11
	Group 4	\$20.01	\$10.16
	Group 5	\$20.66	\$10.23
	Group 6	\$21.46	\$10.31
Truck Driver: Truck Mounted Attenuator		\$17.29	\$3.22

Go to <http://www.denvergov.org/Auditor> to view the Prevailing Wage Clarification Document for a list of complete classifications used.



## DENVER INTERNATIONAL AIRPORT

### FINAL LIEN RELEASE – CONSTRUCTION (Subcontractor)

Project: \_\_\_\_\_

Date: \_\_\_\_\_

City Contract No. \_\_\_\_\_

Subcontractor Contract No. \_\_\_\_\_

Dated: \_\_\_\_\_, 20 \_\_\_\_

FROM:

Subcontractor: \_\_\_\_\_

(1) Last Progress Payment for billing  
period ending \_\_\_\_\_, 20 \_\_\_\_

Address: \_\_\_\_\_

\$ \_\_\_\_\_

City/State: \_\_\_\_\_

(2) Does not apply

Telephone: \_\_\_\_\_

TO:

Contractor: \_\_\_\_\_

(3) Does not apply

Address: \_\_\_\_\_

City/State: \_\_\_\_\_

(4) **Total Paid to Date:**

\$ \_\_\_\_\_

( ) SBE ( ) DBE ( ) MBE ( ) WBE ( ) Non

The Undersigned hereby certifies that all costs, charges, or expenses incurred by the undersigned or on behalf of the undersigned for any work, labor or services performed and for any materials, supplies or equipment provided on the above referenced Project or used in connection with the above referenced Subcontract (the "Work Effort") have been duly paid in full.

The Undersigned further certifies that each of the undersigned's subcontractors and suppliers that incurred or caused to be incurred, on their behalf, costs, charges, or expenses in connection with the undersigned's Work Effort on the above referenced Project have been duly paid in full.

The undersigned Subcontractor hereby (1) acknowledges receipt of the progress payment referred to above as the Last Progress Payment which, when added to the total of all previous progress payments, constitutes full

payment for all labor, services, materials and supplies which the undersigned has provided for use in and upon the project described above through \_\_\_\_\_, 20\_\_\_\_ and, (2) hereby releases the Contractor, Surety, the City and County of Denver, and any intermediate subcontractor or supplier of any tier from any and all claims prior to the above mentioned date.

The Subcontractor also hereby agrees that the Contractor, Surety, the City and County of Denver, and any intermediate subcontractor or supplier of any tier shall be released from any and all claims arising out of its performance or non-performance of any contract associated with the above project.

As additional consideration for the payments referenced above, the undersigned agrees to defend, indemnify and hold harmless the City, its officers, employees, agents and assigns and the above-referenced Contractor from and against all costs, losses, damages, causes of action, judgments under the subcontract and expenses arising out of or in connection with any claim or claims against the City or the Contractor which arise out of the Undersigned's performance of the Work Effort and which may be asserted by the Undersigned or any of its suppliers or subcontractors of any tier or any of their representatives, officers, agents, or employees.

It is acknowledged that this release is for the benefit of and may be relied upon by the City and the referenced Contractor.

The foregoing shall not relieve the undersigned of any obligation under the provisions of the Undersigned's subcontract, as the subcontract may have been amended, which by their nature survive completion of the Undersigned's work effort including, without limitation, warranties, guarantees, insurance requirements and indemnities.

Subcontractor: \_\_\_\_\_

Certified by: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**[END OF BID DATA FORMS]**



SCHEDULE OF PRICES						
ITEM NO.	DESCRIPTION		UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL
202-00010	Removal of Tree	at the unit price of: <u>Five thousand</u> dollars and <u>zero</u> cents.	EACH	1	\$ 5,000.00	\$ 5,000.00
202-00019	Removal of Inlet	at the unit price of: <u>two thousand</u> dollars and <u>zero</u> cents.	EACH	2	\$ 2,000.00	\$ 4,000.00
202-00024	Removal of Embankment Protector Type 5	at the unit price of: <u>three thousand five hundred</u> dollars and <u>zero</u> cents.	EACH	2	\$ 3,500.00	\$ 7,000.00
202-00025	Removal of Ditch Lining	at the unit price of: <u>twenty</u> dollars and <u>zero</u> cents.	LF	100	\$ 20.00	\$ 2,000.00
202-00035	Removal of Pipe	at the unit price of: <u>one hundred</u> dollars and <u>zero</u> cents.	LF	6	\$ 100.00	\$ 600.00
202-00090	Removal of Delineator	at the unit price of: <u>fifty</u> dollars and <u>zero</u> cents.	EACH	55	\$ 50.00	\$ 2,750.00
202-00190	Removal of Concrete Median Cover Material	at the unit price of: <u>thirty</u> dollars and <u>zero</u> cents.	SY	162	\$ 30.00	\$ 4,860.00
202-00201	Removal of Curb	at the unit price of: <u>twelve</u> dollars and <u>zero</u> cents.	LF	334	\$ 12.00	\$ 4,008.00
202-00203	Removal of Curb and Gutter	at the unit price of: <u>fifteen</u> dollars and <u>zero</u> cents.	LF	1,117	\$ 15.00	\$ 16,755.00
202-00210	Removal of Concrete Pavement	at the unit price of: <u>twenty-five</u> dollars and <u>zero</u> cents.	SY	2,323	\$ 25.00	\$ 58,075.00
202-00220	Removal of Asphalt Mat	at the unit price of: <u>thirty</u> dollars and <u>zero</u> cents.	SY	1,703	\$ 30.00	\$ 51,090.00
202-00250	Removal of Pavement Marking	at the unit price of: <u>four</u> dollars and <u>zero</u> cents.	SF	4,200	\$ 4.00	\$ 16,800.00
202-00810	Removal of Ground Sign	at the unit price of: <u>three hundred</u> dollars and <u>zero</u> cents.	EACH	25	\$ 300.00	\$ 7,500.00
202-00821	Removal of Sign Panel	at the unit price of: <u>one thousand</u> dollars and <u>zero</u> cents.	EACH	3	\$ 1,000.00	\$ 3,000.00
202-00828	Removal of Traffic Signal Equipment	at the unit price of: <u>Fourteen thousand</u> dollars and <u>zero</u> cents.	L S	1	\$ 14,000.00	\$ 14,000.00
202-00900	Removal of Concrete Footing	at the unit price of: <u>three thousand</u> dollars and <u>zero</u> cents.	EACH	1	\$ 3,000.00	\$ 3,000.00
202-01200	Removal of High-Tension Cable Barrier	at the unit price of: <u>eleven</u> dollars and <u>zero</u> cents.	LF	1,118	\$ 11.00	\$ 12,298.00
202-04002	Clean Culvert	at the unit price of: <u>one thousand</u> dollars and <u>zero</u> cents.	EACH	5	\$ 1,000.00	\$ 5,000.00
202-04010	Clean Inlet	at the unit price of: <u>one thousand</u> dollars and <u>zero</u> cents.	EACH	2	\$ 1,000.00	\$ 2,000.00
203-00010	Unclassified Excavation (Complete In Place)	at the unit price of: <u>fifty</u> dollars and <u>zero</u> cents.	CY	15,902	\$ 50.00	\$ 795,100.00
203-00050	Unsuitable Material	at the unit price of: <u>one hundred</u> dollars and <u>zero</u> cents.	CY	200	\$ 100.00	\$ 20,000.00
203-01597	Potholing	at the unit price of: <u>six hundred</u> dollars and <u>zero</u> cents.	HOOR	80	\$ 600.00	\$ 48,000.00
206-00510	Filter Material (Class A)	at the unit price of: <u>one hundred fifty</u> dollars and <u>zero</u> cents.	CY	199	\$ 150.00	\$ 29,850.00
207-00205	Topsoil	at the unit price of: <u>one hundred</u> dollars and <u>zero</u> cents.	CY	4	\$ 100.00	\$ 400.00
207-00700	Topsoil (Onsite)	at the unit price of: <u>sixty five</u> dollars and <u>zero</u> cents.	CY	5,400	\$ 65.00	\$ 351,000.00
208-00002	Erosion Log Type 1 (12 Inch)	at the unit price of: <u>seven</u> dollars and <u>zero</u> cents.	LF	1,220	\$ 7.00	\$ 8,540.00
208-00033	Sediment Trap	at the unit price of: <u>twenty thousand</u> dollars and <u>zero</u> cents.	EACH	1	\$ 20,000.00	\$ 20,000.00
208-00035	Aggregate Bag	at the unit price of: <u>ten</u> dollars and <u>zero</u> cents.	LF	1,040	\$ 10.00	\$ 10,400.00
208-00046	Pre-fabricated Concrete Washout Structure (Type 1)	at the unit price of: <u>three thousand</u> dollars and <u>zero</u> cents.	EACH	2	\$ 3,000.00	\$ 6,000.00
208-00051	Storm Drain Inlet Protection (Type I)	at the unit price of: <u>five hundred</u> dollars and <u>zero</u> cents.	LF	1	\$ 500.00	\$ 500.00
208-00056	Storm Drain Inlet Protection (Type III)	at the unit price of: <u>two hundred</u> dollars and <u>zero</u> cents.	EACH	5	\$ 200.00	\$ 1,000.00
208-00075	Pre-fabricated Vehicle Tracking Pad	at the unit price of: <u>twenty five thousand</u> dollars and <u>zero</u> cents.	EACH	1	\$ 25,000.00	\$ 25,000.00

SCHEDULE OF PRICES						
ITEM NO.	DESCRIPTION		UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL
208-00103	Removal and Disposal of Sediment (Labor)	at the unit price of: <u>one hundred thirty</u> dollars and <u>zero</u> cents.	HOUR	30	\$ 130.00	\$ 3,900.00
208-00105	Removal and Disposal of Sediment (Equipment)	at the unit price of: <u>two hundred</u> dollars and <u>zero</u> cents.	HOUR	20	\$ 200.00	\$ 4,000.00
208-00106	Sweeping (Sediment Removal)	at the unit price of: <u>three hundred fifty</u> dollars and <u>zero</u> cents.	HOUR	12	\$ 350.00	\$ 4,200.00
208-00207	Erosion Control Management	at the unit price of: <u>five hundred</u> dollars and <u>zero</u> cents.	DAY	50	\$ 500.00	\$ 25,000.00
208-00400	Water Control	at the unit price of: <u>fifty thousand</u> dollars and <u>zero</u> cents.	L S	1	\$ 50,000.00	\$ 50,000.00
210-00816	Reset Sign Panel (Special)	at the unit price of: <u>twenty thousand</u> dollars and <u>zero</u> cents.	EACH	1	\$ 20,000.00	\$ 20,000.00
210-00882	Reset Traffic Signal Vehicle Detector	at the unit price of: <u>three thousand</u> dollars and <u>zero</u> cents.	EACH	1	\$ 3,000.00	\$ 3,000.00
210-02900	Relay Riprap	at the unit price of: <u>two hundred</u> dollars and <u>zero</u> cents.	CY	10	\$ 200.00	\$ 2,000.00
210-02910	Relay Riprap (Special)	at the unit price of: <u>twenty</u> dollars and <u>zero</u> cents.	SY	2,113	\$ 20.00	\$ 42,260.00
210-04010	Adjust Maintenance Hole	at the unit price of: <u>one thousand</u> dollars and <u>zero</u> cents.	EACH	4	\$ 1,000.00	\$ 4,000.00
210-04050	Adjust Valve Box	at the unit price of: <u>five hundred</u> dollars and <u>zero</u> cents.	EACH	2	\$ 500.00	\$ 1,000.00
212-00706	Seeding (Native) Drill	at the unit price of: <u>four thousand three hundred seventy five</u> dollars and <u>zero</u> cents.	ACRE	4	\$ 4,375.00	\$ 17,500.00
212-00708	Seeding (Native) Broadcast	at the unit price of: <u>four thousand three hundred seventy five</u> dollars and <u>zero</u> cents.	ACRE	1	\$ 4,375.00	\$ 4,375.00
213-00003	Mulching (Weed Free)	at the unit price of: <u>two thousand five hundred</u> dollars and <u>zero</u> cents.	ACRE	4	\$ 2,500.00	\$ 10,000.00
213-00012	Spray-on Mulch Blanket	at the unit price of: <u>four thousand three hundred seventy five</u> dollars and <u>zero</u> cents.	ACRE	1	\$ 4,375.00	\$ 4,375.00
213-00061	Mulch Tackifier	at the unit price of: <u>thirty seven</u> dollars and <u>fifty</u> cents.	LB	200	\$ 37.50	\$ 7,500.00
213-00150	Bonded Fiber Matrix	at the unit price of: <u>four thousand three hundred seventy five</u> dollars and <u>zero</u> cents.	ACRE	1	\$ 4,375.00	\$ 4,375.00
216-00222	Soil Retention Blanket (Coconut) (Biodegradable Class 2)	at the unit price of: <u>three</u> dollars and <u>ninety</u> cents.	SY	4,910	\$ 3.90	\$ 19,149.00
216-00301	Turf Reinforcement Mat (Class 1)	at the unit price of: <u>sixteen</u> dollars and <u>thirty five</u> cents.	SY	34	\$ 16.35	\$ 555.90
218-00000	Noxious Weed Management	at the unit price of: <u>one hundred thirty</u> dollars and <u>zero</u> cents.	HR	16	\$ 130.00	\$ 2,080.00
304-06000	Aggregate Base Course (Class 6)	at the unit price of: <u>forty two</u> dollars and <u>zero</u> cents.	TON	4,251	\$ 42.00	\$ 178,542.00
306-01000	Reconditioning	at the unit price of: <u>fourteen</u> dollars and <u>zero</u> cents.	SY	14,097	\$ 14.00	\$ 197,358.00
412-01050	Concrete Pavement (10-1/2 Inch)	at the unit price of: <u>one hundred eight</u> dollars and <u>zero</u> cents.	SY	11,469	\$ 108.00	\$ 1,238,652.00
420-00102	Geotextile (Erosion Control) (Class 1)	at the unit price of: <u>seven</u> dollars and <u>zero</u> cents.	SY	634	\$ 7.00	\$ 4,438.00
420-00132	Geotextile (Separator) (Class 1)	at the unit price of: <u>five</u> dollars and <u>zero</u> cents.	SY	1,566	\$ 5.00	\$ 7,830.00
503-00024	Drilled Shaft (24 Inch)	at the unit price of: <u>one thousand</u> dollars and <u>zero</u> cents.	LF	16	\$ 1,000.00	\$ 16,000.00
503-00036	Drilled Shaft (36 Inch)	at the unit price of: <u>one thousand fifty</u> dollars and <u>zero</u> cents.	LF	19	\$ 1,050.00	\$ 19,950.00
506-00209	Riprap (9 Inch)	at the unit price of: <u>three hundred</u> dollars and <u>zero</u> cents.	CY	251	\$ 300.00	\$ 75,300.00
506-00406	Soil Riprap (6 Inch)	at the unit price of: <u>two hundred</u> dollars and <u>zero</u> cents.	CY	35	\$ 200.00	\$ 7,000.00
506-01020	Geogrid Reinforcement	at the unit price of: <u>six</u> dollars and <u>zero</u> cents.	SY	134	\$ 6.00	\$ 804.00
509-00000	Structural Steel	at the unit price of: <u>one hundred</u> dollars and <u>zero</u> cents.	LB	130	\$ 100.00	\$ 13,000.00
601-01000	Concrete Class B	at the unit price of: <u>eight hundred</u> dollars and <u>zero</u> cents.	CY	4	\$ 800.00	\$ 3,200.00

SCHEDULE OF PRICES						
ITEM NO.	DESCRIPTION		UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL
601-03000	Concrete Class D	at the unit price of: <u>seven hundred fifty</u> dollars and <u>zero</u> cents.	CY	7	\$ 750.00	\$ 5,250.00
601-40010	Masonry Wall	at the unit price of: <u>six hundred twenty five</u> dollars and <u>zero</u> cents.	SF	32	\$ 625.00	\$ 20,000.00
601-40301	Structural Concrete Coating	at the unit price of: <u>twelve</u> dollars and <u>zero</u> cents.	SF	370	\$ 12.00	\$ 4,440.00
602-00000	Reinforcing Steel	at the unit price of: <u>twenty five</u> dollars and <u>zero</u> cents.	LB	1,875	\$ 25.00	\$ 46,875.00
603-01185	18 Inch Reinforced Concrete Pipe (Complete In Place)	at the unit price of: <u>two hundred fifty</u> dollars and <u>zero</u> cents.	LF	7	\$ 250.00	\$ 1,750.00
603-01245	24 Inch Reinforced Concrete Pipe (Complete In Place)	at the unit price of: <u>three hundred forty</u> dollars and <u>zero</u> cents.	LF	44	\$ 340.00	\$ 14,960.00
603-01305	30 Inch Reinforced Concrete Pipe (Complete In Place)	at the unit price of: <u>five hundred thirty</u> dollars and <u>zero</u> cents.	LF	51	\$ 530.00	\$ 27,030.00
604-00305	Inlet Type C (5 Foot)	at the unit price of: <u>seven thousand one hundred fifteen</u> dollars and <u>zero</u> cents.	EACH	1	\$ 7,115.00	\$ 7,115.00
604-00505	Inlet Type D (5 Foot)	at the unit price of: <u>eight thousand five hundred</u> dollars and <u>zero</u> cents.	EACH	1	\$ 8,500.00	\$ 8,500.00
604-00511	Inlet Type D (Special) (10 Foot)	at the unit price of: <u>twelve thousand three hundred fifty three</u> dollars and <u>zero</u> cents.	EACH	1	\$ 12,356.00	\$ 12,356.00
604-16005	Inlet Type 16 (5 Foot)	at the unit price of: <u>eleven thousand three hundred seventy two</u> dollars and <u>zero</u> cents.	EACH	1	\$ 11,372.00	\$ 11,372.00
604-30010	Manhole Slab Base (10 Foot)	at the unit price of: <u>six thousand three hundred eight four</u> dollars and <u>zero</u> cents.	EACH	1	\$ 6,384.00	\$ 6,384.00
605-00004	4 Inch Non-Perforated Pipe Underdrain	at the unit price of: <u>thirty</u> dollars and <u>zero</u> cents.	LF	14	\$ 30.00	\$ 420.00
605-00040	4 Inch Perforated Pipe Underdrain	at the unit price of: <u>nineteen</u> dollars and <u>zero</u> cents.	LF	4,949	\$ 19.00	\$ 94,031.00
606-20014	High-Tension Cable Barrier (TL-4)	at the unit price of: <u>ninety two</u> dollars and <u>zero</u> cents.	LF	900	\$ 92.00	\$ 82,800.00
606-21010	End Anchorage (High-Tension Cable Barrier)	at the unit price of: <u>thirty one thousand</u> dollars and <u>zero</u> cents.	EACH	2	\$ 31,000.00	\$ 62,000.00
607-11525	Fence (Plastic)	at the unit price of: <u>five</u> dollars and <u>zero</u> cents.	LF	100	\$ 5.00	\$ 500.00
609-21011	Curb and Gutter Type 2 (Section I-M)	at the unit price of: <u>forty five</u> dollars and <u>zero</u> cents.	LF	162	\$ 45.00	\$ 7,290.00
609-21021	Curb and Gutter Type 2 (Section II-M)	at the unit price of: <u>forty</u> dollars and <u>zero</u> cents.	LF	4,538	\$ 40.00	\$ 181,520.00
612-00001	Delineator (Type I)	at the unit price of: <u>fifty</u> dollars and <u>zero</u> cents.	EACH	28	\$ 50.00	\$ 1,400.00
612-00002	Delineator (Type II)	at the unit price of: <u>seventy five</u> dollars and <u>zero</u> cents.	EACH	13	\$ 75.00	\$ 975.00
612-00003	Delineator (Type III)	at the unit price of: <u>one hundred</u> dollars and <u>zero</u> cents.	EACH	4	\$ 100.00	\$ 400.00
612-00041	Delineator (Flexible) (Type I)	at the unit price of: <u>two hundred fifty</u> dollars and <u>zero</u> cents.	EACH	3	\$ 250.00	\$ 750.00
613-00206	2 Inch Electrical Conduit (Bored)	at the unit price of: <u>seventy three</u> dollars and <u>zero</u> cents.	LF	100	\$ 73.00	\$ 7,300.00
613-00306	3 Inch Electrical Conduit (Bored)	at the unit price of: <u>seventy five</u> dollars and <u>zero</u> cents.	LF	200	\$ 75.00	\$ 15,000.00
613-01200	2 Inch Electrical Conduit (Plastic)	at the unit price of: <u>one hundred twenty five</u> dollars and <u>zero</u> cents.	LF	10	\$ 125.00	\$ 1,250.00
613-01300	3 Inch Electrical Conduit (Plastic)	at the unit price of: <u>one hundred thirty</u> dollars and <u>zero</u> cents.	LF	20	\$ 130.00	\$ 2,600.00
613-07004	Type Four Pull Box	at the unit price of: <u>five thousand four hundred</u> dollars and <u>zero</u> cents.	EACH	1	\$ 5,400.00	\$ 5,400.00
613-10000	Wiring	at the unit price of: <u>eight thousand five hundred</u> dollars and <u>zero</u> cents.	L S	1	\$ 8,500.00	\$ 8,500.00
613-50210	Temporary Lighting	at the unit price of: <u>ninety five thousand</u> dollars and <u>zero</u> cents.	L S	1	\$ 95,000.00	\$ 95,000.00
614-00011	Sign Panel (Class I)	at the unit price of: <u>twenty five</u> dollars and <u>zero</u> cents.	SF	114	\$ 25.00	\$ 2,850.00
614-00012	Sign Panel (Class II)	at the unit price of: <u>fifty</u> dollars and <u>zero</u> cents.	SF	213	\$ 50.00	\$ 10,650.00

SCHEDULE OF PRICES						
ITEM NO.	DESCRIPTION		UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL
614-00013	Sign Panel (Class III)	at the unit price of: <u>seventy five</u> dollars and <u>zero</u> cents.	SF	1,216	\$ 75.00	\$ 91,200.00
614-00821	Steel Sign Post (W 8x21)	at the unit price of: <u>seventy five</u> dollars and <u>zero</u> cents.	LF	34	\$ 75.00	\$ 2,550.00
614-01022	Steel Sign Post (W 10x22)	at the unit price of: <u>eighty five</u> dollars and <u>zero</u> cents.	LF	107	\$ 85.00	\$ 9,095.00
614-01226	Steel Sign Post (W 12x26)	at the unit price of: <u>one hundred five</u> dollars and <u>zero</u> cents.	LF	46	\$ 105.00	\$ 4,830.00
614-01512	Steel Sign Support (2-Inch Round)(Post)	at the unit price of: <u>twenty five</u> dollars and <u>zero</u> cents.	LF	288	\$ 25.00	\$ 7,200.00
614-01522	Steel Sign Support (2-Inch Round)(Socket)	at the unit price of: <u>fifty two</u> dollars and <u>zero</u> cents.	EACH	28	\$ 52.00	\$ 1,456.00
614-01575	Steel Sign Support (2-1/2 Inch Round NP-40)(Post)	at the unit price of: <u>thirty one</u> dollars and <u>zero</u> cents.	LF	184	\$ 31.00	\$ 5,704.00
614-01578	Steel Sign Support (2-1/2 Inch Round NP-40)(Slipbase)	at the unit price of: <u>two hundred one</u> dollars and <u>zero</u> cents.	EACH	14	\$ 201.00	\$ 2,814.00
614-03004	Concrete Footing (Type 4)	at the unit price of: <u>nine hundred eight five</u> dollars and <u>zero</u> cents.	EACH	2	\$ 985.00	\$ 1,970.00
614-03005	Concrete Footing (Type 5)	at the unit price of: <u>one thousand thirty five</u> dollars and <u>zero</u> cents.	EACH	6	\$ 1,035.00	\$ 6,210.00
614-03006	Concrete Footing (Type 6)	at the unit price of: <u>one thousand one hundred</u> dollars and <u>zero</u> cents.	EACH	4	\$ 1,100.00	\$ 4,400.00
614-03007	Concrete Footing (Type 7)	at the unit price of: <u>one thousand three hundred</u> dollars and <u>zero</u> cents.	EACH	2	\$ 1,300.00	\$ 2,600.00
614-70336	Traffic Signal Face (12-12-12)	at the unit price of: <u>two thousand four hundred</u> dollars and <u>zero</u> cents.	EACH	3	\$ 2,400.00	\$ 7,200.00
614-81155	Traffic Signal-Light Pole Steel (1-55 Foot Mast Arm)	at the unit price of: <u>forty seven thousand</u> dollars and <u>zero</u> cents.	EACH	1	\$ 47,000.00	\$ 47,000.00
615-00050	Embankment Protector Type 5	at the unit price of: <u>twenty five thousand</u> dollars and <u>zero</u> cents.	EACH	9	\$ 25,000.00	\$ 225,000.00
615-00150	Embankment Protector (Special)	at the unit price of: <u>thirty thousand</u> dollars and <u>zero</u> cents.	EACH	3	\$ 30,000.00	\$ 90,000.00
620-00020	Sanitary Facility	at the unit price of: <u>three thousand</u> dollars and <u>zero</u> cents.	EACH	1	\$ 3,000.00	\$ 3,000.00
621-00450	Detour Pavement	at the unit price of: <u>two hundred fifty</u> dollars and <u>zero</u> cents.	SY	15	\$ 250.00	\$ 3,750.00
625-00000	Construction Surveying	at the unit price of: <u>fifty five thousand</u> dollars and <u>zero</u> cents.	L S	1	\$ 55,000.00	\$ 55,000.00
626-00000	Mobilization	at the unit price of: <u>one hundred fifty thousand</u> dollars and <u>zero</u> cents.	L S	1	\$ 150,000.00	\$ 150,000.00
627-00008	Modified Epoxy Pavement Marking	at the unit price of: <u>five hundred twenty five</u> dollars and <u>zero</u> cents.	GAL	84	\$ 525.00	\$ 44,100.00
627-00013	Pavement Marking Paint (High Build)	at the unit price of: <u>four hundred seventy</u> dollars and <u>zero</u> cents.	GAL	8	\$ 470.00	\$ 3,760.00
627-01001	Preformed Plastic Pavement Marking (Type I)	at the unit price of: <u>forty eight</u> dollars and <u>zero</u> cents.	SF	234	\$ 48.00	\$ 11,232.00
627-02010	Preformed Plastic Pavement Marking (Type II) (Inlaid)	at the unit price of: <u>forty</u> dollars and <u>zero</u> cents.	SF	332	\$ 40.00	\$ 13,280.00
630-00000	Flagging	at the unit price of: <u>forty eight</u> dollars and <u>zero</u> cents.	HOURL	1,350	\$ 48.00	\$ 64,800.00
630-00003	Uniformed Traffic Control	at the unit price of: <u>one hundred seventy</u> dollars and <u>zero</u> cents.	HOURL	40	\$ 170.00	\$ 6,800.00
630-00007	Traffic Control Inspection	at the unit price of: <u>four hundred fifty</u> dollars and <u>zero</u> cents.	DAY	60	\$ 450.00	\$ 27,000.00
630-00012	Traffic Control Management	at the unit price of: <u>one thousand three hundred</u> dollars and <u>zero</u> cents.	DAY	140	\$ 1,300.00	\$ 182,000.00
630-80001	Flashing Beacon (Portable)	at the unit price of: <u>one thousand two hundred</u> dollars and <u>zero</u> cents.	EACH	4	\$ 1,200.00	\$ 4,800.00
630-80335	Barricade (Type 3 M-A) (Temporary)	at the unit price of: <u>one hundred sixty</u> dollars and <u>zero</u> cents.	EACH	8	\$ 160.00	\$ 1,280.00
630-80341	Construction Traffic Sign (Panel Size A)	at the unit price of: <u>forty</u> dollars and <u>zero</u> cents.	EACH	7	\$ 40.00	\$ 280.00
630-80342	Construction Traffic Sign (Panel Size B)	at the unit price of: <u>forty seven</u> dollars and <u>zero</u> cents.	EACH	19	\$ 47.00	\$ 893.00

SCHEDULE OF PRICES						
ITEM NO.	DESCRIPTION		UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL
630-80343	Construction Traffic Sign (Panel Size C)	at the unit price of: <u>fifty three</u> dollars and <u>zero</u> cents.	EACH	6	\$ 53.00	\$ 318.00
630-80350	Vertical Panel	at the unit price of: <u>forty</u> dollars and <u>zero</u> cents.	EACH	50	\$ 40.00	\$ 2,000.00
630-80355	Portable Message Sign Panel	at the unit price of: <u>eight thousand nine hundred</u> dollars and <u>zero</u> cents.	EACH	2	\$ 8,900.00	\$ 17,800.00
630-80360	Drum Channelizing Device	at the unit price of: <u>fifty three</u> dollars and <u>zero</u> cents.	EACH	90	\$ 53.00	\$ 4,770.00
630-80370	Barrier (Temporary)	at the unit price of: <u>Thirty</u> dollars and <u>zero</u> cents.	LF	1,200	\$ 30.00	\$ 36,000.00
630-80380	Traffic Cone	at the unit price of: <u>eleven</u> dollars and <u>zero</u> cents.	EACH	50	\$ 11.00	\$ 550.00
630-85010	Impact Attenuator (Temporary)	at the unit price of: <u>four thousand</u> dollars and <u>zero</u> cents.	EACH	1	\$ 4,000.00	\$ 4,000.00
700-70034	F/A Temporary Plant Site	at the unit price of: _____dollars and _____cents.	F A	1	\$	\$ 0.00
SCHEDULE TOTAL						\$ 5,420,179.90

**VI. ATTACHMENT 1, BID FORMS****Attachment 1, Part 1 Bid Acknowledgement Letter**

CONTRACT NAME: GUN CLUB ON-RAMP TO PEÑA BOULEVARD

Contract No.: 202366978

Bid Letter

BIDDER

Chato's Concrete, LLC

Chief Executive Officer  
City and County of Denver  
Business Management Services (Procurement) Office  
Airport Office Building, Room 8810  
Denver International Airport  
8500 Peña Boulevard  
Denver, Colorado 80249

This letter is in response to the Notice of Invitation for Bids first published on March 22, 2023, for Contract No. 202366978, Denver International Airport, Gun Club On-Ramp to Peña Boulevard.

This contract is for the construction of a new interchange on-ramp at Gun Club Road and Peña Boulevard inbound and other associated roadway improvements within the area. Gun Club Road will be widened to the east and restriped to accommodate a new left turn lane onto the new ramp. The roadway construction will be a 10.5-inch full depth Portland cement concrete pavement over an aggregate base course. The scope of work will include, but is not limited to, demolition, concrete paving, general construction in support of concrete paving work, earthwork, stormwater drainage conveyance, traffic signal construction, erosion control and revegetation, traffic control, and existing roadway/pavement tie-ins.

The undersigned Bidder declares that it has carefully examined the location of the proposed work and has carefully read and examined all of the Contract Documents which include, but are not limited to, the Contract Drawings, Technical Specifications, Construction Contract General Conditions, Special Conditions, Instruction to Bidders, and EEO provisions, and hereby proposes to furnish all labor, materials, equipment, tools, transportation and services, and to discharge all duties and obligations necessary and required to perform and complete the Work as required in the Contract Documents which are provided herewith and by this reference made a part hereof for the prices shown in the bid forms and totaled below:

TOTAL BASE BID AMOUNT: five million, fourhundred twenty thousand, onehundred Seventy Nine Dollars and ninety Cents  
(\$5,420,179.90)



The undersigned acknowledges receipt, understanding and full consideration of the following addenda to the Contract Documents:

Addenda Nos.: 1(4.10.2023), 2(4.17.2023)

The undersigned agrees that this Bid is a firm offer to the City to perform and complete the Contract described above which cannot be withdrawn for one hundred twenty (120) calendar days after the bids are opened or until after a contract for the work described in these bid documents is fully executed by the City, whichever date is earlier.

The undersigned Bidder hereby agrees to appear at Denver International Airport, Business Management Services Office, Room 8810, Airport Office Building, at any time within ten (10) business days from the date of a written notice from the CEO to do so, mailed, emailed, or faxed to the business address of Bidder and at that time the Bidder shall: (1) deliver an executed Contract which conforms with this bid; (2) furnish the required performance and payment bonds in the sum of the Total Contract Bid Amount shown above, executed by a surety company acceptable to the CEO; and (3) furnish the required insurance documents.

Enclosed herewith is a bid guarantee, as defined in the Instructions to Bidders, in the amount of which bid guarantee the undersigned Bidder agrees is to be paid to and become the property of the City as liquidated damages should the bid be considered to be the best by the City and the undersigned Bidder notified that it is the Apparent Low Bidder and it fails to enter into contract in the form prescribed and to furnish the required performance and payment bonds and evidences of insurance within ten (10) business days as stipulated above.

Attached and incorporated herein are the proposed Schedule of Prices and Quantities and Bid Data Forms. All of the forms must be completed. Bidder acknowledges that the City may incorporate, at its option, any or all of the data submitted by the Bidder into a contract arising out of this Bid.

The undersigned Bidder acknowledges the right of the City to waive informalities in the bids, to reject any or all bids submitted, and to re-advertise for bids.

The undersigned certifies that it has examined and is fully familiar with all of the provisions of the Contract Documents and is satisfied that they are accurate; that it has carefully checked all words and figures and all statements made in these Bid forms; and that it has satisfied itself with respect to the actual site conditions and the nature and location of the Work, the general and local conditions which may be encountered in the performance of the Work, and other matters which in any way affect the Work or the cost thereof.

[CERTIFICATION AND SIGNATURE ON FOLLOWING PAGES]

This bid is submitted upon the declaration that neither, I (we), nor, to the best of my (our) knowledge, none of the members of my (our) firm or company have either directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this Bid.

Dated this 20<sup>th</sup> day of April, 2023.

BUSINESS ADDRESS OF BIDDER:

8326 Quivas Way

City, State, Zip Code:

Denver, CO 80221

Telephone Number of Bidder:

(720) 252-7959

Fax Number of Bidder:

(303) 427-7156

Social Security or Employer Id. No. of Bidder:

16-1680034

Email Address:

marlene@chatosconcrete.com

SIGNATURE OF BIDDER:

PRINT NAME OF BIDDER:

Chato's Concrete, LLC

Attest:

(Corporate Seal)

Marlene Andrade

Secretary

By:


President



**Attachment 1, Part 2 Disclosure of Legal and Administrative Proceedings and Financial Condition****City and County of Denver  
Denver International Airport  
(Please use this form)**

If no disclosure required in accordance with II-14, please sign affirmation statement.

The undersign affirms that Chato's Concrete, LLC (Bidder) has not been involved in any legal or administrative proceedings which involve a claim in excess of Fifty Thousand Dollars (\$50,000.00); has not filed bankruptcy within the last ten (10) years; has not been debarred or suspended from bidding/proposing on any Federal, State or local government procurements; and neither the Bidder nor its key employees have been convicted of a Bid/Bid-related crime, violation or felony in the last five (5) years.

Signature  Title Owner/Partner

Print Name Marlene Andrade

Date April 20, 2023

If disclosure is required in accordance with II-13, please use the following space to provide information. If additional space is needed, please attach additional pages.

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**Attachment 1, Part 3 Contract Information**

1. Name of Bidder/Contractor: Chato's Concrete, LLC
2. Type of business entity: LLC  
NOTE: If bidder is a partnership or joint venture, give full names of all partners or joint venturers. Bid must be signed by all joint venturers. If bidder is a limited liability company, bid must be signed by authorized manager (may be signed by member-manager if LLC is organized to allow management by members).
3. Prequalified by City and County of Denver as Construction Contractor : Categories: 1F(2)-1F(3)  
Monetary Limit: 3,000,000.00
4. Address of Contractor: 8326 Quivas Way  
Denver, CO 80221  
Telephone: 720.252.7959  
Email Address: marlene@chatosconcrete.com
5. Established where and when: Denver, CO / August
6. Contractor's Banks: Vestra Bank  
720.947.7710 - Jackie VanDenburg
7. Principal Officers of Contractor (managers and members if LLC):
- |                                 |                               |
|---------------------------------|-------------------------------|
| Name: <u>Eleazar Villalobos</u> | Name: <u>Marlene Andrade</u>  |
| Title: <u>Owner / Partner</u>   | Title: <u>Owner / Partner</u> |
| Name: _____                     | Name: _____                   |
| Title: _____                    | Title: _____                  |

8. Bidder's/Contractor's City and County of  
Denver Contractor License if it has obtained  
one:

License No.:

245768

Class:

ROW-Paving License

A contractor license is required prior to start of construction but not prior to bid submittal.

9. Bidder's/Contractor's state of incorporation (state of organization if an LLC or partnership):

Colorado

10. Bidder's Surety:

Suretec

11. Surety's State of Incorporation:

Tx

12. Address of Contractor in other areas  
(if different from No. 4):

-same-

13. Name and address of person to  
receive payments:

Chato's Concrete, LLC  
8326 Quivas Way  
Denver, CO 80221

14. If the Bidder/Contractor is a joint venture, it shall attach a certified copy of the joint venture agreement. The joint venture agreement will not be included as a Contract Document. N/A

15. The Bidder/Contractor shall identify all applicable labor agreements (if any) to be used in the performance of the Work: N/A

## 16. References (Provide three professional references below):

1. Company Name: Douglas County Dept. of Public Works  
Contact: Brian Schultz, Project Inspector  
Project Title: Poston Parkway Reconstruction  
Email: bschultz@douglas.co.us  
Phone Number: 303.947.8721
  
2. Company Name: Martin Marietta Materials  
Contact: Ryan Yoch, Vice President / GM  
Project Title: Stapleton Filing 57  
Email: ryan.yoch@martinmarietta.com  
Phone Number: 303.598.16478
  
3. Company Name: City & County of Denver  
Contact: Derek Miles, DOT Project Manager  
Project Title: 2022 Citywide Concrete Panel Replacement  
Email: derek.miles@denvergov.org  
Phone Number: 720.865.3124



**Attachment 1, Part 5 Certification of Non-Segregated Facilities**

The Bidder must certify that it does not maintain or provide for its employees any segregated facilities at any of its establishments and that it does not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Bidder certifies further that it will not maintain or provide for its employees segregated facilities at any of its establishments and that it will not permit its employees to perform their services at any location under its control, where segregated facilities are maintained. The Bidder agrees that a breach of this certification is a violation of the equal opportunity clause in this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, parking lots, drinking fountains, recreation or entertainment areas, transportation and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion or national origin because of habit, local custom or any other reason. The Bidder agrees that (except where it has obtained identical certification from proposed subcontractors for specific time period) it will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding Ten Thousand Dollars (\$10,000) which are not exempt from the provisions of the equal opportunity clause and that it will retain such certification in its files.

Dated: April 20, 2023Bidder Company Name: Chato's Concrete, LLCBy: Title: Owner/Partner

**Attachment 1, Part 6 Equal Opportunity Report Statement**

The Bidder shall review, complete, sign and submit with its Bid this Equal Opportunity Report Statement (Statement). A Bid may be considered unresponsive and may be rejected, in the City's sole discretion, if the Bidder fails to provide the fully executed Statement or fails to furnish required data. The Bidder shall also, prior to award, furnish such other pertinent information regarding its own employment policies and practices as well as those of its proposed subcontractors as the FAA, the Owner or the Executive Vice Chairman of the President's Committee may require.

The Bidder shall furnish similar Statements executed by each of its first tier and second-tier subcontractors and shall obtain similar compliance by such subcontractors before awarding subcontracts. No subcontract shall be awarded to any non-complying subcontractor.

Equal Opportunity Report Statement as Required in 41 C.F.R. 60-1.7(b)

The Bidder shall complete the following statements by checking the appropriate blanks. Failure to complete these blanks may be grounds for rejection of Bid:

1. The Bidder has \_\_\_ has not ☒ developed and has on file at each establishment affirmative action programs pursuant to 41 C.F.R. 60-1.40 and 41 C.F.R. 60-2.
2. The Bidder has \_\_\_ has not ☒ participated in any previous contract or subcontract subject to the equal opportunity clause prescribed by Executive Order No. 11246, as amended.
3. The Bidder has \_\_\_ has not ☒ filed with the Joint Reporting Committee the annual compliance report on Standard Form 100 (EEO-1 Report).
4. The Bidder does ☒ does not \_\_\_ employ fifty (50) or more employees.

Dated: April 20, 2023

Bidder Company: Chato's Concrete, LLC

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

Title: Owner/Partner

Attachment 1, Part 7 Bid BondBidder Chato's Concrete, LLCDENVER INTERNATIONAL AIRPORT  
Gun Club On-Ramp to Peña Boulevard  
Contract No. 202366978

## Bid Bond

KNOW ALL MEN BY THESE PRESENTS THAT Chato's Concrete, LLC, as Principal, and SureTec Insurance Company, a corporation organized and existing under and by virtue of the laws of the State of TX, and authorized to do business within the State of Colorado as Surety, are held and firmly bound unto the City and County of Denver, Colorado, as Oblige, in the full and just sum of Five Percent of Amount Bid Dollars and --- Cents (\$ ---5%---) lawful money of the United States, 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 by these presents:

WHEREAS, the said Principal is herewith submitting its Bid, dated on April 20th, 2023, for the construction of Contract No. 202366978, Gun Club On-Ramp to Peña Boulevard, Denver International Airport, as set forth in detail in the contract documents for the City and County of Denver, Colorado, and said Oblige has required as a condition for receiving said Bid that the Principal deposit specified bid security in the amount of not less than five percent (5%) of the amount of said Bid, as it relates to work to be performed for the City, conditioned that in event of failure of the Principal to execute the Contract for such construction and furnish required Performance and Payment Bond if the Contract is offered them, that said sum be paid immediately to the Oblige as liquidated damages, and not as a Penalty, for the Principal's failure to perform.

The condition of this obligation is such that if the aforesaid Principal shall, within the period specified therefor, on the prescribed form presented to them for signature, enter into a written Contract with the Oblige in accordance with his bid as accepted, and give Performance and Payment Bond with good and sufficient surety or sureties, upon the form prescribed by the Oblige, for the faithful performance and the proper fulfillment of said Contract, or in the event of withdrawal of said bid within the time specified, or upon the payment to the Oblige of the sum determined upon herein, as liquidated damages and not as a Penalty, in the event the Principal fails to enter into said Contract and give such Performance and Payment Bond within the time specified, then this Obligation shall be null and void, otherwise to remain in full force and effect.

[END OF PAGE]

Signed, sealed, and delivered this 20th day of April, 2023.

Attest:

Chato's Concrete, LLC

PRINCIPAL

  
Secretary

[SEAL if bidder a corporation]

By: 

President

SureTec Insurance Company

SURETY

By: 

Attorney-in-Fact Jody L. Anderson

(ATTACH POWER OF ATTORNEY)

Power of Attorney shall be certified as to the date of  
bid.



**MOODY INSURANCE AGENCY, INC.**

8055 East Tufts Avenue, Suite 1000

DENVER, COLORADO 80237

PHONE: (303) 824-6600



## JOINT LIMITED POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That SureTec Insurance Company, a Corporation duly organized and existing under the laws of the State of Texas and having its principal office in the County of Harris, Texas and Markel Insurance Company (the "Company"), a corporation duly organized and existing under the laws of the state of Illinois, and having its principal administrative office in Glen Allen, Virginia, does by these presents make, constitute and appoint:

Karen A. Feggestad, Bradley J. Moody, Jody L. Anderson, Elizabeth Ostblom, Andrew J. Waterbury

Their true and lawful agent(s) and attorney(s)-in-fact, each in their separate capacity if more than one is named above, to make, execute, seal and deliver for and on their own behalf, individually as a surety or jointly, as co-sureties, and as their act and deed any and all bonds and other undertaking in suretyship provided, however, that the penal sum of any one such instrument executed hereunder shall not exceed the sum of:

Fifty Million and 00/100 Dollars (\$50,000,000.00)

This Power of Attorney is granted and is signed and sealed under and by the authority of the following Resolutions adopted by the Board of Directors of SureTec Insurance Company and Markel Insurance Company:

"RESOLVED, That the President, Senior Vice President, Vice President, Assistant Vice President, Secretary, Treasurer and each of them hereby is authorized to execute powers of attorney, and such authority can be executed by use of facsimile signature, which may be attested or acknowledged by any officer or attorney, of the company, qualifying the attorney or attorneys named in the given power of attorney, to execute in behalf of, and acknowledge as the act and deed of the SureTec Insurance Company and Markel Insurance Company, as the case may be, all bond undertakings and contracts of suretyship, and to affix the corporate seal thereto."

IN WITNESS WHEREOF, Markel Insurance Company and SureTec Insurance Company have caused their official seal to be hereunto affixed and these presents to be signed by their duly authorized officers on the 15th day of December, 2021.

SureTec Insurance Company

By:   
Michael C. Keimig, President



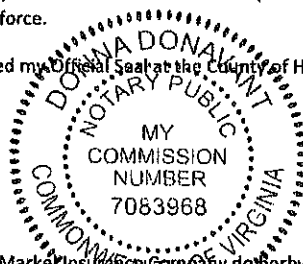
Markel Insurance Company

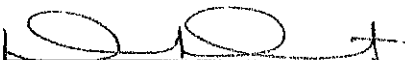
By:   
Robin Russo, Senior Vice President

Commonwealth of Virginia  
County of Henrico SS:

On this 15th day of December, 2021 A. D., before me, a Notary Public of the Commonwealth of Virginia, in and for the County of Henrico, duly commissioned and qualified, came THE ABOVE OFFICERS OF THE COMPANIES, to me personally known to be the individuals and officers described in, who executed the preceding instrument, and they acknowledged the execution of same, and being by me duly sworn, disposed and said that they are the officers of the said companies aforesaid, and that the seals affixed to the proceeding instrument are the Corporate Seals of said Companies, and the said Corporate Seals and their signatures as officers were duly affixed and subscribed to the said instrument by the authority and direction of the said companies, and that Resolutions adopted by the Board of Directors of said Companies referred to in the preceding instrument is now in force.

IN TESTIMONY WHEREOF, I have hereunto set my hand, and affixed my Official Seal at the County of Henrico, the day and year first above written.



By:   
Donna Donavant, Notary Public  
My commission expires 1/31/2023

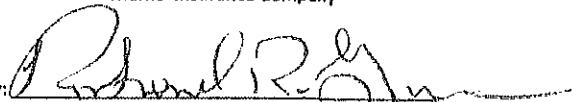
We, the undersigned Officers of SureTec Insurance Company and Markel Insurance Company do hereby certify that the original POWER OF ATTORNEY of which the foregoing is a full, true and correct copy is still in full force and effect and has not been revoked.

IN WITNESS WHEREOF, we have hereunto set our hands, and affixed the Seals of said Companies, on the 20th day of April, 2023.

SureTec Insurance Company

By:   
M. Brent Beaty, Assistant Secretary

Markel Insurance Company

By:   
Richard R. Grinnan, Vice President and Secretary

OFFICE OF THE SECRETARY OF STATE  
OF THE STATE OF COLORADO

**CERTIFICATE OF FACT OF GOOD STANDING**

I, Jena Griswold, as the Secretary of State of the State of Colorado, hereby certify that, according to the records of this office,

CHATO'S CONCRETE, LLC

is a

Limited Liability Company

formed or registered on 08/15/2003 under the law of Colorado, has complied with all applicable requirements of this office, and is in good standing with this office. This entity has been assigned entity identification number 20031263521 .

This certificate reflects facts established or disclosed by documents delivered to this office on paper through 05/17/2023 that have been posted, and by documents delivered to this office electronically through 05/18/2023 @ 21:11:49 .

I have affixed hereto the Great Seal of the State of Colorado and duly generated, executed, and issued this official certificate at Denver, Colorado on 05/18/2023 @ 21:11:49 in accordance with applicable law. This certificate is assigned Confirmation Number 14988303 .



*Jena Griswold*

Secretary of State of the State of Colorado

\*\*\*\*\*End of Certificate\*\*\*\*\*

*Notice: A certificate issued electronically from the Colorado Secretary of State's website is fully and immediately valid and effective. However, as an option, the issuance and validity of a certificate obtained electronically may be established by visiting the Validate a Certificate page of the Secretary of State's website, <https://www.coloradosos.gov/biz/CertificateSearchCriteria.do> entering the certificate's confirmation number displayed on the certificate, and following the instructions displayed. Confirming the issuance of a certificate is merely optional and is not necessary to the valid and effective issuance of a certificate. For more information, visit our website, <https://www.coloradosos.gov> click "Businesses, trademarks, trade names" and select "Frequently Asked Questions."*