INVITATION FOR BID
Construction

B18-005MZ

Date issued: January 18, 2018

STORM DRAIN IMPROVEMENT PROJECT

THE CITY OF COLORADO SPRINGS
The City of Colorado Springs hereby solicits Fixed Unit Price Bids, as
detailed in this Invitation for Bids (IFB), for STORM DRAIN
IMPROVEMENT PROJECT.

This IFB is posted to Rocky Mountain E-Purchasing as well as the City’s
new Contract Management Program – Bonfire.

SUBMITTALS FOR THIS PROJECT WILL BE ACCEPTED ON THE
BONFIRE PROCUREMENT PLATFORM.

Please login to the following website to register (Free Registration) to
submit a bid for this project. All required documents will be uploaded to
the website and hard copies are required as a backup.

https://coloradospringsgov.bonfirehub.com/login

Bonfire Support

https://bonfirehub.zendesk.com/hc/en-us
SECTION I – BID INFORMATION

1.0 BID INFORMATION

Section I provides general information to potential Bidders, such as bid submission instructions and other similar administrative elements. This Invitation for Bid (IFB) is available on Rocky Mountain E-Purchasing System (www.rockymountainbidsystem.com) and on the Bonfire Website (https://coloradospringsgov.bonfirehub.com). All addenda or amendments shall be issued through the Rocky Mountain E-Purchasing System.

1.1 SPECIAL TERMS

Please note the following definitions of terms as used herein:

The term “City” means the City of Colorado Springs.

The term “Contractor” or “Consultant” means the Bidder whose offer is accepted and is awarded the contract to provide the products or services specified in the IFB.

The term “Offer” or “Bid” means a bid submitted in response to this IFB.

The term “Offeror” or “Bidder” means the person, firm, or corporation that submits a formal bid or offer and that may or may not be successful in being awarded the contract.

The term “Project” refers to Storm Drain Improvement Project.

The term “Invitation for Bid” or “IFB” means this solicitation of formal, competitive, sealed bids from prospective bidders in which the intent is to award a contract to the resultant lowest responsible and responsive bidder.

1.2 BID ISSUE DATE

Invitation for Bid (IFB) Number B18-005MZ is being issued and posted on www.bidnetdirect.com on January 18, 2018.

1.3 SUBMISSION OF BIDS

A. Bids are to be submitted electronically on the Bonfire Procurement Platform (https://coloradospringsgov.bonfirehub.com).

B. Bids shall be received on or before: February 15, 2018

C. Bid bond is required if total bid exceeds $50,000.00. (Also see 1.22)

D. The cost of Bid preparation is not a reimbursable cost. Bid preparation shall be at the Bidder’s sole expense and is the Bidder’s total and sole responsibility.
1.4 PRE-BID CONFERENCE

A NON-MANDATORY pre-bid conference will not be held for this Bid on January 31, 2018 at 9:00AM in Suite 401 Large, 30 S. Nevada Colorado Springs, CO 80903.

1.5 LATE BIDS/LATE MODIFICATIONS OF BIDS

Bids, withdrawals or modifications of Bids received after the time set for opening, as designated in 1.3 above, are considered "late bids", and will not be accepted by the City, except as provided for in the City of Colorado Springs Procurement Rules and Regulations and approved by the Procurement Services Manager. Bidders are solely responsible for insuring their bids arrive on time and to the place specified in this Invitation for Bid.

1.6 MISTAKES IN BIDS - CONFIRMATION OF BID

If it appears from a review of a Bid that a mistake has been made, the Bidder may be requested to confirm its Bid in writing. Situations in which the confirmation may be requested include obvious, apparent errors on the face of a Bid or a Bid unreasonably lower than the other Bids submitted. All mistakes in Bids will be handled in accordance with the City of Colorado Springs Procurement Rules and Regulations.

1.7 PROCUREMENT RULES AND REGULATIONS

All formal IFBs advertised by the City of Colorado Springs are solicited in accordance with the City's Procurement Rules and Regulations. The City's Procurement Rules and Regulations can be reviewed and/or downloaded from the City’s Procurement Services Division website www.coloradosprings.gov. Any discrepancies or conflicting statements, decisions regarding bidding irregularities, or clarifications regarding clauses or specifications will be rectified utilizing the City’s Procurement Rules and Regulations, when applicable. It is the Bidder’s responsibility to advise the Contracts Specialist listed in this IFB of any perceived discrepancies, conflicting statements, or problems with clauses or specifications prior to the Bid opening date and time.

1.8 MINOR INFORMALITIES/IRREGULARITIES IN BIDS

A. A minor informality or irregularity is one that is merely a matter of form and not of substance. It also pertains to some immaterial defect in a Bid or variation of a Bid from the exact requirements of the invitation that can be corrected or waived without being prejudicial to other Bidders. The defect or variation is considered immaterial when the effect on price, quantity, quality, or delivery is negligible when contrasted with the total cost or scope of the goods and/or services being acquired.

B. If the City Procurement Services Division determines that a Bid submitted contains a minor informality or irregularity, then the Procurement Services
Manager shall either give the Bidder an opportunity to cure any deficiency resulting from the minor informality or irregularity or waive the deficiency, whichever is to the advantage of the City. In no event will the Bidder be allowed to change the Bid amount. Examples of minor informalities or irregularities include but are not limited to the following:

(1) Bidder fails to sign the Bid, but only if the unsigned Bid is accompanied by other material evidence, which indicates the Bidder's intention to be bound by the unsigned Bid (such as Bid security, or signed cover letter which references the Bid Number and amount of Bid).

(2) Bidder fails to acknowledge an Amendment, although this may be considered a minor informality only if the Amendment, which was not acknowledged, involves only a matter of form or has either no effect or merely a negligible effect on price, quantity, quality, or delivery of the item or services bid upon.

1.9 REJECTION OF BIDS

The Procurement Services Manager has the authority to reject any Bid based on, but not limited to, the following:

A. Any Bid that fails to conform to the essential requirements of the Invitation for Bids shall be rejected.

B. Any Bid that does not conform to the applicable specifications shall be rejected unless the IFB authorizes the submission of alternate bids and the items or services offered as alternates meet the requirements specified in the IFB.

C. A Bid that fails to conform to the specified delivery schedule.

D. A Bid shall be rejected when the Bidder imposes conditions that would modify requirements of the IFB or limit the Bidder’s liability to the City, since to allow the Bidder to impose such conditions would be prejudicial to other Bidders.

For example, Bids shall be rejected in which the Bidder:

(1) Protects against future changes in conditions, such as increased costs, if total possible costs to the City cannot be determined. This includes failure to completely fill out required bid schedule.

(2) Fails to state a price and indicates that price shall be “price in effect at time delivery”.

(3) States a price but qualifies it as being subject to “price in effect at time of delivery”.

(4) Takes exceptions to the IFB terms and conditions
(5) Inserts the Bidder’s terms and conditions.

(6) Limits the rights of the City under any Contract/Invitation for Bid clause.

E. Any Bid in which the price is considered to be unreasonable or is over budget.

F. Any Bid if the prices are determined to be unbalanced.

G. Bids received from any person or contractor that is suspended, debarred, proposed for debarment, or under investigation for fraud, including failure to pay federal, state, local or city taxes.

H. When a bid guarantee is required and the bidder fails to furnish the guarantee in accordance with the requirements of the IFB.

I. Low Bids received from bidders who are determined to be non-responsible in accordance with the City’s Procurement Rules and Regulations.

J. Any Bid that was prepared and submitted by a vendor who has been determined by the Procurement Services Manager to have an unfair advantage over other Bidders. Examples of an unfair advantage include, but are not limited to, the following:

(1) A previous or prior employee who in the last six (6) months was directly involved in the design or specification preparation of the competed procurement.

(2) A vendor who was directly involved in design or specification preparation of the competed project either for pay or voluntarily.

1.10 ESTIMATED QUANTITIES

If the Bid Form (Schedule A) herein contains estimated quantities, this provision is applicable. The quantities listed for each of the items in the Bid Form are only estimated quantities. Contractors are required to bid a firm unit price for each item specified. The actual quantities ordered may fluctuate up or down. The unit prices proposed by each Bidder will remain firm and will not be re-negotiated if the estimated quantities are not met or are exceeded. This clause will take precedence over any/all other estimated quantity clauses that conflict with this clause.

For bidding purposes, if there is a conflict between the extended total of an item and the unit price, the unit price shall prevail and be considered as the amount of the Bid. All unit prices shall include all necessary overhead and profit. Items not listed in the Bid Form such as overhead, profit, mobilization, de-mobilization, bonding, etc. shall be distributed throughout the Bidder’s Unit Prices for the items listed on the Bid Form.
1.11 **NUMBER OF COPIES**

Bidders shall submit one electronic copy on the Bonfire Procurement Platform (https://coloradospringsgov.bonfirehub.com). Upon submission, all Bid documents shall become and remain the property of the City. In the case of a contradiction or inconsistency between the hardcopy and softcopy, the hardcopy shall prevail.

1.12 **IDENTIFICATION OF BID**

Bids must be returned in a sealed envelope, box, or other container. The solicitation number and due date for submission of Bids must be clearly marked on the outside in the lower left hand corner:

**Bid No.**: B18-005MZ Storm Drain Improvement Project  
**Due Date & Time**: February 15, 2018 2:00PM  
**Company**:  

1.13 **SALES TAX**

The successful Offeror, if awarded a contract, shall apply to the Colorado Department of Revenue for a tax-exempt certificate for this project. The certificate does not apply to City of Colorado Springs Sales and Use Tax which shall be applicable and should be included in all bids and proposals. The tax exempt project number and the exemption certificate only apply to County, PPRTA (Pikes Peak Rural Transportation Authority), and State taxes when purchasing construction and building materials to be incorporated into this project.

Furthermore, the exemption does not include or apply to the purchase or rental of equipment, supplies or materials that do not become a part of the completed project or structure. In these instances, the purchase or rental is subject to full taxation at the current taxation rate.

The Offeror and all subcontractors shall include in their Offer City of Colorado Springs Sales and Use Tax on the work covered by the offer, and all other applicable taxes. Any increase in applicable sales or use tax occurring after the contract has been let shall be borne by the contractor and not passed through to the City.

Forms and instructions can be downloaded at the City of Colorado Springs Website. Questions can be directed to the City Sales Tax Division at (719) 385-5903.

Our Registration Numbers are as follows:  
City of Colorado Springs  
Federal I.D.: 84-6000573  
Federal Excise: A-138557  
State Sales Tax: 98-03479
1.14 PREPARATION OF BID OFFER

A. Bidders are expected to examine the drawings, specifications, bid documents, proposed contract forms, terms and conditions, and all other instructions and solicitation documents. Bidders are expected to visit the job-site to determine all requirements and conditions that will affect the work. Failure to do so will not relieve a Bidder from their responsibility to know what is contained in this Invitation for Bid, or site conditions affecting the work.

B. The Bidder certifies that it has checked all of its figures and understands that the City will not be responsible for any errors or omissions on the part of the Bidders in preparing its Bid.

C. All items, (unless the invitation specifically states otherwise) including any additive or deductive alternates on the Bid Form, must be completely filled out or the Bid will be determined non-responsive and ineligible for consideration for award.

D. The Bidder declares that the person or persons signing this Bid is/are authorized to sign on behalf of the firm listed and to fully bind the Bidder to all the requirements of the IFB.

E. The Bidder certifies that no person or firm other than the Bidder or as otherwise indicated has any interest whatsoever in the Bid or the contract that may be entered into as a result of the Bid and that in all respects the Bid is legal and firm, submitted in good faith without collusion or fraud.

F. By submitting a Bid the Bidder certifies that it has complied and will comply with all requirements of local, state, and federal laws, and that no legal requirements have been or will be violated in making or accepting this Bid. Bidders are expected to review the City's Procurement Rules and Regulations, which will be used when determining whether a Bidder is responsive and responsible and awarding contracts in the best interest of the City.

G. If there is a discrepancy between the unit price and the total price, the unit price shall be used to determine the applicable total price. Bidders are responsible for including profit and overhead associated with the project when determining their unit prices.

1.15 BASIS OF AWARD

A. The City of Colorado Springs intends to award a contract to the lowest responsive and responsible Bidder whose Bid meets the requirements and the criteria set forth in the Invitation for Bids and is determined to be in the best interest of the City.

B. The City reserves the right to reject any or all Bids and to waive informalities and/or irregularities in a Bid. Whether or not a contract is awarded as a result of
this Invitation for Bid, as stated above, Bid preparation costs are not reimbursable.

C. Total Bid will be evaluated and awarded as follows: It is the City’s intent to award this bid based on the TOTAL BASE BID, not on a line item by line item basis.

1.16 PERIOD OF ACCEPTANCE

The Bidder agrees that its Bid shall remain open for acceptance by the City for a period of sixty (60) calendar days from the date specified in the IFB for receipt of Bids.

1.17 CONTRACT AWARD

The signature of the Bidder indicates that within ten (10) calendar days from acceptance of its Bid, it will execute a contract with the City and, if indicated in this IFB, furnish a project specific Certificate of Insurance naming the City as Additional Insured, furnish Performance, Labor and Materials, Payment and Maintenance Bonds and any other documents required by the Specifications or Contract Documents.

1.18 NOTICE TO PROCEED

Work may not start under any awarded contract until a written notice to proceed is issued by the City. The City may issue the Notice to Proceed any time after the contract is signed and, if required, insurance and bonds have been provided in accordance with 1.23 below.

1.19 AMENDMENTS TO THE SOLICITATION

Amendments are also referred to as addendum or addenda; and these terms shall be considered synonymous. It is the Bidder’s responsibility to contact the Contracts Specialist listed in 1.22 below to confirm the number of Amendments which have been issued.

A. If this solicitation is amended, then all specifications, terms and conditions, which are not specifically amended, remain unchanged.

B. Bidders shall acknowledge receipt of any amendment to this solicitation by signing and returning the amendment and by identifying the amendment number and date in the space provided on the form for submitting a Bid.

C. Acknowledged amendments must be received prior to Bid opening. Bidders are encouraged to include signed addenda or initialed acknowledgment with returned Bids.
1.20 EXPLANATIONS TO PROSPECTIVE OFFERORS

Any prospective Bidder desiring an explanation or interpretation of the IFB documents, drawings, specifications, etc., must request it in writing within ten days of the Bid due date to allow enough time for a reply to reach all prospective offerors before the time for submission of offers. Oral explanations or instructions given before the opening of Bids will not be binding. Any information provided to a prospective Bidder during the Bid preparation stage will be promptly furnished to all other prospective Bidders as an amendment to the solicitation, if that information is necessary in submitting Bids or if the lack of it would be prejudicial to other prospective Bidders.

1.21 QUESTIONS AND OTHER REQUESTS FOR INFORMATION

All questions shall be submitted in writing to the following Contract Specialist. All questions must be submitted by email and must be received no later than 1:00 PM February 8, 2018.

All questions shall be directed to:
(Contract Specialist)

Mike Zeller
mzeller@springsgov.com

1.22 SECURITY REQUIREMENTS

A. Bid Security

(1) If the total amount of the accumulative Bid is more than $50,000, or a bond is required elsewhere in this IFB, the Bidder is required to furnish with their Bid a bid security in the form of a bank certified check, bank cashier’s check or a one-time bid bond underwritten by a company licensed to issue bonds in the State of Colorado and acceptable to the City in an amount equal to at least 5% of the total amount of the Bid payable without condition to the City.

(2) The Bid security shall guarantee that the Bid will not be withdrawn or modified for a period of sixty (60) calendar days after the time set for the receipt of Bids, and, if the Bid is accepted within those sixty (60) calendar days, that the person, firm or corporation submitting same shall within ten (10) calendar days after being notified of the acceptance of its Bid, enter into a Contract and furnish the required bonds and all insurance certificates called for under this Invitation for Bid.

(3) The Bid bonds of unsuccessful Bidders will not be returned to the respective Bidders unless a self-addressed, stamped envelope is provided along with a written request for bid bond return. However, if a certified check or a cashier's check is submitted as Bid security, it will be returned as soon as possible after the lowest responsive and responsible Bidder is determined and a contract is executed.
(4) In the event the Bidder whose Bid is accepted fails to enter into the contract and/or furnish the required contract bonds, its certified check, cashier’s check or bid bond will be forfeited in full to the City.

B. Performance, Labor and Materials Payment, and Maintenance Bonds

(1) For contracts in excess of $50,000, the Contractor shall furnish to the City each of the following: a Performance Bond, a Labor and Materials Payment Bond, and a Maintenance Bond. Each such bond shall be in the amount of one hundred percent (100%) of the contract price. Bonds shall be submitted within ten (10) calendar days after notification of award of a Contract. The cost of all bonds shall be included in Contractor’s Bid.

(2) Bonds shall:

a) Be for the full amount of the Contract price.

b) Guarantee the Contractor’s faithful performance of the work under the Contract, and the prompt and full payment for all labor and materials involved therein.

c) Guarantee protection to the City against liens of any kind.

d) Be from a surety company operating lawfully in the state of Colorado and accompanied by an acceptable "Power-of-Attorney" form attached to each bond copy.

e) Be issued from a surety company that is acceptable to the City.

f) Be submitted using the forms in the Exhibit section of this IFB or such forms as are approved by the City Attorney’s Office.

1.23 SPECIFICATIONS AND DRAWINGS

No Fee solicitations: Specifications and Drawings are normally included in the IFB. If Specifications and Drawings are too large to be included in the IFB, all interested Bidders may obtain one copy of the Project Specifications and a set of the Project Drawings for use in preparing Bids from the City Procurement Services Division office. If the Bidder requires additional sets, it is the Bidder’s responsibility to duplicate any additional copies, at its own expense.

1.24 TYPE OF CONTRACT

As a result of this Invitation for Bids, it is the City’s intention to award a fixed unit price Contract based on the prices offered by the lowest responsive and responsible bidder. Contract prices shall remain firm and fixed throughout the Contract performance period.

1.25 F.O.B. DESTINATION

Unless otherwise specified in the Invitation for Bid, all goods, materials, supplies, equipment or services covered by this IFB shall be delivered F.O.B. Destination shall be the location indicated in the awarded Contract or Purchase Order.
1.26 **BID RESULTS**

The City does not mail Bid results or tabulations. However, Bid tabulations are posted and can be downloaded from BidNetDirect ([www.bidnetdirect.com](http://www.bidnetdirect.com)). Bidders submitting Bids in response to this solicitation may also request the Bid tabulation for this solicitation via email to the Contracts Specialist indicated as the point of contact for this solicitation.

1.27 **APPROPRIATION OF FUNDS**

A. In the event funds are not appropriated in whole or in part sufficient for performance of the City's obligations under this IFB, or appropriated funds may not be expended due the City Charter spending limitations, then the City, without compensation to Bidders, may terminate or cancel this IFB or not award any contracts under this IFB.

B. In accordance with the Colorado Constitution and City Charter, performance of the City's obligations under any resultant Contract will be expressly subject to appropriations of funds by the City Council, and, in the event the budget or other means of appropriation for any year of the Contract fails to provide funds in sufficient amounts to discharge such obligations, such failure (i) shall act to terminate the Contract at such time as the then-existing and available appropriations are depleted, and (ii) neither such failure nor termination shall constitute a default or breach of the Contract, including any sub-agreement, attachment, schedule, or exhibit thereto, by the City.

1.28 **PERIOD OF PERFORMANCE**

The Contractor shall complete all work within the Period of Performance of **Notice to Proceed to June 29, 2018**. The Contractor will start work promptly after receipt of the Notice to Proceed and Pre-Construction meeting and continue to work diligently until all work is completed and accepted by the City.

1.29 **BID DOCUMENTS**

The following comprise this Invitation for Bid.

Schedule A – Bid Form  
Schedule B – General Construction Terms and Conditions  
Schedule C – General Provisions  
Schedule D – Special Provisions  
Schedule E – Technical Specifications  
Schedule F – Measurement and Payment  
Schedule G – Scope of Work  
Schedule H – List of Exhibits
The following listed documents must be included with your Bid in order for your Bid submittal to be considered responsive.

Schedule A -- Bid Form  
Exhibit 2 – Minimum Insurance Requirements Form  
Exhibit 3 – Qualification Statement  
Exhibit 4 -- Representations and Certifications  
Exhibit 5 -- Bid Bond if applicable (see 1.23)  
Acknowledged Addendums, if issued
SECTION II – SCHEDULES

Schedule A – Bid Form
Schedule B – General Construction Terms and Conditions
Schedule C – General Provisions
Schedule D – Special Provisions
Schedule E – Technical Specifications
Schedule F – Measurement and Payment
Schedule G – Scope of Work
Schedule H – List of Exhibits
SCHEDULE A - BID FORM

Submitted on Bonfire website.
SCHEDULE B – GENERAL CONSTRUCTION TERMS AND CONDITIONS

Schedule B -- General Construction Terms and Conditions, Version 100316 are hereby incorporated by reference, with the same force and effect as if they were given in full text. Upon request, the City will make their full text available. Also, the full text of a clause may be accessed electronically at this address:


The referenced General Construction Terms and Conditions will be incorporated in the resultant Contract.
SCHEDULE C - GENERAL PROVISIONS

C.0 GENERAL PROVISIONS

The Standard Specifications for this project shall be the “CITY OF COLORADO SPRINGS ENGINEERING DIVISIONS SPECIAL PROVISIONS revised October 2003, included herein and the City's STANDARD SPECIFICATIONS”, Major Revisions February, 1995 except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety. The following terms and conditions are listed because of their importance to bidders during the solicitation phase. The City of Colorado Springs Engineering Divisions Standards contains all of the Terms and Conditions that are applicable. It is the responsibility of each bidder/contractor to insure they have a copy of the above mentioned special provisions/standard specifications and understand the requirements therein. Copies are available for purchase at the cost of $25.00 from the City of Colorado Springs, Office Services Unit, Suite L01, 30 South Nevada, Colorado Springs, during regular business hours. These special provisions/standard specifications are also available and may also be downloaded from the City's web-site at www.coloradosprings.gov/contracting, or www.coloradosprings.gov/cityengineering.

C.1 GENERAL PROVISIONS

All bids submitted as a result of City of Colorado Springs Invitations for Bids (IFB) shall be in accordance with the latest version of the City's Procurement Rules, Regulations and Information. The latest version is posted on the City's web-site at www.coloradosprings.gov/contracting, and can be reviewed or downloaded.

SECTION 104

THE CONTRACT FOLLOWING EXECUTION

104.01 MATERIALS

Unless otherwise stipulated in the contract, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, light power, transportation, and other facilities necessary for the execution and completion of the work. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

104.02 SCHEDULE

The Contractor shall be responsible for planning, scheduling, and reporting the progress of the work to ensure timely completion of the work as called for in the Contract Documents. The Contractor shall prepare a Project Schedule that shall be used for coordination, for evaluation of progress, and for the evaluation of changes to the Contract. The Schedule shall include all activities, including those of subcontractors, Contractor's engineers and surveyors, and suppliers. Seasonal and weather constraints, utility coordination, railroad restrictions, right of way restrictions, traffic constraints, environmental constraints, other project interfaces, expected job learning curves and other
constraints shall be considered when preparing the Project Schedule, including any phasing or sequencing of the work specified in the Contract Documents. Days scheduled as no work days shall be indicated. The Schedule shall consist of a Methods Statement as defined in part A. below and a progress schedule consisting of (1) a Critical Path Method (CPM) schedule as defined in part B. below, or (2) a Bar Chart schedule as defined in part C. below. A CPM Schedule shall be required if the contract exceeds $250,000 or if the construction period exceeds 150 calendar days, unless the Contract Documents stipulate otherwise. The CPM Schedule shall utilize Primavera’s Suretrak Project Manager software or be capable of being read and manipulated by Suretrak Project Manager software. The Schedule shall show all work completed within the contract time.

The Contractor shall submit two copies of all required schedule information as described below. Schedules, schedule updates, diagrams and reports using CPM shall also be submitted electronically in the appropriate software format. All schedules, diagrams, and reports shall include a title, project number, date of preparation, and the name of the Contractor.

The Bar Chart or Critical Path Method 90-day schedule shall be submitted at least 10 working days prior to the start of the work. The Project Engineer’s review of the Schedule will not exceed 5 working days. Work shall not begin until the Schedule is accepted in writing, unless otherwise approved by the Project Engineer.

Methods Statement. A Methods Statement shall be prepared for the prominent features listed in the Contract Documents, and for any feature not listed in the Contract Documents that the Contractor considers a controlling factor for timely completion. The Methods Statement shall be a detailed narrative describing each feature and all work necessary to complete the feature. The Methods Statement shall be submitted with the Contractor’s schedule. The following format is required:

A. Feature: Name of the feature

B. Responsibility: Contractor, subcontractor, supplier, utility, etc. responsible for the feature.

C. Procedures: Procedures to be used to complete the work. The procedure to be used shall include general information regarding methods such as forming, excavation, pouring, heating and curing, backfill and embankment, trenching, protecting the work, etc. When separate or different procedures are to be employed by the Contractor due to seasonal or project phasing requirements, such differing procedures shall be described in the procedure statement

D. Production Rates: The planned quantity of work per day for each feature

E. Labor Force: The labor force planned to do the work

F. Equipment: The number, types, and capacities of equipment planned to do the work
G. Work Times: The planned time for the work to include:
   1. Number of work days per week
   2. Number of shifts per day
   3. Number of hours per shift

At the Project Engineer’s request, the Contractor shall update the Methods Statement, or any part thereof, and submit it with the Job Progress Narrative Report or Schedule Update, whichever is earlier.

Critical Path Method. CPM is a scheduling method which shows the interdependencies between work activities. The critical path is that path through the schedule which, if delayed, will cause a delay to project completion.

The progress schedule shall include as a minimum the prominent features of this project as listed in the Contract Documents. The progress schedule shall include all activities for all work on the project, including subcontracted work, delivery dates for critical material, submittal and review periods, milestone requirements and no work periods. Where the project has specific phases, each phase shall be described separately for each applicable prominent feature.

Construction activity duration shall not exceed 15 calendar days unless approved by the Project Engineer. Series of activities that have aggregate durations of five calendar days or less may be grouped in a single activity. For example, “form, reinforce, and pour pier” could be defined as a single activity rather than three. Single activities or a series of grouped activities of at least 1 calendar day duration may also need to be included in the Project Schedule as determined by the Project Engineer (e.g. same activities but noted separately by location).

Time Scaled Logic Diagram: This diagram shall show the logical progression of all activities required to complete the work defined in the Contract Documents. Activity information shall include activity ID, description, duration, early start and finish dates, late start and finish dates, total float, and responsibility.

90-Day Schedule. The 90-day Schedule shall provide all necessary detail for procurement, construction and submittal activities required during the first 90 days of contract time. This submittal shall include a Time Scaled Logic Diagram.

Project Schedule. The Project Schedule submittal shall consist of a Time Scaled Logic Diagram and Schedule Report. It shall be prepared in full and submitted to the Project Engineer within 45 calendar days after the Project Engineer’s acceptance of the 90-day Schedule. The Project Engineer’s review of the Project Schedule will not exceed one week. Revisions required as a result of the Project Engineer’s review shall be submitted within one week. Work shall not continue beyond the initial 90 days until the Project Schedule is accepted in writing, unless otherwise approved by the Project Engineer.

The Project Schedule shall cover the time from the Day of Notice to Proceed to the predicted completion date.
The Schedule Report shall tabulate for each activity the activity ID, description, duration, earliest start and finish date, latest start and finish date, total float time, and responsibility. Other reports and scheduling documentation may be requested by the Project Engineer.

Schedule Updates. The Contractor shall update the 90-day Schedule or the Project Schedule to reflect actual construction progress of all work activities on the project. Updates shall show the previous 30 days progress and a 60-day projection for all work started, completed, or in progress during this three month window.

The Project Schedule shall be updated as of the cutoff date for the monthly progress pay estimate and submitted to the Project Engineer before the payment of the progress pay estimate is approved.

Each of the diagrams, charts, and reports shall comply with the requirements for the Project Schedule above, except that they shall also include the actual completion dates and percentages of completion for the appropriate activities.

Bar Chart. The Bar Chart shall be time scaled and shall show the following:

The prominent features, as listed in the Contract Documents.

Any feature not listed in the Contract Documents that the Contractor considers a controlling factor for timely completion.

The number of days required to complete each feature and its relationship in time to other features.

Sufficient space for each feature to permit two additional plots parallel to the original time span plot.

The anticipated delivery dates for equipment or materials in any feature that could affect timely completion of the project.

Critical completion dates for any activity within any feature that could affect timely completion of the project.

Connecting lines between features that show the intended progression of activities.

The Project Schedule shall cover the time from the Day of Notice to Proceed to the predicted completion date. The Project Schedule shall be updated as of the cutoff date for the monthly progress pay estimate and submitted to the Project Engineer before the payment of the progress pay estimate is approved. The Contractor shall provide a copy of the original bar chart showing, for each feature, the days actually worked and the anticipated days required to complete.

A Job Progress Narrative Report shall be submitted bi-weekly as a minimum and with all Schedule updates. It shall detail the description of job progress, problem areas, current and anticipated delaying factors and their anticipated effects, impacts to job milestones or
project completion, any corrective action proposed or taken, and any minor revisions to
the Schedule. If the Job Progress Narrative Report indicates problem areas and impacts
to job milestones or project completion, a revised Schedule Update shall also be
submitted as specified below.

Revision of the Schedule may be required, as determined by the Project Engineer, for:
a major revision in the schedule logic or methods of construction; the addition, deletion, or
revision of activities required by contract modification; delays in milestones or the
completion of the project; or for prosecution of work that revises the phasing or staging
which is represented on the plans or on the progress schedule. If in the opinion of the
Project Engineer, the Contractor falls behind the approved schedule, the Contractor shall
take steps necessary to improve project progress, including those steps that may be
required by the Project Engineer, without additional costs to the City. In those
circumstances where the Contractor is behind schedule, the City may require the
Contractor to increase the number of shifts, overtime operations, days of work, and/or the
amount of construction plant, and to submit such changes and revisions to the schedule to
the Project Engineer for approval that will demonstrate how the approved rate of required
progress will be regained. Failure of the Contractor to comply with the requirements of the
Project Engineer under this subsection shall be grounds for a determination by the City
that the Contractor is not prosecuting the work with sufficient diligence to ensure timely
completion of the contract as required.

If it is determined that a revision to the Schedule is required, it shall be provided to the
Project Engineer for review within 15 calendar days of written notification. The Project
Engineer’s review of the revised schedule will not exceed 5 working days. Revisions
required as a result of the Project Engineer’s review shall be submitted within 5 working
days. When accepted by the Project Engineer in writing, the revised schedule shall
become the Project Schedule.

The Contractor shall participate in the Project Engineer’s review and evaluation of the
submittals. Meetings will be held to review progress and planning when requested by the
Project Engineer or Contractor. The Project Engineer may request additional project
scheduling information and documentation as deemed necessary, including reports and
other information that may be reasonably generated using CPM software if required by the
contract.

The Contractor shall prosecute the work according to the Schedule. The Contractor shall
be responsible for assuring that its subcontractors, suppliers, and engineers/surveyors, at
any tier, also prosecute the work according to the Schedule. The City shall be entitled to
rely on the Contractor’s Schedule for planning and coordination.

Acceptance of the Contractor’s Schedule by the Project Engineer is not to be construed as
relieving the Contractor of obligation to complete the contract work within the contract time
allowed for the portion of the work or the entire Contract, or granting, rejecting or in any
other way acting on the Contractor’s request for extension of contract time, or claims for
additional compensation.
All costs relating to preparation, submittal, and acceptance of the Schedule, reports and revisions, and all requirements of this subsection will not be paid for separately, but shall be included in the work.

Failure of the Contractor to comply with the requirements of this subsection shall be grounds for a determination by the Project Engineer that no further progress payments are to be made until the Contractor is in full compliance.

Project Coordination. The Contractor shall be responsible to coordinate and schedule their work to include utility work anticipated or otherwise. Various City and private utility agencies may be working to install and/or inspect their utilities within the project area. Reasonable delays should be expected for utility lowering, relocations and placement. These delays shall not be reason for granting any monetary change or performance time alteration to the contract. As a minimum, the Contractor’s Project Schedule shall reflect coordination with the following:

City of Colorado Springs City Engineering Division
City of Colorado Springs Traffic and Transportation Engineering Division
Colorado Springs Utilities (water, wastewater, gas, electric)
Telecommunication Companies

Contractor Early Finish or Voluntary Acceleration. Early finish or voluntary acceleration of the schedule by the Contractor is acceptable provided:

At the time the Contractor submits the Project Schedule indicating an early finish or voluntary acceleration, the City is notified in writing of actions on the City’s part necessary to accommodate the change(s).

The City agrees to such change(s) in writing.

The City is compensated by the Contractor for any inconvenience or expense associated with the change(s).

There is no increased Contract cost.

104.03 SCHEDULE OF VALUES

A. Promptly following the execution of the contract documents for all lump sum contracts, the Contractor shall prepare and transmit to the Engineer two copies of an itemized breakdown showing the unit quantities of each major construction item and the corresponding unit prices. Such unit prices shall contain all costs including profit and overhead of each item complete in place. The total cost of all the items shall equal the contract price for the project. This breakdown, when approved by the Engineer, will be used primarily in determining payment due the Contractor on periodical estimates. If, in the opinion of the Engineer, any unit price submitted by the Contractor is unbalanced, a detailed breakdown of the items contained in the unit will be required.

B. For contracts bid on a unit price basis, payment shall be made based on the actual number of units installed or performed that are complete, however, payment shall
not exceed the total contract amount unless previously approved by Change Order. For bypass pumping and traffic control items, to be paid for on a lump sum basis, the Contractor shall prepare and transmit to the Engineer two copies of an itemized breakdown showing the unit quantities of each major component of the item and the corresponding unit prices prior to the work. Such unit prices shall contain all costs, including profit and overhead, of each component of that item, complete in place. The total cost of all the components shall equal the lump sum price bid for that item. This breakdown, when approved by the Engineer, will be used primarily in determining payment due the Contractor on periodical estimates. If, in the opinion of the Engineer, any unit price submitted by the Contractor is unbalanced, a detailed breakdown of the items contained in the unit will be required.

The itemized breakdown for bypass pumping shall include, at a minimum, the following items for each sanitary sewer system pipe size that will be bypassed:

A. Preparation, design and submittal for approval of the bypass system plan(s), including emergency response plan

B. Mobilization, setup and testing of bypass system for each sanitary sewer pipe size, including all pumps, generators, piping and equipment, and any additional setups if multiple systems or setups are used for each sanitary sewer pipe size

C. Daily operation and maintenance, including fuel costs

D. Continuous manned monitoring during all bypass operations

E. Overtime costs of CSU inspections/observation staff

F. Demobilization and removal of bypass system

G. Restoration of sanitary sewer system and manholes and restoration of surfaces impacted by bypass operations

H. Emergency response activities, if needed

I. All other labor, materials and equipment necessary for the successful implementation of the bypass system plan.

104.04 SURVEYS

A. Unless otherwise specified in the Contract documents, the City will furnish all site surveys, easements, pipeline licenses, etc., necessary to authorize construction of any permanent works required in the Contract, where such work is to be done on property other than the City’s.

B. The project limits of construction shall be within the public right-of-way and/or easements. The Contractor shall not trespass on premises outside of the limits of construction for this project, unless permission to do so is granted by the property owner in
writing. Copies of any such grant shall be furnished to the City prior to the performance of any work outside the limits of construction.

104.05 TAXATION

The Contractor's payment or exemption of State of Colorado, El Paso County and City Sales and Use Taxes shall be as specified in the Instructions to Bidders of the Invitation for Bids or Request for Proposals.

104.06 ASSIGNMENT OF CONTRACT

No assignment or transfer by the Contractor of this contract or any part thereof or of the funds to be received there under by the Contractor will be recognized unless such assignment has had the prior written approval of the City and the surety has been given due notice of such assignment. Such written approval by the City shall not relieve the Contractor of the obligations incurred by them under the terms of this contract. In addition to the usual recitals in assignment contracts, the following language must be set forth:

It is agreed that the funds to be paid to the assignee under this assignment are subject to a prior lien for services rendered or materials supplied for the performance of the work called for in said contract in favor of all persons, firms, or corporations rendering such services or supplying such materials.

104.07 SUBCONTRACTS

The Contractor shall as soon as practical after signing the contract, notify the Project Engineer/Manager in writing, giving the names and qualifications of all subcontractors proposed for work within fifteen (15) business days of notice of award. The City shall have the right to reject subcontractors who are debarred or suspended from doing business with the City of Colorado Springs. The Contractor shall notify the Engineer of each subcontract he awards, giving:

A. Name, address, and telephone number of the subcontractor
B. Branch of work covered
C. Total price of subcontract
D. Date of subcontract

It shall be the responsibility of the Prime Contractor to file with the Engineer copies of applicable permits and licenses required to do the subcontracted work.

104.08 OTHER CONTRACTS

The City may undertake or award other contracts for additional work at or near the site of the work under this contract. The Contractor shall fully cooperate with the other contractors and with City employees and shall carefully adapt their scheduling and performance of the work to accommodate the additional work, heeding any direction that may be directed by the
Project Engineer/Manager. The Contractor shall not commit or permit any act, which will interfere with the performance of work by any other contractor.

SECTION 105

CONSTRUCTION SITE

105.01 LANDS TO BE USED FOR WORK

A. The City shall provide as indicated the lands upon which the work under this contract is to be done, right-of-way for access to same, and such other lands which are designated on the Drawings for the use of the Contractor, unless otherwise noted in the contract documents.

B. The Contractor shall provide at their expense and without liability to the City any additional land and access thereto that may be required for temporary construction facilities, or for storage of materials. All such costs will be considered as having been included in the bids for the contractor.

105.02 STORAGE OF MATERIALS

The Contractor shall confine their equipment, apparatus, the storage of materials and operations of Contractor's workmen to limits indicated by law, ordinances, permits, or directions of the City and shall not encumber the project site with materials or equipment not necessary for the project.

105.03 LOADING OF STRUCTURES

The Contractor shall not load or permit any part of the structure to be loaded with a weight that will endanger the structure's safety. The Contractor shall enforce the Engineer's instructions regarding signs, advertisements, fires, and smoke.

105.04 SANITARY PROVISIONS

The Contractor shall provide and maintain on the construction work at all times suitable sanitary facilities for use of those employed on this contract without committing any public nuisance. All toilet facilities shall be subject to the approval of the El Paso County Health Department.

105.05 ACCIDENT PREVENTION

Precaution shall be exercised at all times for the protection of persons, including employees, and property. The safety provisions of all Federal, State and Municipal laws and any other codes relating to the public safety, shall be strictly observed, and the contractor shall, at all
times, whether or not so specifically directed by the Engineer, take the necessary precautions to ensure the protection of the public.

Piling, sheeting and shoring shall be utilized where required to prevent any excessive widening or sloughing of the trench which may be detrimental to human safety, traffic flow, the pipe being placed, trees, or to any existing structure.

Excavated materials shall be placed a safe distance from the sides of the trench. Heavy equipment shall not be used or placed near the sides of the trench unless the trench is adequately braced. If the Engineer or any City Safety Officer or their designated representatives become aware of failure to comply with applicable safety regulations, the Engineer or City Safety Officer or their designated representatives may inform the contractor who shall take immediate steps to remedy the noncompliance. The Engineer or City Safety Officer or their designated representatives shall give written notification to the contractor directing them to correct the unsafe acts or conditions. If the contractor fails to comply with such a notification, the Engineer or City Safety Officer or their designated representatives may issue a "stop work" order in accordance with Section 108.05 of the General Provisions of this contract, and work shall only be resumed after adequate corrective actions have been taken to comply with the safety deficiencies the Contractor has been notified of. Stoppage of work because of noncompliance with prescribed accident precaution measures shall not be subject to claim for changed condition or changes in work, nor for extension of completion time.

105.06 PROTECTION OF THE PUBLIC WORKS AND PROPERTY

A. The Contractor shall provide and maintain all necessary watchmen, barricades, lights, and warning signs and take all necessary precautions for the protection of the public. The contractor shall continuously maintain adequate protection of all work from damage, and shall take all reasonable precautions to protect the City's property from injury or loss arising in connection with the contract. The Contractor shall make good any damage, injury, or loss to their work and to the property of the City resulting from lack of reasonable protective precautions except such as may be due to errors in the contract documents, or caused by agents or employees of the City. The Contractor shall check all cautionary signs at least once a day during this contract.

B. The Contractor shall continuously maintain adequate protection of all their work from damage and shall protect the City's and adjacent property from injury arising in connection with this contract.

The Contractor will be responsible for any and all damage to property, public or private, that may be caused by their operations in the performance of this contract, and the Contractor shall defend any suit that may be brought against themselves or the City on account of damage inflicted by their operations, and shall pay any judgments awarded to cover such damage.

C. The Contractor shall be responsible for the restoration of all existing surface or subsurface improvements where damaged as a result of construction at no additional cost to the City.
105.07 PUBLIC ROADS

The Contractor in executing the work on this project shall not unnecessarily impede or interfere with traffic on public highways or streets. Detours, including surfacing, guard rails, temporary bridges and culverts, as may be shown on the drawings, or ordered by the Engineer to accommodate the general public, residents adjacent to the improvements, and the United States mail shall be provided and maintained by the Contractor in a good workmanlike manner. Any call out of City Barricade Crews shall be charged to and paid for by the Contractor.

All work done within the public right-of-way and/or easements requires an approved Traffic Control Plan by the City Traffic Engineering Division.

The Contractor shall provide and maintain in place all barricades, warning signs, lights and other safety devices required to protect the work, divert traffic, and warn pedestrians of open excavation, unfilled trenches, and other areas or conditions which might be hazardous or dangerous during the daylight or dark. Detour routings must first be submitted to the Traffic Engineer for review and approval and shall be signed for the entire route of the detour as required to return the traffic to their street or origination. Detours shall be maintained throughout the period of construction in such a manner as to provide the least amount of disruption to normal traffic flow.

All signing and barricading shall conform to the latest edition of the Manual of Uniform Traffic Control Devices for Street and Highways, refer to Section 800. The Traffic Engineer may require flag persons or off-duty police officers for traffic direction. Any call out of the City Barricade crews shall be charged to the Contractor.

105.08 FAILURE TO MAINTAIN SAFE SITE

In case of injury to persons or property by reason of failure to erect and to maintain necessary barricades, safeguards, and signals, or by reason of any act of negligence of the Contractor, or Contractor's subcontractors, agents, or employees, during the performance of this contract, the City may withhold payments due the Contractor so long as shall be reasonably necessary to indemnify the City on account of any such injuries, but the City's payment or failure to pay any sum shall not be considered as a waiver of its right under the indemnity provision of this contract.

105.09 POLLUTION

The Contractor shall at all times ensure compliance with applicable Federal, State, and Municipal air, water, and noise pollution laws and ordinances. The Contractor shall at all times have the proper sprinkling equipment available and shall apply water in the amount determined by each site condition or as directed by the Engineer. The Contractor shall obtain all necessary permits at Contractor's expense, which may include, but not be limited to, El Paso County or a State Air Emission permit, State of Colorado Construction Activity permit, State of Colorado Dewatering permit and Section 404 Corp of Engineers permit, unless otherwise specified in the Invitation for Bids.
105.10 CLEAN-UP

The Contractor shall at all times keep the work area including storage and staging areas, free from accumulations of waste materials. The Contractor is also responsible for any costs associated with cleanup of debris from the work site or storage areas that may inadvertently be scattered outside the area by weather or vandalism. Upon completion of the work, the Contractor shall leave the work area in a clean neat, and orderly condition satisfactory to the Project Engineer/Manager.

105.11 PROTECTION OF EXISTING CURBS, GUTTERS AND DRIVEWAYS

The Contractor shall exercise care in protecting existing curbs, gutters and driveways. Curbs, gutters and driveways damaged by the Contractor's operations shall be removed and replaced by the Contractor at Contractor's expense.

105.12 TEMPORARY CONSTRUCTION

All temporary facilities, including the Contractor's field office which they may maintain at the site, and additional offices erected by subcontractors, shall be neatly constructed and arranged on the site in an orderly manner. The Contractor shall prepare and submit to the Engineer, for approval prior to starting work, a construction plan layout, showing arrangement of storage areas, temporary buildings, equipment, and work areas. The Contractor shall provide suitable weather-tight storage sheds of capacity required to contain all materials which might be damaged by storage in the open. The Contractor shall at all times keep copies of all contract documents readily accessible at their office at the site.

105.13 TEMPORARY WATER SUPPLY

The Contractor shall provide at Contractor's own expense temporary water connections and water supply necessary for the prosecution of the work and permit all contractors on the work to use this supply at a reasonable prorated charge, or by submetering. The Contractor shall pay for all water consumed in the work, and shall arrange with municipal authorities for temporary connections and payment of service charges. (Use most current Code of the City of Colorado Springs). Upon completion of the contract work, all temporary waterlines shall be removed.

105.14 TEMPORARY ELECTRIC LIGHT AND POWER

The Contractor shall arrange with the City Utility Departments for temporary electric light and power necessary for the prosecution of the work. The Contractor shall pay for all electric current consumed, and shall permit all contractors on the work to use this supply at a reasonable prorated charge, or by submetering.

105.15 TEMPORARY HEAT

The Contractor shall provide adequate, temporary heat required during construction. Until the building or work area is enclosed, heavy tarpaulin shall be used to enclose any space requiring heating or protection from weather during construction operations. After the heating
plant is in operating condition and the building is enclosed, heat may be provided from the permanent heating plant if such is approved by the Engineer. In such case, the Contractor shall arrange to operate the plant, connect permanent or temporary radiation or unit heaters, and so maintain the plant during operation that it will be turned over to the City undamaged at the completion of the work. The Contractor shall provide all fuel required. In no case shall salamander heating be used in finished or plastered surfaces; instead, gas-steam radiators, unit heaters, or other suitable and approved means shall be used if the permanent heating plant is not available.

105.16 TEMPORARY ENCLOSURES

The Contractor shall provide and maintain temporary enclosures for the work as may be required to permit continuation of interior work during inclement weather, if wall and roof construction has progressed sufficiently to make interior work possible.

SECTION 106

INSURANCE AND INDEMNITY

106.01 CONTRACTOR’S INSURANCE

The Contractor shall secure and maintain during the life of this contract such insurance policies as will protect Contractor and Contractor’s Subcontractors, the City, and each of their officers, agents and employees from claims for bodily injuries, death, or property damage, which may arise from operations under this contract whether such operations be by the Contractor or by any Subcontractor or anyone employed by them directly or indirectly. The Contractor shall not commence work under this contract until Contractor has obtained all insurance required and such insurance has been approved by the City of Colorado Springs. Also, the Contractor shall not allow any Subcontractor to commence work on any subcontract until all similar insurance required of the Subcontractors has been obtained. The following insurance policies are required:

WORKER’S COMPENSATION INSURANCE

Contractor shall take out and maintain during the period of this contract, Colorado Worker’s Compensation Insurance for the Contractor and all employees of the Contractor. If any service is sublet by the Contractor, the Contractor shall require the subcontractor to provide the same coverage for the subcontractor and the subcontractor’s employees. Worker’s Compensation Insurance shall include occupational disease provisions covering any obligations of the Contractor in accordance with the provisions of the Worker’s Compensation Act of Colorado.
**Employer's Liability** The Contractor shall take out and maintain during the life of this contract, Employer's Liability Insurance with a limit of $100,000 in an insurance company authorized to write such insurance in all states where the Contractor will have employees located in the performance of this contract and the Contractor shall require each of his Subcontractors similarly to maintain Employer's Liability Insurance on his employees.

**Public Liability** The Contractor shall maintain during the life of this contract such Public Liability Insurance as shall protect the Contractor against claims for damages resulting from (a) bodily injury, including wrongful death, and (b) property damage, which may arise from operations under this contract whether such operations be by the Contractor or by any Subcontractor or anyone directly or indirectly employed by either of them.

The Public Liability Insurance required by the preceding sub-paragraph shall include the following extensions of coverage:

1. The coverage shall be provided under a Comprehensive General Liability form of policy or similar thereto.

2. **X.C.U. Coverage** - If the contract requires any work procedures involving blasting, excavating, tunneling, or other underground work, the City may require Standard Blasting or Explosion Coverage, Standard Collapse Coverage and Standard Underground Coverage, commonly referred to as XCU property damage liability coverage. If this coverage is required, it will be specified in the contract and the limits shall be specified in the Special Provisions.

3. The property damage coverage shall include a Broad Form Property Damage Endorsement.

4. **Contractual Liability** coverage shall be included.

5. **Protective Liability** coverage shall be included to protect the Contractor against claims arising out of operations performed by Contractor's Subcontractors.

6. **Products Liability and/or Completed Operation** coverage shall be included.

**Automobile Liability.** The Contractor shall take out and maintain during the life of the contract such comprehensive Automobile Liability Insurance as shall protect the Contractor against claims for damages resulting from (1) bodily injury, including wrongful death, and (2) property damage, which may arise from the operations of any owned, hired or non-owned automobiles used by or for the Contractor in any capacity in connection with the carrying out of this contract.

A. Other forms of insurance shall also be provided if specified in the Special Provisions.

B. The minimum acceptable policy limits for each project shall be as set forth below or as specified in the Special Provisions. The required insurance coverage shall in no way lessen or limit the liability of the Contractor under the terms of the contract. The Contractor shall procure and maintain at Contractor's own cost and expense, any additional kinds and
amounts of insurance that in Contractor’s own judgement, may be necessary for his proper protection in the prosecution of the work.

**Statutory Workmen's Compensation**

<table>
<thead>
<tr>
<th>Insurance Coverage</th>
<th>Minimum Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer's Liability</td>
<td>$100,000</td>
</tr>
<tr>
<td>each person</td>
<td>$100,000</td>
</tr>
</tbody>
</table>

**Comprehensive General Liability**

<table>
<thead>
<tr>
<th>Insurance Coverage</th>
<th>Minimum Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bodily Injury:</td>
<td>$500,000</td>
</tr>
<tr>
<td>each occurrence</td>
<td>$500,000</td>
</tr>
<tr>
<td>aggregate</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>Property Damage:</td>
<td>$500,000</td>
</tr>
<tr>
<td>each occurrence</td>
<td>$500,000</td>
</tr>
<tr>
<td>aggregate</td>
<td>$500,000</td>
</tr>
</tbody>
</table>

**Comprehensive Automobile Liability**

| Bodily Injury: | $500,000 |
| each person | $500,000 |
| each accident | $500,000 |

| Property Damage: | $500,000 |
| each accident | $500,000 |

C. The Contractor and all Subcontractors shall include the City of Colorado Springs and the City’s officers, agents and employees as "additional insured parties" on each policy for each project, except for Worker’s Compensation Coverage.

D. The Contractor shall furnish the Project Engineer with applicable Insurance Policies or Certificates of Insurance with required insurance coverage. They shall contain a provision that thirty (30) days written notice shall be given to the City prior to cancellation or revisions to any of the insurance. These Policies or Certificates of Insurance will be subject to City approval prior to execution of the contract.

**106.02 INDEMNIFICATION**

Contractor agrees that the Contractor shall indemnify, defend and hold harmless the City, its officers, employees and agents, from and against any and all loss, damage, injuries, claims, costs, including attorney’s fees, cause or causes of action, or any liability whatsoever resulting from, or arising out of, or in connection with the Contractor’s obligations or actions
under this contract, or from any act or obligation of any subcontractor, laborer, material man or agent of the Contractor.

This indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable for or by the Contractor or any subcontractor, manufacturer or supplier under Workmen's Compensation Act, disability benefit acts or other employee benefit acts.

106.03 THIRD PARTY LIABILITY

It is specifically agreed between the parties executing this contract that this contract is not intended by any of the provisions to create in the public or any member thereof any third party beneficiary rights whatsoever, or to authorize anyone not a party to this contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of this contract.

106.04 RISK INSURANCE

Unless otherwise set forth in the Contract Documents, the City shall not maintain risk insurance on the project.

SECTION 107

ROYALTIES, PATENT INFRINGEMENTS, SPECIAL LICENSES AND PERMITS

107.01 ROYALTIES AND PATENTS

The Contractor shall pay all applicable royalties and license fees. The Contractor shall defend all suits or claims for infringement of any patent rights and save the City harmless from loss on account thereof except that the City shall be responsible for any such loss when a particular process, design, or the product of a particular manufacturer or manufacturers is specified, unless the City has notified the Contractor prior to the signing of the contract that the particular process, design, or product is patented or is believed to be patented.

107.02 PERMITS, LICENSES AND REGULATIONS

Permits and licenses necessary for the prosecution of the work shall be secured and paid for by the Contractor. The Contractor shall be responsible for all water and wastewater tap fees and water and wastewater connection fees as set forth in the Code of the City of Colorado Springs, as amended. Projects that involve Building Permits and sprinkler systems will require water or wastewater connection fees or both.

Licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the City, unless otherwise specified. The Contractor shall give all notices and comply with all laws, ordinances, rules, and regulations bearing on the conduct of the work as drawn and specified. If the Contractor observes that the Plans and Specifications are at variance therewith, he shall promptly notify the Engineer in writing, and any necessary changes shall be adjusted as provided in the contract for changes in the work.
Prior to the start of construction, the Contractor shall procure all permits and licenses, pay all charges, fees and taxes, and give all notices necessary and incidental to the due and lawful prosecution of the work. Copies of the fully executed permits shall be furnished to the Engineer. It is the responsibility of the Contractor to be aware of the terms and conditions of all permits, and it is the Contractor’s responsibility that the terms and conditions are satisfied.” (REF. 102.06, 105.09)

SECTION 108

WORK PROVISIONS AND RULES

108.01 COMMENCEMENT AND COMPLETION OF WORK

A. Preconstruction Conference. After issuance of Notice of Award, or as otherwise established by the City, a preconstruction conference shall be held for review of the construction schedule, Contractors written list of Subcontractors and suppliers, project contracts, utility support plan, water control plan, Traffic Control Supervisor name and telephone number, gradations, test results, certifications, to review procedures for handling shop drawings and other submittals, processing applications for payment, and other pertinent items.

B. The Contractor shall commence work within ten (10) calendar days after the date specified on the Notice to Proceed and complete the contract within the number of calendar days or by the date specified in the proposal form. (Unless otherwise noted the number of days set out in proposal form are calendar days).

C. The dates fixed for commencement and completion of the work may be extended by the Engineer. All requests for extension of time by the Contractor shall be made in writing to the Engineer and shall set forth the reasons for such requests. The Engineer shall fix the period of extension, if any. The Engineer’s decision shall be binding upon the parties hereto. Requests for extension of time received twenty (20) or more days after the occurrence of the delay will not be honored. No requests for extension of time shall be honored if submitted after the completion date.

D. If satisfactory execution and completion of the contract shall require work or materials in greater amounts or quantities other than those set forth in the contract, then the contract time shall be adjusted at the time of the execution of the Change Order. No allowance will be made for delays or suspension of the prosecution of the work due to the fault of the Contractor.

108.02 FAILURE TO COMPLETE WORK ON TIME, LIQUIDATED DAMAGES
If the Contractor fails to fully perform and complete the work in conformity to the provisions and conditions of the contract within the specified time limit set forth in the contract, including any extensions granted hereto, the Contractor shall pay to the City for each calendar day of delay until such time the contract is complete, liquidated damages at the applicable daily rate below. The amounts shown are considered to be liquidated damages to reimburse the City for the additional cost of construction engineering and contract administration services and in no case are considered a penalty.

<table>
<thead>
<tr>
<th>Original Contract Amount</th>
<th>Amount of Liquidated Damages Per Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $50,000</td>
<td>$300.00</td>
</tr>
<tr>
<td>$50,000 to $100,000</td>
<td>$500.00</td>
</tr>
<tr>
<td>$100,000 to $500,000</td>
<td>$700.00</td>
</tr>
<tr>
<td>$500,000 to $1,000,000</td>
<td>$900.00</td>
</tr>
<tr>
<td>Over $1,000,000</td>
<td>$1500.00</td>
</tr>
</tbody>
</table>

108.03 WORK IN BAD WEATHER

No construction work shall be done during stormy, freezing, or inclement weather, except such as can be done satisfactorily, and in a manner to secure first class construction throughout, and then only subject to permission of the Engineer.

The granting of a time extension for inclement weather does not imply or guarantee that additional compensations for incidental and appurtenant work caused by such weather will be approved or authorized by the Engineer. The Contractor is instructed to include as part of the Contractor's total bid price the costs for such weather delays as can be reasonably anticipated. The Engineer will be the sole judge as to the reasonableness of delays for inclement weather.

108.04 EMERGENCY WORK

In an emergency affecting the safety of life or of the work or of adjoining property, the Contractor is, without special instructions or authorization from the Engineer, hereby permitted to act at Contractor's discretion to prevent such threatening loss or injury. Contractor shall also act, without appeal, if so authorized or instructed by the Engineer. Any compensation claimed by the Contractor on account of emergency work shall be determined by agreement or in accordance with the changes in Work Provision of this contract.

108.05 AUTHORITY OF THE ENGINEER
The Engineer shall perform technical inspection of the work. The Engineer has authority to stop the work whenever such stoppage may be necessary to insure the proper execution of the contract. The Engineer shall also have authority to reject all work and materials, which do not conform to the contract and to decide questions, which arise in the execution of the work.

The Engineer shall, within a reasonable time after their presentation to the Engineer, make decisions in writing on all claims submitted to the City or the Contractor and on all other matters relating to the execution and progress of the work or the interpretation of the contract documents. The Engineer's decisions shall be final.

Suspension of Work

The Project Engineer/Manager may order the Contractor, by giving fifteen (15) days written notice, to suspend, delay, or interrupt all or any portion of the work required by the contract for a period of up to 10 ten calendar days, for the convenience of the City at no additional cost.

108.06 CONSTRUCTION OBSERVATION AND INSPECTION

A. The Engineer shall at all times have access to the work and the Contractor shall provide proper equipment, materials and labor as required for such access and inspection.

B. All equipment, material, and articles incorporated into the work covered by this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. The Engineer shall have the right to reject materials and workmanship, which are defective, or require their correction. Rejected workmanship shall be satisfactorily corrected and rejected materials shall be removed from the premises without charge to the City. If the Contractor does not correct such condemned work and remove rejected materials within a reasonable time fixed by written notice, the City may remove them and charge the expense to the Contractor.

C. Should it be considered necessary or advisable by the Engineer at any time before final acceptance of the entire work to make an examination of work already completed, by removing or tearing out same, the Contractor shall on request promptly furnish necessary facilities, labor and materials. If such work is found to be defective in any material respect due to fault of the Contractor or his subcontractors, he shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the contract, the actual cost of labor and material necessarily involved in the examination and replacement, plus fifteen (15) percent, will be allowed the Contractor.

D. All materials to be incorporated in the work, all labor performed, all tools, appliances, and methods used shall be subject to the inspection and approval or rejection of the Engineer.

E. If the Engineer shall point out to the Contractor, Contractor's foreman, or agent any neglect or disregard of the contract provisions, such neglect or disregard shall be remedied and further defective work be at once discontinued.
F. The Contractor shall execute the work only in the presence of the Engineer or authorized representative, unless provision has been made for the work to proceed without complete engineering supervision or inspection. The presence of the Engineer or authorized representative shall in no way relieve the Contractor of the responsibility of this contract, or be any warrant for the furnishing of bad material or poor workmanship.

G. The observation of the work by the Engineer is intended to aid the Contractor in applying labor, materials, and workmanship in compliance with the contract provisions. Such observation, however, shall not relieve the Contractor from any of Contractor's contract obligations.

108.07 CONTRACTOR COOPERATION

Discrepancies: If the Contractor, as the work progresses, finds any discrepancies between the Plans and physical conditions or any errors in the Plans or layout as given by the stakes or instructions, it shall be the Contractor’s duty to inform the Engineer in writing and the Engineer shall address such discrepancy in a reasonable period of time. Any work done after such discovery until authorized will be done at the Contractor’s risk.

Workmen, Methods and Equipment: Permission from the Engineer to use any particular methods, equipment or appliances shall not be so construed as to relieve the Contractor from furnishing other equipment or appliances or adopting other methods when those in use prove unsatisfactory to the Engineer, or as to bind the Engineer to accept work which does not comply with the contract.

All work under this contract shall be performed in a skillful and professional manner. The Project Engineer/Manager shall have the authority to notify the Contractor in writing, that the Contractor remove from the work site any employee the Project Engineer/Manager deems incompetent, careless, or otherwise objectionable to the general public or the City of Colorado Springs.

108.08 CONTRACTOR’S RESPONSIBILITY FOR WORK

A. Until the work is accepted by the Engineer as evidenced by the issuance of the Certificate of Completion, the Contractor shall have the charge and care thereof and shall take every necessary precaution against injury or damage to any part thereof by action of the elements or from any other cause, whether arising from the execution or from the nonexecution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before its completion and acceptance and shall bear the expense thereof.

B. The Contractor shall be responsible for the preservation of all public and private property, trees, fences, monuments, and other property, along and adjacent to the improvements and shall use suitable precautions necessary to prevent damage to pipes, conduits, and other underground structures. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect or misconduct in the execution of the work, or inconsequence of the nonexecution thereof on
the part of the Contractor, such property will be restored by the Contractor and at
Contractor's expense to a condition similar, or equal to that existing before such damage or
injury to the satisfaction of the City's Project Manager.

C. It shall be the responsibility of the Contractor, when moving or operating
equipment, to make all arrangements for temporary crossings of telephone, transmission,
pipe lines, railroad tracks, and irrigation ditches. This work shall not be paid for as a separate
item but shall be considered as incidental to the project.

108.09 PROTECTION OF UTILITIES

The Contractor's attention is directed to the fact that utilities may encroach on the
construction of this project, and also to the importance of protecting all public/private utilities
encountered on this project. These may include telecommunications, cablevision, traffic
signal lines and power lines, water lines, sewer lines, gas lines, railroad tracks, and other
overhead and underground utilities.

Any information concerning underground utilities shown on the drawings is intended to be
merely an aid to the Contractor. The accuracy of information with respect to underground
utilities is not guaranteed. The Contractor shall make their own investigation, including
exploratory excavations, to determine the locations and type of existing mains or service
lateral or appurtenances when their presence can be inferred from the presence of other
visible facilities, such as building, manholes, inlets, meters and junction boxes, on or
adjacent to the site of the work. If the Contractor discovers utility facilities not identified in the
plans or specifications or in a position different from that shown in the plans and
specifications, the Contractor shall immediately notify verbally and in writing the Engineer
and Owner of the utility facility.

Before any excavation is begun in the vicinity of water lines, railroad tracks, or structures,
sewer lines, telecommunication conduits or cablevision line, each utility company,
department, or company concerned must be notified in advance of such excavation, and
such excavation shall not be made until an authorized representative of the utility concerned
is at the site.

All utilities encountered must be kept in operation by the Contractor and must be protected
and/or repaired at the Contractor's own expense, unless otherwise specified in the contract
documents. The Contractor shall be held liable for all damages to any and all public utilities
encountered on the project, which damages are due to the Contractor's operations. Such
damages shall include all physical damages to utilities and also all damages due to
interruption of service of such utilities, when such damages and interruptions are caused by
the Contractor's operations.

Where alterations or moving of utilities is not required to permit construction of the project,
the Contractor shall take such measures as the Engineer may direct to properly protect these
utilities throughout his construction operations and shall cooperate at all times with the
proper authorities and/or owners in maintaining service of railroads, conduits, pole lines,
transmission lines, pipe lines, sewers, etc., affected by this project.
The costs of damages due to the Contractor’s operation or the cost of protecting utilities where alteration or moving is not required to permit construction of the project shall be included in the original contract price for the project.

Should any pipe line, water lines, or gas mains, electrical conduits, sewer pipes, overhead wiring, telecommunication lines, power lines, or any other such utilities, not specifically mentioned and provided for elsewhere as a part of this contract, have to be moved, repaired, reconditioned, or revised due to the construction, or moved temporarily to permit construction of the project the party or parties owning and operating such utilities shall perform the actual work of moving, repairing, reconditioning, or revising such utilities. The cost of this work shall be borne by the utility companies involved, unless other agreements are reached with the City.

Existing Utilities

A. Existing Gas Lines: As of April 1, 1983, Federal law requires anyone who uncovers a gas line to report it to the gas company and allow it to be inspected by the gas company personnel before it is backfilled. The Gas Department is to be notified prior to any excavation around gas lines. A Gas Department inspector is to be notified and present on site prior to construction activities around gas lines.

B. Existing Sewer Mains and Services: All relocation, replacement protection shown on the plans or determined necessary by the inspector shall be performed according to the latest edition of the Colorado Springs Utilities Wastewater Line Extension & Service Standards (Wastewater LESS). Minimum 48 hours notice must be given to the Wastewater Department prior to any related work. The Contractor shall adjust sanitary sewer manhole rims to an elevation acceptable to the CSU Wastewater Department. The Contractor shall contact the CSU Wastewater Department twenty-four (24) hours prior to manhole rim adjustments.

C. Existing Water Mains and Services: All relocation, replacement or protection shown on the plans or determined necessary by the inspector shall be performed according to the latest edition of the Colorado Springs Utilities Water Line Extension & Service Standards (Water LESS). Minimum 48-hour notice must be given to the Water Department prior to any related work. The Water Department reserves the right to schedule any operations at their discretion and to provide for any requirements determined necessary to perform the work. The Contractor shall coordinate with the Water Department and receive their approval prior to performance of the work.

Utility Support Systems:

A. If required by the contract documents, or requested by the Engineer or utility owner, the Contractor shall submit shop drawings for the method of temporary support for all existing utilities during construction. The temporary support details for existing utilities shall be submitted for review and approval prior to performance of the work. Shop drawings must bear the seal of a Professional Engineer registered in the State of Colorado, unless so waived by the City or utility owner.
B. Regardless of City approved shop drawings, the Contractor shall be responsible for the satisfactory support of the utility system and any damages that may occur to the utility involved.

C. Electric Utility Installation: Any electric facilities, unless otherwise noted, are to be protected and supported in place. Any electric facilities to be relocated or modified shall be done by the Colorado Springs Utilities Electric Department or their contractor. The Contractor shall coordinate the work with the Electric Department and the Electric Department's Contractor.

D. Telecommunication Agencies: Any telephone facilities unless otherwise noted are to be relocated or modified by the respective public or private utility company. The Contractor shall coordinate the work with the respective utility company.

E. Cablevision: The television utilities are to be protected and supported in place. If relocation is determined to be necessary, television utilities shall be relocated by Cablevision. The Contractor shall coordinate the work with Cablevision.

108.10 LABOR

A. The Contractor shall employ only competent and skilled workmen and foremen in the conduct of work on this contract. The Contractor shall at all times enforce strict discipline and good order among Contractor's employees. The Engineer shall have the authority to order the removal from the work of any Contractor's employee who refuses or neglects to observe any of the provisions of these Plans or Specifications, or who is incompetent, abusive, threatening, or disorderly in conduct, and any such person shall not again be employed on the project.

B. Colorado labor shall be employed to perform the work to the extent of not less than eighty percent (80%) of each type or class of labor in the several classifications of skilled and common labor employed on this project, as required and defined in Section 8-17-107 C.R.S. 1973.

C. Eight (8) hours shall constitute a day's labor and Monday through Friday shall constitute a workweek. In no event shall the City be responsible for overtime pay.

108.11 EMPLOYMENT OF LABOR

The Contractor shall comply with, and protect and hold the City harmless from any violation of all laws and lawful rules and regulations, both of the State of Colorado and of the United States, relating to Workmen's Compensation, unemployment compensation, Social Security, payment for overtime, and all other expenses and conditions of employment under this contract.

108.12 EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this contract, the Contractor agrees as follows:
A. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, sex, color or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, religion, sex, color or national origin. Such actions 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.

B. 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, religion, sex, color or national origin.

108.14 SUPERINTENDENCE

The Contractor shall give the work the constant attention necessary to facilitate the progress thereof and shall cooperate with the Engineer and with other Contractors or utility company employees in every way possible. The Contractor shall have at all times, on the work, as Contractor's agent, a competent superintendent capable of reading and thoroughly understanding the Plans and Specifications, and who shall have the necessary authority to receive and promptly execute the instructions and orders from the Engineer or the Engineer's authorized representative. Such superintendent shall be furnished irrespective of the amount of work sublet. The Contractor shall supply the Engineer with a list of phone numbers at which the Contractor, his superintendent and foreman can be reached at any time. The assigned Superintendent must adhere to the cooperation requirements specified in Section 108.07 and is subject to removal if so ordered in writing by the Engineer/Project Manager.

108.15 PREPARATION

All vegetation, stumps, and debris and other objectionable objects shall be removed from the area staked out by the Engineer, and where necessary from the area immediately adjacent thereto. Such debris shall be hauled from the site of the construction and wasted as directed by the Engineer.

108.16 STAKING WORK

The Engineer shall provide reference points (horizontal and vertical control) only, unless otherwise noted in the bid proposal and project specifications. The Contractor shall engage the services of a licensed surveyor or surveying firm (hereinafter referred to as the Surveyor) to be approved by the Engineer. The Surveyor shall perform all detailed construction layout and staking including the staking of all storm sewer, street
improvements, and utility relocations in accordance with the plans and specifications. The Contractor shall be responsible for the correctness and accuracy of the detailed layout of finished structures.

Any instrument man or survey assistant employed on the work by the Contractor or his Subcontractors who is judged by the Engineer to be incompetent shall be removed from the work and replaced by a competent individual.

108.17 DEVIATION ALLOWED

Finished surfaces in all cases shall conform with lines, grades, cross sections and dimensions shown on the approved drawings or described in the Specifications. Deviations from the approved drawings and working drawings as may be required by the expediencies of construction will, in all cases, be determined by the Engineer and authorized in writing. If the Engineer deems it inexpedient to correct work injured or done in an unauthorized manner, an equitable deduction from the contract price of the work done shall be made by the Engineer subject to approval of the City Engineer.

108.18 RIGHT-OF-WAY

The City's right-of-way will in general be adequate for construction purposes. Nothing marked on the drawings shall be interpreted as giving the Contractor exclusive occupancy of the territory provided by the City. The City and its employees for any purpose, and other contractors of the City, for any purpose required by their respective contracts, may enter upon or occupy portion of the land furnished by the City. When the territory of one contract is a necessary or convenient means of access for the execution of another contract, such privileges of access or any other reasonable privilege shall be granted by the Contractor to the extent, amount, in the manner and at times necessary. No such joint occupancy or use of the territory shall be made the basis of any claim for delay or damages.

108.19 SHOP DRAWINGS AND SUBMITTALS

A. The Contractor shall submit to the Engineer all shop drawings, submittals and schedules required for the work, including those pertaining to structural and reinforcing steel within fifteen calendar days from the date of the Notice of Award. The Contractor shall make any corrections in the drawings required by the Engineer, and resubmit the same without delay.

B. Three final copies of all shop drawings, submittals and schedules shall be submitted to the Engineer, who after checking will retain two copies and return one copy to the Contractor. The Engineer's approval of shop drawings of equipment and material shall extend only to determining the conformity of such equipment and materials with the general features of the design drawings prepared by the Engineer. It shall be the responsibility of the Contractor to determine the correctness of all dimensions and minor details of such equipment and materials so that when incorporated in the work, correct operations will result.

108.20 RECORD DRAWINGS
The Contractor shall maintain an up-to-date set of contract documents, legibly marked, depicting all constructed improvements at the site or as otherwise specified and shall submit a complete set labeled "Project Record" to the Engineer upon completion of the project.

Drawings:

A. Depths of various elements of foundation in relation to finish floor datum.

B. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements and project survey control.

C. Location of internal utilities and appurtenances concealed in the construction, referenced to permanent surface improvements and project survey control.

D. Field changes of dimensions and detail.

E. Changes made by Field Order or by Change Order.

F. Details not on original Contract Drawings.

G. Specifications and Addenda:

H. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.

I. Changes made by Field Order or by Change Order.

108.21 MATERIALS

A. Unless otherwise stipulated in the Specifications, all workmanship, equipment, materials, and articles incorporated in the work covered by this contract are to be new and of the best grade of their respective kinds for the purpose. The Contractor shall furnish to the Engineer for the Engineer’s approval, the name of the manufacturer of machinery, mechanical and other equipment, which he contemplates installing, together with their performance capacities and other pertinent information including but not limited to instruction manuals pertaining to the use and operation of such machinery, mechanical and other equipment.

B. When required by the Specifications, or when called for by the Engineer, the Contractor shall furnish for approval full information concerning the materials or articles which he contemplates incorporating in the work. Samples of materials shall be submitted for approval when so directed. Machinery, equipment, materials, and articles installed or used without such approval shall be at the risk of subsequent rejection.

108.22 TESTING OF MATERIALS

A. Tests and Inspections. The City will employ and pay for the services of an approved testing laboratory to perform specified services for the field testing of:
The Contractor shall perform, or arrange for the performance, and pay all costs in connection therewith, all other tests and inspections required by the contract documents. The Contractor shall pay for all testing laboratory services in connection with tests verifying conformance of proposed materials and installation with project requirements including, but not limited to, mix designs, riprap, gradation tests for embedment, fill and backfill materials. The City shall pay for testing laboratory services in connection with tests on materials after incorporation into the project, unless retesting of materials is necessary because of the failure of the materials to meet the project requirements. The Contractor shall obtain the City’s written acceptance of the testing laboratory before having services performed.

B. Requirements for Independent Testing Consultants.

Comply with "Recommended Requirements for Independent Laboratory Qualifications", latest edition, published by the personnel, facilities, equipment and other qualification data, including; Report of inspection of facilities made by the American Council of Independent Laboratories, and basic requirements of ASTM E-329, "Standards of Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction", latest edition.

Submit to the City for prior approval, the name and address of the proposed testing laboratory with description of personnel, facilities, equipment and other qualification data. Certificate of calibration of applicable testing equipment made by an accredited calibrated agency within 12 months prior to submittal date.

C. Test Reports

Testing agency shall be instructed to submit directly to the City three (3) copies of all reports of tests or inspections made, showing compliance, irregularities or deficiencies, identifying project, date of test, location in project, applicable specification section, applicable standard(s) for compliance, observations relating to compliance, name and signature of inspector.

D. Contractor Responsibilities

Furnish access to the work, materials, equipment and labor required to accommodate inspections and test when testing laboratory is retained by the City. In the event retesting of materials, or recompaction is necessary because of the failure of the materials or compaction to meet the project requirements, the cost of said retesting shall be borne by the Contractor. Cost of said retest will be deducted from the final payment amount due the Contractor, or invoiced directly to the Contractor at the City’s discretion.
E. Differing Site Conditions

The Contractor shall promptly, and before the conditions are disturbed, give a written notice to the Project Engineer/Manager of (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this contract, or (2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in this contract.

The Project Engineer/Manager shall promptly investigate the site conditions after receiving the notice. If the Engineer/Project Manager determines that conditions do materially differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the work under this contract, whether or not changed as a result of the conditions encountered, an equitable adjustment shall be made under this clause and the contract modified accordingly.

No request by the Contractor for an equitable adjustment to the contract shall be allowed, unless the Contractor has given the proper written notice and the Project Engineer/Manager determine the condition is in fact a Differing Site Condition; furthermore, the City of Colorado Springs shall not be liable for an equitable adjustment under this clause if the Contractor disturbed or repaired the condition without prior inspection by the Project Engineer/Manager, or if the contract is completed.

108.24 CHANGED CONDITIONS

A. When additional information regarding foundation or other conditions becomes available as a result of the excavation work, further testing, or otherwise, it may be found desirable and the City shall have the right to change the location, alignment, dimensions, or design of the work to meet such conditions.

B. During the progress of the work, the City may find it advisable, and it shall have the right to omit portions of the work and to increase or decrease any items as may be deemed necessary or desirable without changing the unit prices in the proposal, provided such increase or decrease does not exceed fifteen percent (15%) of the total monetary value of the original contract. If the material or labor involved in such a change is not included in the unit prices of the contract, but forms an inseparable part of the work to be done under this contract, and the delay involved in asking for the advertising for bids and the letting of a new contract therefore might result in damage, injury, or impairment of the plant, work system or other property belonging to the City, the City may, in its discretion, declare an emergency and require the Contractor to proceed with such alterations and additions. The Contractor will not, however, be required to perform such extra work and furnish such extra materials without a written Change Order from the Engineer. The parties hereto shall agree upon any sum to be paid for said work in advance of performing it. The Contractor shall make no claims for extra work unless the work was performed as authorized by a properly executed Change Order. Additional compensation or credit for work covered by a Change Order must be determined by one or a combination of the following methods:

1. Unit bid prices previously approved.
2. An agreed lump sum.
3. The actual cost of:
   a. Labor (including foremen and extra supervision if required).
   b. Materials entering permanently into the work.
   c. Rental cost of construction plant and equipment used for the work.
   d. Power and fuel required for the operation of power equipment used for change order work.
   e. The Contractor shall furnish a breakdown of cost including but not limited to bills, payrolls, invoices and vouchers covering the cost of the work. To this cost there shall be added a fixed fee to be agreed upon, but not to exceed fifteen percent (15%) of the cost of work. The fee shall be compensation to cover the cost of management, insurance, benefits, bond, profit and any other general expenses.

The cost of Subcontractor's work shall be determined according to methods 2 and 3, above, to which the Contractor may add a maximum of fifteen percent (15%), which amount shall be compensation for the cost of the Contractor's management, insurance, benefits, bond, profit, and any other general expenses.

108.25 CHANGES IN THE WORK

The City may make written changes in the Plans and Specifications or scheduling of the contract within the general scope of this contract at any time by a written order. If such changes add to or deduct from the Contractor's cost of the work, the contract price shall be adjusted accordingly. All such work shall be executed under the conditions of the original contract except that any claim for an extension of time caused thereby shall be allowed and adjusted at the time of ordering such change or at such time as it can be ascertained.

A. In giving instructions, the Engineer shall have authority to make minor changes in the work not involving extra cost, and not inconsistent with the purpose of the work. No extra work or change shall be made unless in pursuance of a written order by the Engineer, and no claim for an addition to the contract sum shall be valid unless the additional work was so ordered.

B. The Contractor shall proceed with the work as changed and the value of any such extra work or change shall be determined as provided for in the Agreement.

C. It shall be expressly understood and agreed to by the contractor that no claim for extra work, will be recognized by the City unless same has been ordered in writing by the Engineer and unless claim for such added work has been filed by the Contractor within five (5) days after the end of the calendar month in which such alleged extra work was performed.

108.26 PROTESTS

If the Contractor considers any work demanded of him to be outside the requirements of the contract, or considers any record or ruling of the Engineer or of the inspectors to be unfair, he shall immediately upon such work being demanded or such record or ruling being made,
as in writing, or written instruction or decision, whereupon he shall proceed without delay to perform the work or to conform to the record or ruling, and, within ten (10) days after date of receipt of the written instructions or decisions, he will file a written protest with the Engineer, stating clearly and in detail the basis of his objection. Except for such protests or objections as are made of record in the manner herein specified and within the limit stated, the written records, rulings, instructions, or decisions of the Engineer shall be final and conclusive. Instructions and decisions of the Engineer contained in letters transmitting drawings to the Contractor shall be considered as written instructions or decisions subject to protest or objections as herein provided. In the event of a protest, the protest shall be presented to the City Engineer, the City Engineer's decision shall be final and conclusive.

108.27 REMOVAL AND SUSPENSION FOR DEFECTIVE WORK

All work or material which has been rejected shall be remedied or removed and replaced in an acceptable manner. Additional compensation will not be allowed for such removal and replacement. Any work done beyond the lines and grades shown on the drawings, except as herein provided, will be considered as unauthorized and will not be measured or paid for. Work so done may be ordered removed at the Contractor's expense. Should the Contractor fail to comply promptly with any order of the Engineer made under the provisions of this paragraph, the Engineer shall have the authority to cause said work to be removed and to deduct the cost from any money due, or to become due, from the Contractor. At any time during the course of construction of this project if the provisions of the Plans, Specifications, or contract provisions are being violated by the Contractor or his employees, the Engineer shall have the right and authority to order all construction to cease or material to be removed, until arrangements satisfactory to the Engineer are made by the Contractor for resumption of the work in compliance with the provisions of the contract.

108.28 CLEANING UP AND FINAL INSPECTION

A. The Contractor shall at the completion of the work, remove all rubbish from and about the work and all tools, equipment, scaffolding, and surplus materials and shall leave the work clean and ready for use. In case of dispute, the City may remove the rubbish and surplus materials and charge the cost to the Contractor.

B. All sewers, conduits, pipes, and appurtenances and all tanks, pump wells, chambers, buildings, and other structures shall be kept clean during construction and as the work or any part thereof approaches completion, the Contractor shall systematically and thoroughly clean and make any needed repairs to them. Contractor shall furnish at Contractor's own expense, suitable tools and labor for removing all water and cleaning out all dirt, mortar, and foreign substances. Any undue leakage of water into the structures such as to make the work, in the opinion of the Engineer, fall short of first class work, shall be promptly corrected by the Contractor at Contractor's own expense.

C. Cleaning and repairs shall be arranged, so far as practicable, to be completed upon finishing the construction work. Notice to begin the final cleaning, and repairing, if such is needed, will be given by the Engineer, who at the same time will make his final inspection of the work. The Engineer will not approve the final estimate of any portion of the work until after the final inspection is made and the work found satisfactory.
108.29 CUTTING AND PATCHING

A. The Contractor shall do all cutting, fitting, or patching of work that may be required to make its several parts fit together or to receive the work of other contractors shown upon, or reasonably implied by the Plans and Specifications for the completed project.

B. Any cost caused by defective or ill timed work shall be borne by the Contractor.

The Contractor shall not endanger any work by cutting, digging, or otherwise and shall not cut or alter the work of any other contractor without the consent of the Engineer.

108.30 FINAL TESTS

After completion of the work, the Contractor shall make any and all tests required by the Specifications or by Municipal, State or Federal regulations, and where so provided in said regulations shall furnish the City with certificates of inspection by the Municipal, State or Federal regulation bodies. The Contractor shall also make all tests required by the National Board of Fire Underwriters for the purpose of determining insurance rates or other protection of the City or the public.

108.31 CORRECTION OF WORK AFTER FINAL PAYMENT

Neither the final payment nor any provision in the contract documents shall relieve the Contractor of the responsibility for negligence or faulty materials or workmanship within the extent and periods provided by law and by this contract.

108.32 GUARANTEES

A. All work shall be constructed in compliance with standard construction codes, and all materials and workmanship must be guaranteed for a period of two years from the date of final acceptance. The Contractor guarantee period (two-year warranty period) will not begin until the contract is 100 percent complete, as determined by the Engineer. Acceptance of the 100 percent complete contract shall be requested in writing by the Contractor. Any item requiring repair and/or replacement prior to expiration of the two-year warranty period shall be guaranteed for a period of one-year after the date of said correction or repair or for the remainder of the two-year warranty period, whichever is longer.

B. In placing orders for equipment, the Contractor shall purchase same only under a written guarantee from the respective manufacturers that the equipment supplied will function satisfactorily as an integral part of the completed project in accordance with the Plans and Specifications. Furthermore, the Contractor shall require that the manufacturer agree in writing at the time order of equipment is placed that manufacturer will be responsible for the proper functioning of the equipment in cooperation with the Contractor, and that whenever necessary during the installation period or tuning up period following construction period, the manufacturer will supply without additional cost to the City, such superintendence and mechanical labor and any adjustments and additional parts and labor
needed to make the equipment function satisfactorily, even if the same was not shown on approved shop drawings.

SECTION 109

PAYMENTS AND ACCEPTANCE OF WORK

109.01  PAYMENTS

Payments will be made as the work progresses at the end of each month or as soon thereafter as practicable in compliance with Title 24, Article 91, Section 103 and Section 110, Colorado Revised Statutes, on statements made and approved by the Engineer. In preparing statements, only completed work will be taken into consideration. No payment will be made for materials in storage and/or delivered to the site, unless otherwise approved by the City. Payment for work performed by the contractor under these contract documents will be made at the approved unit price or lump sum price for each of the several items as listed in the bid and measured as hereinafter specified. Such payment shall compensate the Contractor for all costs in connection with furnishing all labor, equipment and material required and performing the operations necessary to complete the item in accordance with the contract documents. All incidental work essential to the completion of the project in a workmanlike manner, and including cleanup and disposal of waste or surplus material, shall be accomplished by the contractor without additional cost to the City. The cleanup and disposal of waste or surplus material shall be performed during construction or as soon after as is reasonably possible in order to better maintain the aesthetics and safety of the construction area. The quantities listed in the bid are estimated quantities, and are listed only for convenience in comparing bids. Payment will be made for the actual quantities constructed or installed, unless otherwise noted in these contract documents. However, any changes to plan quantity must be approved through proper change order procedures, said quantities being measured as specified in the contract documents.

If the contract exceeds EIGHTY THOUSAND DOLLARS ($80,000.00), no monthly payment shall exceed NINETY PERCENT (90%) of the calculated value of any work completed until FIFTY PERCENT (50%) of the work required by the contract has been performed. Thereafter, the City shall pay any of the remaining installments without retaining additional funds, if in the opinion of the City, satisfactory progress is being made under the contract. All other provisions set forth above shall be complied with.

Should the City determine at any point in the project after fifty percent (50%) of the work required has been performed that satisfactory progress is not being made under the contract, the City may retain up to ten percent (10%) of any partial payment requests submitted thereafter, if it is the City's opinion that additional retaining of funds may be necessary to assure proper completion of the project.

109.02  CORRECTION OF WORK BEFORE FINAL PAYMENT

A. The Contractor shall promptly remove from the premises all materials and work condemned by the Engineer as failing to meet contract requirements, whether incorporated in the work or not, and the Contractor shall promptly replace and re-execute Contractor's
own work in accordance with the contract and without expense to the City and shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement.

B. All removal and replacement work shall be done at the Contractor’s expense. If the Contractor does not take action to remove such condemned work and materials within ten (10) days time thereafter, the City may, upon ten (10) days written notice, sell such materials at auction or at private sale and retain the proceeds without compensation to the Contractor.

Payments Withheld Prior to Final Acceptance of Work
The City may withhold or nullify the whole or part of any certificate of payment to such extent as may be necessary to protect it from loss caused by:
A. Defective work not remedied.
B. Claims filed or reasonable evidence indicating probable filing of claims by other parties against the Contractor.
C. Failure of the Contractor to make payments properly to subcontractors or for material or labor.
D. Damage to another contractor.

When the above grounds are removed, payment shall be made for amounts withheld because of them.

109.04 ACCEPTANCE OF FINAL PAYMENT

A. Upon notice that the work is fully completed, the Engineer will make a final inspection. If the Engineer finds the work acceptable under the contract and the contract is fully performed, the work may be finally accepted by the Engineer under the terms and conditions of the contract. The entire balance found by the Engineer to be due the Contractor, including the retained percentage, less any retention based on; (1) the Engineer's estimate of the fair value of the claims against the Contractor; and (2) the cost of completing the incomplete or unsatisfactory items of work with specified amounts for each incomplete or defective item of work; and (3) retentions required by law, shall be due and payable to the Contractor. The date of completion is the date as specified in the Certificate of Completion issued by the Engineer.

B. Upon completion of the work under the contract and before the Contractor shall receive or be paid for the Engineer's final statement, the City Contracts Office shall publish in a newspaper published in the City of Colorado Springs, a notice that the City has accepted such work as completed according to the Plans and Specifications and rules set forth in the contract; that the Contractor is entitled to final settlement; that after the final publication, the City will pay the full balance due under the contract; and that persons having claims for labor or material furnished the Contractor must present their claim to the City Contracts Office prior to the date specified for such payment. Nothing herein shall be construed as relieving the Contractor and the sureties on the Contractor's bonds from any claim or claims for work or labor done or materials or supplies furnished in the execution of the contract.
C. The making and acceptance of the final payment shall constitute a waiver of all claims by the Contractor against the City.

D. If, after the work has been substantially completed, full completion thereof is materially delayed through no fault of the Contractor, and the Engineer so certifies, the City may, upon Certificate of Completion by the Engineer, and without terminating the contract, make payment of the balance due for that portion of the work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment and acceptance of the project shall constitute a waiver of all claims by the Contractor but acceptance shall not constitute a waiver of City claims against the Contractor.

E. Advertising for Final Payment and processing of the Final Pay Request shall not take place until after the Contractor has submitted Sales and Use Tax Forms to the City of Colorado Springs and said forms have been reviewed and approved by the City Sales Tax Office.

SECTION 110

TERMINATION OF CONTRACT

110.01 THE CITY’S RIGHT TO TERMINATE CONTRACT

In accordance with the City Charter, performance of the City's obligations under this contract are expressly subject to appropriation of funds by the City Council. Further, in the event that funds are not appropriated in whole or in part sufficient for performance of the City's obligations under this contract, or appropriated funds may not be expended due to City Charter spending limitations, then the City may terminate this contract without compensation to the Contractor.

If the termination is for failure of the contractor to fulfill the contract obligations, the City may terminate the subject contract for Default, and complete the work by contract or otherwise, and the contractor shall be liable for any additional cost incurred by the City. Prior to issuing a Termination for Default, the City will issue a Notice to Cure allowing the contractor a minimum of ten (10) calendar days to prepare a plan to correct whatever failures are causing the contract obligation failure(s). The City will have the right to accept the plan of correction or to continue with the Termination for Default.

Where the contract has been terminated for Default by the City, said termination shall not affect or terminate any of the rights of the City as against the Contractor or his surety then existing or which may thereafter accrue because of such default. Any retention or payment of monies by the City due the Contractor under the terms of the contract shall not release the Contractor or the Contractor's surety from liability for the Contractor's default.

If the Contractor should become bankrupt and a relief from stay is granted to the City, or if the Contractor should make a general assignment for the benefit of Contractor's creditors, or if a receiver should be appointed on account of Contractor insolvency, or if Contractor should persistently or repeatedly refuse or should fail, except in cases for which extensions of time are provided, to supply enough properly skilled workmen or materials, or if Contractor should
fail to make payments to subcontractors or for material or labor so as to affect the progress of the work, or breach, or substantially violate any provision of the contract, then the City, upon the written notice of the Engineer may, without prejudice to any other right or remedy, terminate the contract for default and take possession of the premises and of all materials, tools, equipment, and other facilities installed on the work and paid for by the City, and finish the work by whatever method the City may deem expedient. In such cases, the Contractor shall not be entitled to receive any further payment under the contract.

The City may also terminate this contract for convenience of the City, upon written notice to the Contractor, without additional compensation to the Contractor, unless the Contractor has started or performed portions of the contract prior to receiving such notice. If performance of the contract is underway, the City will be liable only for the portions of work actually satisfactorily completed up to the point of the issuance of the Notice of Termination for Convenience. In no event shall the City be liable for unperformed work or anticipated profits or overhead. Upon receipt of this notice the Contractor shall immediately: discontinue all services affected (unless the notice directs otherwise), and deliver to the City all data, drawings, specifications, reports, estimates, summaries, and other information and materials accumulated in performing this contract, whether completed or in process.

110.02 COMPLETION OF CONTRACTS IN DEFAULT

A. If for any reason a contract is declared in default, the City shall have the right without process or action at law to take over all or any portion of the work and complete it in any manner the City deems most appropriate. Written notice shall be given the Contractor by the City that the contract has been declared in default, and upon receiving such notice, the Contractor shall peaceably relinquish possession of the said work or the parts thereof specified in the notice.

B. The City may, at its option and at a rental which it considers reasonable, retain all material, equipment, and tools on the work until the work has been completed.

C. Neither the City nor any officer, agent or employee of the City shall be in any way liable or accountable to the Contractor or the Contractor's surety for the method by which the completion of the said work, or any portion thereof, may be accomplished or for the price paid. Should the cost of completing the work be in excess of the original contract price, the Contractor and Contractor's surety shall be responsible for such excess cost. Should the cost of such completion, including all proper charges, be less than the original contract price, the amount so saved shall accrue to the City. Neither by taking over the work nor by declaring the contract in default shall the City forfeit the right to recover damages from the Contractor or Contractor's surety for failure to complete the entire contract.

110.03 REMOVAL OF EQUIPMENT

Except as provided in Section 110.01 above, in the case of termination of this contract before completion from any cause whatever, the Contractor, if notified to do so by the City, shall promptly remove any part or all of Contractor's equipment and supplies from the property of the City, failing which the City shall have the right to remove such equipment and supplies at the expense of the Contractor.
SCHEDULE D – SPECIAL PROVISIONS

D.0 SPECIAL PROVISIONS

This section contains any Special Provisions or revisions to the General Provisions that are applicable on the subject project. In the event that the Special Provisions conflict with the "City of Colorado Springs Engineering Division Standard Specifications", latest revision, the Special Provisions listed herein will take precedence.

D.1 DESCRIPTION OF WORK

The work to be done by the Contractor shall consist of the work described in Section H and performing all operations necessary for the construction of this work as described in the plans and specifications, including restoration of all areas disturbed by the construction activities to a condition better than the pre-construction condition.

This project shall generally consist of the work to construct new storm drain structures to capture and convey drainage from 12th, 11th, and 10th Street to Fountain Creek.

The Contractor shall obtain and pay for all permits, except the City will waive the fees for Traffic Control, Concrete, and Excavation permits that must be obtained from the City of Colorado Springs. The Contractor shall furnish all transportation, materials, tools, equipment, labor and supplies necessary to complete in a workmanlike manner the improvements as shown and specified in these documents.

The Contractor shall be responsible for verification and acceptance of the existing site conditions prior to proposing on the project. The Contractor shall notify the Engineer 48 hours prior to the commencement of construction activities.

The Contractor shall be responsible for all work, whether it be performed by himself or by others under a subcontract agreement.

All work required to construct all items in this contract shall be performed in a safe, careful, and orderly manner with due consideration given to protection of adjoining property, the public, and workmen. Any damage to streets, utilities, public or private property, or the bench marks and construction staking due to the negligence of the Contractor, shall be repaired and restored to its original condition by the Contractor at his expense to the satisfaction of the Engineer. It will be the Contractor’s responsibility to ensure that areas not in conflict with new work are not disturbed or damaged during the construction process.

D.2 PRECONSTRUCTION CONFERENCE

Within 10 calendar days after issuance of the Notice of Award, or as otherwise established by the Owner and Engineer, a preconstruction conference shall be held for review of the construction schedule, the Contractor’s list of Subcontractors and suppliers, project contracts, Traffic Control Plan with Supervisor name and telephone number and certifications, procedures for handling shop drawings, processing Applications for
Payment, and other pertinent items. The Contractor (and Subcontractor) should address any construction problems which may be foreseen in the execution of the project work at the preconstruction conference.

D.3 DRAINAGE AND EROSION CONTROL

The Contractor shall provide for the drainage of storm water and such water as may be applied or discharged on the site in performance of the work. Drainage facilities shall be adequate to prevent damage to the work, the site and adjacent property.

The Contractor shall prevent the pollution of drains and watercourses by sanitary waste, sediment, debris, contaminated ground water or other substances resulting from this work. The Contractor shall be required to clean up, treat and/or isolate such materials on a continuing basis to prevent risk of washing into such drainage ways. The Contractor shall be responsible for capturing and properly disposing of contaminated groundwater.

The Contractor shall obtain a copy of and follow the language of the MS4 permit and all other state and local permits.

The Contractor shall be responsible for preparing a Stormwater Management Plan (SWMP) and obtaining all required state and local storm water discharge permits. The Stormwater Management Plan shown in the contract documents is provided as a guide for the completed condition of the project for the contractor to bid on the project and may be used by the contractor as a portion of the project SWMP or the Contractor may elect to modify or prepare a new SWMP. The approved SWMP must include a Stormwater Management Plan for all phases throughout construction. When a modified or new SWMP is prepared, it must be prepared by a licensed engineer in the State of Colorado and submitted to the Engineer for review and approval prior to applying for permits. The SWMP used to obtain the permits, and any modifications to the SWMP as directed by the permitting agencies, shall be considered the approved SWMP. An approved SWMP shall be submitted to the Engineer with a copy of permit notice prior to beginning construction.

The Contractor shall be responsible for maintaining erosion control and preparing a SWMP for all phases of the project and shall be submitted to the Engineer for review and approval prior to beginning construction.

D.4 CONSTRUCTION PHOTOGRAPHS

The contractor shall provide construction photographs on an ongoing basis throughout the duration of the project as described below:

A. Preconstruction photographs will be required on the project.
B. Construction photographs shall be digital photographs taken with a good quality camera with a minimum of 10 megapixels. The digital photographs shall be submitted to the Engineer on a CD with digital photos properly identified and in the JPEG format. The CD shall be accompanied by an 8 ½” x 11” printout on good quality matte photo paper. A maximum of six photos shall be on each sheet.
C. Photographs shall be taken a minimum of once per week and in sufficient number to document the condition of the site and ongoing work including traffic control.

D. Each photograph (digital and printouts) shall be marked with a date, description and identification number. The identification number shall be referenced in an index with a description of the photos.

E. Each photograph (digital and printouts) must indicate a reference to where it was taken, including whether it is of the northbound or southbound side, span #, and include the direction the photo is taken.

F. The preconstruction photographs shall be delivered to and approved by the Engineer, prior to beginning of construction.

G. The first set of photographs shall be taken before the Contractor moves on the site and the last shall be taken after completion.

H. Construction photographs will not be paid for separately, but will be considered subsidiary to the work.

D.5 PROJECT INFORMATION SIGNS

The Contractor shall be responsible for installing and maintaining all project signs throughout the duration of the Contract. The City will furnish project signs with the PPRTA Logo for placement within the project by the Contractor. The Contractor shall be responsible for moving project signs and for installing completion signs after completion of the project. Project signs will not be paid for separately, but will be considered subsidiary to the work.

D.6 CONSTRUCTION WORK HOURS

The Contractor shall conduct normal activities between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday. Work outside that time shall be considered night work and will only be allowed with the permission of the Engineer. Work on Sunday will only be allowed with the permission of the Engineer.

D.7 WORK SITE RESTRICTIONS

The Contractor shall confine the work activities to the area shown in the construction drawings. The Engineer will furnish the contractor with copies of all executed ROW and easement documents for the project. The established work zone shall be marked and secured with an appropriate fence. The fence type shall be preapproved by the Engineer based on discussions with individual property owners/tenants. Approved temporary fences are required at all locations that require removal of an existing fence. Temporary fences are to be considered incidental to the work and will not be paid for separately. Temporary easements on private property are not to be used for stockpiling or storage of materials or equipment. Any additional work area required within adjoining private properties must be acquired by the Contractor by written permission from the property owner. The Contractor
shall restore any damage or disruption to other properties utilized in the performance of this project to an equal or better than pre-construction condition at no cost to the City. The Contractor shall hold the City harmless from any claims to damage or disruption of private property.

Contractor personnel shall not unnecessarily enter upon private property without the express written consent of the landowner. The Contractor shall provide the Engineer with a copy of the written permission. The City will be held harmless of Contractor negligence in matters of trespassing.

D.8 COORDINATION WITH PROPERTY OWNERS

The Contractor shall be responsible for notifying the Property Owners and Tenants at least 48 hours in advance of any construction that may affect access, parking and/or existing structures, including fences, adjacent to that property. The Contractor shall also be responsible for notifying property owners and tenants at least one week prior to any major shifts in traffic patterns. Suitable access and parking will be maintained at all times. Relocating of fences and structures shall be coordinated with owners and shall include miscellaneous items including, but not limited to, temporary fence, sod replacement, sprinkler system modifications, etc. These items are considered to be incidental to the work and are to be included in the unit prices.

The Contractor shall coordinate the relocation of fencing, landscaping, sprinklers, control boxes, utility services, street signs and mail boxes and the salvaging of any materials suitable for re-use with the City Inspector and, if on private property, with the respective property owners.

The Contractor shall notify and coordinate the closing and construction of the driveways, curb, gutter and sidewalks with the Project Engineer and the adjoining property owners and tenants in advance of work in writing. Any restrictions on street parking or traffic movement shall be coordinated with the City Traffic Engineer. The Contractor shall make every effort to minimize the inconvenience to the traveling and pedestrian public.

D.9 CONSTRUCTION TRAFFIC RESTRICTIONS

Construction traffic control shall conform to Section 800 of the City of Colorado Springs Standard Specifications as revised herein and the Manual on Uniform Traffic Control Devices and the Supplement for the City of Colorado Springs.

D.10 BUSINESS AND RESIDENTIAL ACCESS

The Contractor shall maintain access to all businesses and residences throughout the project and shall provide at a minimum 48 hours written notice to each business or residence prior to any work on or partial closure of access drives. Access may be limited to half the existing driveway width for limited periods of 48 hours or less during concrete driveway and street construction. Access must at all times accommodate emergency services vehicles. Additional coordination with emergency services is required if the access location to the property is relocated from the existing location. An additional verbal
D.11 SOIL CONDITIONS

The Contractor assumes all risks connected with the surface and subsurface conditions actually encountered by him in performing the work, even though such actual conditions may result in the Contractor performing more or less work than he originally estimated.

The Contractor shall perform whatever exploratory excavations and tests he deems necessary to determine the site conditions.

The Contractor shall utilize all suitable excavated material as approved by the Engineer for raising grades and backfilling the new construction. Additional imported material shall be a well graded non-expansive inorganic soil or as herein after specified.

D.12 UTILITIES

The size and location of all existing utilities as known to the Engineer have been noted on the plans for the information and guidance of the Contractor. The Contractor shall be responsible for the location and protection of all utilities located within his working area regardless of whether or not their existence or location is shown or noted on the drawings.

All overtime costs for observation and inspection by Colorado Springs Utilities staff shall be at the Contractor's expense and will be billed directly from Colorado Springs Utilities to the Contractor. Overtime shall be defined as time outside of regular (non City holiday) working hours (M-F 7:00 am – 3:30 pm) at an average rate of $80/hour. These overtime costs include, but are not limited to, overtime for Colorado Springs Utilities staff to observe and inspect bypass pumping operations.

It is the Contractor's responsibility to complete required work and to schedule inspections during normal working hours. The Contractor is responsible for contacting each affected utility for their inspectors' working hours. The Contractor is responsible to request an inspection two (2) working days in advance of the inspection. In the case of an overtime inspection, the request must be in writing. The City will not entertain any requests for time extensions for delays caused by the Contractor's failure to properly notify the affected utility of a required inspection or the Contractor's failure to complete the required work by the time of the scheduled inspection.

The accuracy of information furnished in the contract documents with respect to underground utilities is not guaranteed. The Contractor shall make his own investigations, including exploratory excavations, to determine the locations and type of existing mains and service laterals or appurtenances.

The Contractor shall notify all utility companies who may have installations in the area where the work is to be performed and solicit their aid in locating horizontally and vertically utilities prior to any excavation. All utilities encountered must be kept in operation by the Contractor and must be protected and/or repaired at the Contractor's expense.
City of Colorado Springs Utilities
Utility Problems or Questions (719) 448-4800
Gas and Electric Inspections (719) 668-5638
Utility Notification Center of Colorado (UNCC) 800-922-1987

Miscellaneous Utility Services
Utility Notification Center of Colorado (UNCC) 800-922-1987
Engineering Division for Inquiries (719) 385-5918

At least forty-eight (48) hours prior to commencing excavation, the Contractor shall call UNCC at 1-800-922-1987 between the hours of 7:30 A.M. and 4:30 P.M., Monday through Friday, for information concerning the location of buried utilities in the area of construction.

Below is a Pre-Excavation Checklist which the Contractor shall follow prior to commencing construction on the project.

Pre-Excavation List
- Utility Notification Center of Colorado (UNCC) called at least two (2) business days prior to construction at: 1-800-922-1987
- Utilities marked and located on the ground
- Employees briefed and knowledgeable on marking and color codes*
- Employees trained on excavation and safety procedure for Natural Gas Lines
- When excavation approaches gas lines, employees expose lines by careful probing and hand digging

Standard Utility Marking Color Code
- Natural Gas Yellow
- Electric Red
- Water Blue
- Wastewater Green
- Communications Orange

"The Contractor shall be responsible for coordination and cost of all utility relocations indicated on the plans and not specified to be done by others. Utility locations shown on the plans are approximate."

The contractor shall coordinate work with various Utility companies and other construction taking place within project limits. Notify applicable Utility companies and other Contractors prior to commencing work, if damage occurs, or if conflicts or emergencies arise during work. No schedule extensions will be granted to the Contractor due to utility coordination issues. It is the responsibility of the Contractor to coordinate with utilities in advance to prevent impacts to the project schedule. The following utility companies are believed to have facilities within or near the project limits:

Gas: Colorado Springs Utilities
  - Contact Person: Dee Dee Brook
  - Telephone: (719) 668-4510
Water: Colorado Springs Utilities  
Contact Person: Adam Baker  
Telephone: (719) 668-4737

Wastewater: Colorado Springs Utilities  
Contact Person: Adam Baker  
Telephone: (719) 668-4737

Electrical Distribution: Colorado Springs Utilities  
Contact Person: Dee Dee Brook  
Telephone: (719) 668-4510  
Inspections: (719) 668-5638

Electrical Transmission: Colorado Springs Utilities  
Contact Person: Dee Dee Brook  
Telephone: (719) 668-4510  
Inspections: (719) 668-5638

Communications: Century Link  
Contact Person: Patty Moore  
Telephone: (719) 636-6096

Television Cable: Comcast  
Contact Person: Dale Stewart  
Telephone: (719) 442-4733 (O), (719) 306-2767 (C)

Traffic Signal Communication/Fiber Optic: City of Colorado Springs  
Contact Person: Rob Helt  
Telephone: (719) 385-7603

The work described in the plans and specifications will require full coordination between the Contractor and Utility Companies while performing their respective operations, so the utility work can be completed with minimum delays to all parties concerned.

The Contractor shall coordinate with residences and businesses affected by any sanitary sewer, electric, gas, or water service shut downs at least 48 hours prior to shut down.

The Contractor shall be responsible for coordinating the adjustment of all utilities on this project. The Contractor shall keep each utility company advised of any work being done to their facilities, so that each utility company can coordinate their inspections for final acceptance with the Engineer.

For utility work that is to be performed by a utility company, Contractor shall provide notice to the utility company that the site is ready for the utility work. The written notice, with a copy to the Engineer, shall be given a minimum of four weeks prior to the requested start of the utility work.

The Contractor shall provide, in the bid proposal, a detailed description of the proposed utility coordination program for the project. The program will describe the steps that will be
taken to avoid delays in the event that unknown or differing conditions are encountered during construction. The program shall address both public and private utilities. The program shall be submitted to both the affected utilities and the Engineer immediately following the Notice to Proceed for review and approval.

D.13 PUBLIC RELATIONS

The Contractor is required to have both letter and personal contact with residents and owners or operators of the buildings and businesses that are adjacent to the construction area. The Contractor will furnish a list of those contacted to the Engineer.

D.14 SCHEDULE

General Provision Section 104 of the City of Colorado Springs Engineering Division Standard Specifications is hereby revised for this project as follows:

In General Provision 104.02 Schedule, the software requirements in the first paragraph shall be revised as follows:

All CPM schedules submitted for review by the Project Engineer shall include capability of being read and manipulated by Microsoft Project.

General Provision 104.02 Schedule shall include the following:

Upon approval of the baseline schedule by the Engineer, no changes to schedule task durations or schedule logic ties shall be permitted without prior written approval by the Engineer.

D.15 LANDS TO BE USED FOR WORK

General Provision Section 105 of the City of Colorado Springs Engineering Division Standard Specifications is hereby revised for this project as follows:

In General Provision Subsection 105.01 Lands to be Used for Work, add the following sentence to paragraph B:

The storage of materials shall not at anytime disrupt or impact area businesses. Locations of storage, heights of storage, and length of time materials will be stockpiled near businesses shall be approved in writing by the Engineer prior to use.

D.16 PROTECTION OF UTILITIES

General Provision Section 108 of the City of Colorado Springs Engineering Division Standard Specifications is hereby revised for this project as follows:

In General Provision Subsection 108.09 Protection of Utilities, delete the first sentence in paragraph B and replace with the following:
Before any excavation is begun in the vicinity of existing utilities or structures, each utility company, department, agency or company concerned shall be notified in advance of such excavation, and such excavation shall not be made until an authorized representative of the utility concerned is at the site.

In General Provision Subsection 108.09 Protection of Utilities, delete paragraph K and replace with the following:

Comcast: The television utilities are to be protected and supported in place. If relocation is determined to be necessary, television utilities shall be relocated by the utility owner, Comcast. The Contractor shall coordinate the work with Comcast.

General Provision Subsection 108.09 Protection of Utilities shall include the following paragraphs:

Natural Gas: All work in close proximity to any natural gas facility shall be coordinated in advance with the Colorado Springs Utilities Gas Department. Any gas facilities, unless otherwise noted, are to be protected and supported in place. Where relocation is noted or determined necessary, gas facilities shall be relocated or modified by the Colorado Springs Utilities Gas Department. The Contractor shall coordinate the work with the Gas Department and the Gas Department's Contractor.

Century Link: Any Century Link facilities, unless otherwise noted, are to be protected and supported in place. If relocation is determined to be necessary, Century Link facilities shall be relocated or modified by Century Link. The Contractor shall coordinate the work with Century Link and Century Link's Contractor.

Electrical Distribution and Transmission: Any electrical distribution and/or transmission facilities, unless otherwise noted, are to be protected and supported in place. If relocation is determined to be necessary, electrical distribution and/or transmission facilities shall be relocated or modified by the Colorado Springs Utilities Electrical Department. The Contractor shall coordinate the work with the Electrical Department and the Electrical Department's Contractor.

D.17 STAKING WORK

General Provision Section 108 of the City of Colorado Springs Engineering Division Standard Specifications is hereby revised for this project as follows:

In General Provision Subsection 108.16 Staking Work, paragraph A shall include:

Staking requirements shall include all structures, underground construction including storm drain and utilities, structures, retaining walls, barriers, fences, and vaults.

Contractor is wholly responsible for the correct horizontal and vertical location of all project items. Items not constructed in the proper location will be removed and replaced in the correct location without additional cost to the project or time to the schedule.

D.18 SHOP DRAWINGS AND SUBMITTALS
The Contractor shall use a system to track various types of submittals. This system shall be submitted to the Engineer for approval at the pre-construction meeting. The system used shall have the information shown below, at a minimum.

Unique identification # for each submittal and resubmittal
Date submitted
Date response required
Reference to design plan or specification
Description
Supplier
Action
Date returned

This system will be used by the selected contractor, consultant and City staff to post, review, track, and approve items such as:

Schedules
Requests for Information (RFI's),
Submittals
Shop drawings
Change orders
Materials testing data
Project pay estimates
Project photos
Meeting agenda and minutes

General Provision Section 108 of the City of Colorado Springs Engineering Division Standard Specifications is hereby revised for this project as follows:

In General Provision Subsection 108.19 Shop Drawings and Submittals, delete the first sentence in paragraph A and replace with the following:

The Contractor shall submit to the Engineer all shop drawings, working drawings, and submittals in a timely manner, considering the 14-day review period for shop drawings. Colorado Springs Utilities review of submittals requires a minimum of 21 days. At no time shall shop drawings be submitted less than 30 days prior to anticipated construction of that element. The Contractor shall submit to the Engineer all project schedules within 21 calendar days of Notice of Award for review. The Contractor shall include Engineer review time in the work schedule. Failure of the Contractor to deliver submittals in sufficient time for the Engineer's review shall not constitute a delay on the part of the City. Submittals which may require a review beyond the first submittal shall not constitute a delay on the part of the City. Shop drawings and submittals shall be at a minimum of those items listed in Table 108-1 and 108-2 and any other additional submittals which may be required by the Engineer. The submittals shown in the tables are not all inclusive. Other submittals may be required.

In General Provision Subsection 108.19 Shop Drawings and Submittals, delete the first sentence of paragraph B and replace with the following:
If submittals are made in the form of hard copies, then the Contractor shall submit a minimum of five copies. One of these will be returned to the Contractor after review. If the Contractor wants more than one copy returned he shall submit the desired number of additional copies.

The Contractor may elect to make submittals electronically. If this is done, the submittals shall be made in clear, readable color electronic files in the PDF format. If this is done, the reviewed submittals will be returned in the same format.

The Contractor shall not begin work until shop drawings and schedules are approved by the Engineer.

General Provision Subsection 108.19 Shop Drawings and Submittals shall include the following:

Shop Drawings, Working Drawings, Other submittals, and Construction Drawings.

A. Shop drawings, Working Drawings, and Other Submittals-General. All work shall be performed in accordance with the plans, reviewed shop drawings, working drawings, or other submittals. Specific requirements for the required shop drawings, working drawings, and other submittals for this project are contained in the specifications.

The Contractor shall be responsible for the accuracy of all dimensions and quantities shown on the shop drawings, working drawings, and other submittals. The Contractor shall correlate all information in the Contract, in the submittals, and in all revisions at the project site to insure that there are no conflicts and that the work can be constructed as shown. The Contractor shall be responsible for all information that pertains to the fabrication processes and methods of construction.

Shop drawings, working drawings, and other submittals shall be delivered to the Engineer. The Contractor shall notify the Engineer, in writing, at the time of submittal of shop drawings, working drawings, and other submittals, of any information submitted that deviates from the requirements of the plans and specifications. In addition, specific notation of the deviations or changes from the plans and specifications shall be placed on the shop drawing, working drawing, or other submittal.

The first sheet or page of each set of shop drawings, working drawings, and other submittals shall be reviewed by the Contractor for conformance with the other work on the project, and stamped with a stamp indicating his review of the submittal. Submittals shall be made in complete packages which will allow the Engineer to properly review them for general compliance with the Contract and to effectively evaluate the proposed methods of construction. The allowed time for review shall not begin until such submittals are complete.

The format of the shop drawings, working drawings, and other submittals shall be as follows:
1. All manually drafted shop drawings and working drawings shall be either 34 inches long by 22 inches wide overall, or 17 inches long by 11 inches wide overall. There shall be a 2-inch margin on the left side of the sheet and a 1/2 inch margin on the other three sides. A blank space, 4 inches long by 3 inches wide, shall be left available near the lower right-hand corner of shop drawings, for the Engineer’s review stamp.

2. A title block shall be located in the lower right-hand corner of each sheet, and shall show the project number, structure name, contents of the sheet, designer/engineer, sheet number, and revision number.

3. Design notes, calculations, lists, reports, descriptions, catalog cuts, and other on-drawing submittals shall be submitted on 8 1/2 inch by 11 inch sheets.

4. The shop drawings, working drawings, other submittals and all revisions shall be signed and sealed for the Contractor, by a professional engineer registered in the state of Colorado when required by the specifications. Submittals without the required signature and seal will not be accepted and will be returned to the Contractor without action.

Table 108-1 summarizes the minimum required submittals and is included at the end of this subsection. Table 108-1 lists submittals in one location for information. The table clarifies the type of submittal and whether the Contractor’s Engineer must sign and seal the submittal. Table 108-1 may not be all inclusive. The Contractor shall provide all submittals required by the Contract, including those not listed in the table.

B. Shop Drawings. The Contractor shall provide shop drawings to adequately control the work. The Contractor shall submit shop drawings to the Engineer for formal review.

The Engineer will review the shop drawings to evaluate that general conformance with the design concept and that general compliance with the information given in the plans and specifications has been achieved. The review does not extend to accuracy of dimensions, means, methods, techniques, sequences, schemes, procedures of construction, or to safety precautions. The review by the Engineer is not a complete check. Review of the shop drawings does not relieve the Contractor of the responsibility for the correctness of the shop drawings. All work done prior to the Engineer’s review of shop drawings shall be at the Contractor’s sole risk.

The Engineer may request additional details and require the Contractor to make changes in the shop drawings which are necessary to conform to the provisions and intent of the plans and specifications without additional cost to the project.

After review, the Engineer will return three sets of shop drawings, for use by the Contractor and the Fabricator or Supplier. Returned shop drawings will be stamped with the Engineer’s review stamp to indicate one of the following:
<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reviewed, no exception taken</td>
<td>Shop drawings or submittals have been reviewed and do not require resubmittal.</td>
</tr>
<tr>
<td>Reviewed, revise as noted</td>
<td>Shop drawings or submittals have been reviewed and the Contractor shall incorporate the comments noted in the shop drawings into the work. The shop drawings do not require resubmittal.</td>
</tr>
<tr>
<td>Resubmit, revise as noted</td>
<td>Shop drawings or submittals require correction or redrawing and shall be resubmitted for review. Corrections shall be made and the shop drawings shall be resubmitted by the Contractor in the same manner as the first submittal. Specific notation shall be made on the shop drawing to indicate the revisions.</td>
</tr>
<tr>
<td>Rejected</td>
<td>Submittal may or may not have been reviewed, but does not meet the minimum requirements for a review. Rejected submittals shall be repackaged and resubmitted after the submittal meets minimum requirements for review.</td>
</tr>
<tr>
<td>Submit Specified Item</td>
<td>Shop drawings or submittals have been reviewed and are not approved without the submittal of the specified item. Engineer is not responsible for project delays when additional items are required for approval.</td>
</tr>
</tbody>
</table>

The time required for the Engineer’s review of each submittal will not exceed 14 days after a complete submittal of shop drawings is received by the Engineer, except reviews performed by Colorado Springs Utilities which will not exceed 21 days. It is the intent of these specifications that no more than one submittal of shop drawings shall be required for anyone particular item. If additional submittals are required by actions of the Contractor, resulting delays shall be the responsibility of the Contractor. If additional submittals are required by the Engineer’s actions or if shop drawing review is delayed by the Engineer, and if the resulting delay is material to the project schedule critical path, the Contractor may request an extension of time equal to the number of days exceeding the 14 or 21 day review per submittal for review performed by the Engineer.

All revisions made to the shop drawings after the Engineer’s initial review process require re-submittal and will be required to follow time frames as set forth for the initial submittal.

C. Working Drawings. The Contractor shall supplement the plans with working drawings to detail the construction or to provide the Engineer with information on the proposed methods of construction. Unless otherwise specified, the Contractor shall submit six sets of working drawings to the Engineer for information only, who after acknowledging receipt of the working drawings, will retain three copies and return three copies to the Contractor. These drawings will not be formally reviewed by the Engineer. The Contractor shall submit working drawings to the Engineer 21 days before the start of work.
D. Other Submittals. Other submittals shall be prepared and submitted by the Contractor as defined for working drawings. Unless otherwise specified, two copies shall be submitted to the engineer for information only. The plans or specifications will indicate which submittals require formal review by the Engineer. One record set of all design work performed by the Contractor's Engineer shall be submitted to the Project Engineer.

E. Construction Drawings. The Contractor shall keep one set of plans, reviewed shop drawings, working drawings, and other submittals available on the project site at all times. This set shall be defined as the construction drawings." The Contractor shall note on these construction drawings all changes and deviations from the work shown on the plans, shop drawings, working drawings, and other submittals. The construction drawings shall be kept current as the work progresses and notations shall be made within seven days of the change or deviation. Requests for Information (RFIs) and the answer/response shall be attached to the construction drawings.

At the completion of the project, the first sheet or page of each set of construction drawings shall be stamped "As Constructed" and signed by the Contractor.

Upon completion of the work and prior to final payment, the construction drawings shall be submitted to the Engineer.

F. Furnishing the shop drawings, working drawings, construction drawings, and other submittals will not be measured and paid for separately, but shall be included in the work.

G. Failure of the Contractor to comply with the requirements for shop drawings, working drawings, other submittals, and construction drawings may be considered unsatisfactory contract progress. Monthly progress payments maybe withheld until the requirements are met.

H. Except as specifically noted, all time required for review of shop drawings, working drawings, and other submittals shall be included in the work and shall not be the basis for any claim for a time extension or monetary adjustment except as provided for herein.
Table 108-1
Summary of Contractor Submittals (not all-inclusive)

<table>
<thead>
<tr>
<th>SPEC SECTION</th>
<th>DESCRIPTION</th>
<th>TYPE</th>
<th>CONTRACTOR P.E. SEAL REQUIRED?</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>Aggregate Base Course</td>
<td>Certification/Testing</td>
<td>No</td>
</tr>
<tr>
<td>400</td>
<td>Asphalt Concrete Pavement</td>
<td>Certification/Testing</td>
<td>No</td>
</tr>
<tr>
<td>601</td>
<td>Concrete Mix Designs, Material Certifications, Testing</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>602</td>
<td>Reinforcing Steel Shop Drawing, Material Certifications</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>603</td>
<td>Storm Drain Pipe Shop Drawing, Material Certification</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Ch. 4, Water LESS</td>
<td>Water pipe, appurtenances and associated materials Product Data, Shop Drawing, Material Certifications</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

* A PE seal is required where the Contractor has provided the design for the item, or performed engineering to modify the details shown on the plans. The PE seal is not required where complete details are provided on the plans.

D.19 PAYMENTS AND RETAINAGE
General Provision Section 109 of the City of Colorado Springs Engineering Division Standard Specifications is hereby revised for this project as follows:

Delete General Provision Subsection 109.01 Payments, and replace with the following:

Payments will be made, and required retainage withheld if applicable, in accordance with this section as the work progresses at the end of each month or as soon thereafter as practicable in compliance with Title 24, Article 91, Section 103 and Section 110, Colorado Revised Statutes, on statements made and approved by the Engineer.

Payment for work performed by the Contractor under these contract documents will be made at the approved unit price or lump sum price for each of the several items as listed in the bid and measured as hereinafter specified. Such payment shall compensate the Contractor for all costs in connection with furnishing all labor, equipment and material required and performing the operations necessary to complete the item in accordance with the contract documents. All incidental work essential to the completion of the project in a workmanlike manner, and including cleanup and disposal of waste or surplus material, shall be accomplished by the contractor without additional cost to the City. The cleanup and disposal of waste or surplus material shall be performed during construction or as soon after as is reasonably possible in order to better maintain the aesthetics and safety of the construction area. The quantities listed in the bid are estimated quantities, and are
listed only for convenience in comparing bids. Payment will be made for the actual
quantities constructed or installed, unless otherwise noted in these contract documents.
However, any changes to plan quantity must be approved through proper change order
procedures, said quantities being measured as specified in the contract documents.

1. If the contract exceeds ONE HUNDRED FIFTY THOUSAND DOLLARS ($150,000.00),
and is for the construction, alteration, or repair of any highway, public work, or public
improvement, structure, and; the contractor has provided Performance, and Payment
Bonds: the City of Colorado Springs shall authorize partial progress payments of the
amount due under this contract monthly, or as soon thereafter as practicable, to the
contractor, if the contractor is satisfactorily performing the contract. If the City of Colorado
Springs finds that satisfactory progress is being achieved during any period for which
progress is to be made, the City of Colorado Springs may authorize payment to be made
in full without withholding retainage. However, if satisfactory progress has not been made,
the City of Colorado Springs may retain a maximum of ten percent (10%) of the amount of
the requested payment until satisfactory progress is achieved. When the work is
substantially complete, the City of Colorado Springs may retain from the remaining unpaid
balance that amount the City Contracting Manager, at the advice of the City's project
manager, considers adequate for protection of the City, suppliers and subcontractor's, and
shall release to the Contractor all the remaining funds associated with completed and
acceptable work.

The withheld percentage of the contract price of any such work, improvement, or
construction shall be retained on an invoice-to-invoice basis and shall not be cumulative.
In other words, if the contractor is not performing satisfactorily the City of Colorado
Springs will hold ten percent (10%) of what is actually due to the contractor. for example, if
the contractor is behind schedule and has successfully completed fifty percent (50%) of
the work, the City of Colorado Springs will only pay forty percent (40%) of the invoice,
withholding ten percent (10%) of what is due until the contractor gets back on schedule.
Once the City of Colorado Springs determines that satisfactory progress is being made in
all phases of the contract, then no retainage will be held on successfully completed work.

2. Whenever a contractor receives payment pursuant to this section, the contractor shall
make payments to each of the subcontractors of any amount actually received which were
included in the contractor's request for payment to the City for such subcontracts. The
contractor shall make such payments within seven (7) calendar days of receipt of
payments from the City in the same manner as the City is required to pay the contractor
under this section if the subcontractor is satisfactorily performing under the contract with
the contractor. The subcontractor shall pay all suppliers, sub-subcontractors, laborers, and
any other persons who provide goods, materials, labor, or equipment to the subcontractor
any amounts actually received which were included in the subcontractor's request for
payment to the contractor for such persons, in the same manner set forth in this
subsection (2) regarding payments by the contractor to the subcontractor. If the
subcontractor fails to make such payments in the required manner, the subcontractor shall
pay those suppliers, sub-subcontractors, and laborers interest in the same manner set
forth in this subsection (2) regarding payments by the contractor to the subcontractor.
At the time a subcontractor submits a request for payment to the contractor, the subcontractor shall also submit to the contractor a list of the subcontractor’s suppliers, sub-subcontractors and laborers. The contractor shall be relieved of the requirements of this subsection (2) regarding payment in seven (7) days and interest payment until the subcontractor submits such list. If the contractor fails to make timely payments to the subcontractor as required by this section, the contractor shall pay the subcontractor interest as specified by contract or at the rate of fifteen percent (15%) per annum, whichever is higher, on the amount of the payment which was not made in a timely manner. The interest shall accrue for the period from the required payment date to the date on which payment is made. Nothing in this subsection (2) shall be construed to affect the retention provisions of any contract.

3. CONTRACTS UNDER ONE HUNDRED FIFTY THOUSAND DOLLARS: If the contractor is not progressing in accordance with the project schedule or not performing quality work in accordance with the specifications, the Project Manager may, at that point start withholding retainage up to and including ten percent (10%) of the total contract amount.

General Provision Subsection 109.03 Payments Withheld Prior to Final Acceptance of Work shall include the following:

E. Failure by the Contractor to submit all record drawings.

**D.20 FINAL INSPECTION AND ACCEPTANCE**

General Provision Section 109 of the City of Colorado Springs Engineering Division Standard Specifications is hereby revised for this project as follows:

General Provision Subsection 109.04 shall include the following:

Upon written notice that the Contractor considers all work complete, the Engineer shall make a final inspection with the Owner and Contractor and shall notify the Contractor in writing of incomplete or defective work revealed by the inspection. The Contractor shall promptly remedy such deficiencies.

After the Contractor has remedied all deficiencies to the satisfaction of the Engineer and delivered all construction records, as-built drawings, maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection and other documents (all as required by the Contract Documents), the Owner and Contractor shall be promptly notified in writing by the Engineer that the work is acceptable.

Final Acceptance shall be obtained no more than 90 days after the date of Material Completion as defined in the RFP. If Final Acceptance is not obtained within 90 days of Material Completion, Liquidated Damages, as set forth in General Provision Section 108.02 of the City of Colorado Springs Engineering Division Standard Specifications, shall be applied for each calendar day over 90 days that the contractor has not received Final Acceptance.
D.21 LATE COMPLETION OF THE WORK DISINCENTIVE

If the number of calendar days required to complete the work is in excess of the total number of calendar days in the Contractor’s Proposal, a disincentive will be deducted from payments made to the Contractor. This disincentive (D) will equal the actual number of calendar days required to complete the work (C) minus the number of calendar days in the proposal (P) multiplied by the daily cost of $2,900.00.

\[ D = (C - P) \times ($2,900.00) \]

The disincentive shall apply in addition to any liquidated damages assessed to the Contractor on the project pursuant to Schedule B, Section 108.02.
SCHEDULE E – TECHNICAL SPECIFICATIONS

This section contains the Standard Specifications and Revisions of Standard Specifications. Measurement and Payment for all bid items shall be in accordance with Section H, Measurement and Payment, and shall take precedence over the measurement and payment sections of the Standard Specifications or Revisions of Standard Specifications.

E.1 STANDARD SPECIFICATIONS

The following are the Standard Specifications that apply to this project. In the event there are conflicting Standard Specifications, the order of precedence will be based upon the order in which the Standard Specifications are listed. Section H Measurement and Payment describes which specific Standard Specification sections apply to each bid item.

All contractors are required to have on the job site and utilize the current updated copy of the Standard Specifications applicable to the work.

Any revisions to the Standard Specifications can be found in the Subsection 9.2 of this document.

A. CITY OF COLORADO SPRINGS STANDARD SPECIFICATIONS

The “City of Colorado Springs Engineering Division Standard Specifications”, current edition/revision and addendums, except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety, shall apply to this project.  


The “Pikes Peak Region Asphalt Paving Specifications”, revised February 2015, except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety, shall apply to this project.

The “City of Colorado Springs Traffic Engineering Signage and Pavement Markings Guidelines”, revised 11/16/2009, except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety, shall apply to this project.

The “City of Colorado Springs Drainage Criteria Manual, Volume II”, May 2014 edition and current addendums, except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety, shall apply to this project.
The “City of Colorado Springs Traffic Controls for Street Construction, Utility Work, and Maintenance Operations”, current edition/revision, except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety, shall apply to this project.

Copies of these documents are available from the City of Colorado Springs, Office Services Division, 30 South Nevada Avenue, Suite 101, Colorado Springs, during regular business hours.

B. COLORADO SPRINGS UTILITIES STANDARD SPECIFICATIONS

The Standards Specifications for Colorado Springs Utilities are included in the Colorado Springs Utilities Line Extension and Service Standards (LESS) for Electric, Natural Gas, Water and Wastewater, and are available for downloading from CSU’s website at: https://www.csu.org/Pages/standards-bulletins.aspx

The Standard Specifications for water line construction and protection shall be the “Colorado Springs Utilities Water Line Extension and Service Standards”, revised 2014 (including bulletins and revision), except as modified and supplemented hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety.

The Standard Specifications for water line construction and protection shall be the “Colorado Springs Utilities Wastewater Line Extension and Service Standards”, revised 2015 (including bulletins and revision), except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety.

The Standard Specifications for the lighting installation, electrical distribution and electrical transmission line construction and protection shall be the “Colorado Springs Utilities Electric Line Extension, and Service Standards”, revised 2016 (including bulletins and revision), except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety.

The Standard Specifications for gas line construction and protection shall be the “Colorado Springs Utilities Natural Gas Line Extension and Service Standards”, revised 2016 (including bulletins and revision), except as modified and supplemented hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety.

Copies of these documents are available from the Colorado Springs Utilities’ Development Services, 111 S. Cascade, Suite 105, Colorado Springs, during regular business hours.

C. COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS

The following sections of the “Colorado Department of Transportation Standard Specifications for Road and Bridge Construction”, 2017, except as modified
hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety, shall apply to this project.

Section 109 – Measurement and Payment
Section 201 – Clearing and Grubbing
Section 206 – Excavation and Backfill for Structures
Section 207 – Topsoil
Section 208 – Erosion Control
Section 420 – Geosynthetics
Section 602 – Reinforcing Steel
Section 603 – Culverts and Sewers
Section 604 – Manholes, Inlets, and Meter Vaults
Section 606 – Guardrail
Section 607 – Fences
Section 609 – Curb & Gutter
Section 613 – Lighting
Section 614 – Traffic Control Devices
Section 625 – Construction Surveying
Section 626 – Mobilization
Section 627 – Pavement Marking
Section 701 – Hydraulic Cement
Section 703 – Aggregates
Section 705 – Joints, Waterproofing, and Bearing Materials
Section 709 – Reinforcing Steel and Wire Rope
Section 711 – Concrete Curing Materials and Admixtures
Section 712 – Miscellaneous
Section 713 – Traffic Control Materials

Contractors are required to have on the job site and utilize the current updated copies of the CDOT Standard Specifications for Road and Bridge Construction and Standard Plans – M&S Standards. Copies of both are available from CDOT.

E.2  REVISIONS TO STANDARD SPECIFICATIONS

A.  REVISIONS TO CITY OF COLORADO SPRINGS STANDARD SPECIFICATIONS

The following Revisions supplement or modify the City of Colorado Springs Engineering Division Standard Specifications. Measurement and Payment for all bid items shall be in accordance with Section H, Measurement and Payment, and shall take precedence over the measurement and payment sections of the Standard Specifications or revisions thereof.

Revision of Section 200 – Street Section (Excavation and Embankment)
Revision of Section 220 – Removal of Structures and Obstructions
Revision of Section 630 – Storm Drains and Culverts
REVISION OF SECTION 200
STREET SECTION

Section 200 of the City of Colorado Springs Engineering Division Standard Specifications is hereby revised for this project as follows:

Subsection 202 is hereby revised as follows:

Excavation shall have the following additional requirements:

Material removed during the excavation process that is not acceptable for use as embankment fill shall be legally disposed of by the Contractor. It shall not be wasted on private property without written permission of the property owner. Rocks, broken concrete, or other solid materials more than six inches in greatest dimension shall not be placed in any of the embankment areas. Materials not meeting this requirement shall become the property of the Contractor to be removed from the site and legally disposed of. All excess material that is not needed in the embankment fills on the project shall be hauled away from the project.

Subsection 203 is hereby revised as follows:

Embankment shall have the following additional requirements:

Embankment material will also be placed to fill up excavations, holes and depressions to the bottom of the required topsoil layer in unpaved, landscaped areas.

For this project, all fill material required below and extending 6" outside of paved areas shall be Aggregate Base Course (Class 6).

Embankment construction shall include preparation of the areas and surfaces upon which embankment material is to be placed and the placing and compacting of approved material. Only approved materials shall be used in the construction of embankments and fills.

Free running water shall be drained from embankment material before it is placed.

Frozen materials shall not be used in the construction of embankments and fills.

Embankments and fills shall be shaped and maintained so that they are well drained at all times.

Compaction of embankments and fills in unpaved, landscaped areas shall be in accordance with the same moisture and density requirements for subgrade given in Subsection 205.
REVISION OF SECTION 220
REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Section 220 of the City of Colorado Springs Engineering Division Standard Specifications is hereby revised for this project as follows:

Subsection 220.01 shall be revised as follows:

The first paragraph shall be revised to include the following additional removal items: existing concrete headwalls and wingwalls, concrete aprons, curb and gutter, curb, pipes, trees, chain link fence, sidewalks, curb opening, concrete channel, inlets, and pavement.

Subsection 220.05 shall be revised to include the following:

Removal of Pavement shall be revised to include the following:

Removal of Pavement shall include the full depth removal of asphalt pavement, curb and gutter, and all other pavement types and elements that are not specifically included in other pay items in the contract.

Existing site observations at miscellaneous locations suggest that the average existing roadway and shoulder pavements consist of asphalt pavement with an approximate thickness varying from 4 inches to 12 inches. This information is provided for reference only. Individual asphalt thicknesses will vary throughout the project. Removals of thicknesses greater or less than the thicknesses indicated above shall be considered incidental to this item.

Saw cutting of pavements shall be full depth, unless otherwise approved by the Engineer.

Removal of Miscellaneous Utilities shall include removal of existing utility pipes, conduits, wires, and their contents that fall within the excavation limits. For removal, existing utilities shall be cut such that the remaining utility is undamaged.

REVISION OF SECTION 630
STORM DRAINS AND CULVERTS

Section 630 of the City of Colorado Springs Engineering Division Standard Specifications is hereby revised for this project as follows:

631 SCOPE OF WORK

The work covered by this specification consists of furnishing all materials, labor, tools and equipment necessary to install storm drain pipe, culvert and appurtenances as shown on the plans and as herein specified. The work covered by this section will be considered as Standard Construction. Work not covered by this section will be considered as special construction and will require additional specifications and prior approval of the City Engineer.
GENERAL

Storm drain pipe, culvert and appurtenances shall conform with all additional standard specifications references and applicable documents as noted herein unless otherwise superseded by the exceptions noted. All reference specifications shall be the current revision. Standard manufactured pipe or culvert materials acceptable for installation as public storm drains are:

Reinforced Concrete Pipe (RCP), Class III
Thermoplastic pipe material is not to be installed unless specific written approval is granted by the City Engineer. Plastic pipe materials that may be considered are:

HP Storm Polypropylene Pipe (PP): City’s acceptance letter dated October 5, 2016 available upon request.
Profile Wall Polyethylene Pipe (PWPE): Written City acceptance required
Corrugated Polyethylene Pipe (CPE): Written City acceptance require
632.01 Standard Specification References

AASHTO - American Association of State Highway and Transportation Officials
ACI - American Concrete Institute
ASTM - American Society for Testing and Materials
CDOT - Colorado Department of Transportation
SS-S - Federal Specification
OSHA - Occupational Safety and Health Administration

633 DESIGN CRITERIA FOR PIPE

See Drainage Criteria Manual, Appendix 6A

634 REQUIREMENTS FOR PIPE DESIGN

See Drainage Criteria Manual, Appendix 6A.

635 MATERIALS

Precast Concrete Pipe

ASTM C-76 "Reinforced Concrete Culvert, Storm Drain and Sewer Pipe". Class II shall be the minimum allowed for storm drain systems. Minimum acceptable size is 15 inch diameter.

ASTM C-507 "Reinforced Concrete Elliptical Culvert, Storm Drain and Sewer Pipe". Class HE-II or VE-II pipe shall be the minimum allowed for Storm Drain Systems. Minimum acceptable size is 11 x 18 inch.

ASTM C-14 "Concrete Sewer, Storm Drain and Culvert Pipe". Class III non-reinforced pipe will be allowed only up to a maximum of 24 inch diameter.

Joints for all pipe may be bell and spigot or tongue and groove according to the supplier's preference unless specifically noted on the plans

Thermoplastic Pipe

The following types of thermoplastic pipes shall conform to AASHTO Interim Specifications Bridges Section 18, soil - thermoplastic pipe interaction systems.

ASTM F-894 "Polyethylene Large Diameter Profile Wall Sewer and Drain Pipe". The minimum allowable pipe wall thickness shall be ring stiffness constant Class 100 for pipe sizes 18 through 30 inch diameter and Class 160 for pipe sizes 33 through 48 inch diameter. Maximum allowable size shall be 48 inch.

Joints for ASTM F-794, ASTM F-894 and AASHTO M-278 pipe shall be gasketed type integral Bell and Spigot.
Joints for AASHTO M-294 pipe shall be a coupling type with gasketed joints. Coupling shall be bell and spigot. Split collar couplings to be used only if specifically approved in writing by the City Engineer.

**Joint Materials - Concrete Pipe**

AASHTO M-198 "Joints for Circular Concrete Sewer and Culvert Pipe using Flexible Watertight Gaskets" for bell and spigot or tongue and groove pipe. Also, ASTM C-433 "Joints for circular concrete sewer and culvert pipe, using rubber gaskets".

Mastic Sealants conforming to federal specification SS-S-210A "Sealing Compound, Preformed Plastic, for Expansion Joints and Pipe Joints for Shapes other than Circular".

Cement mortar for joint repair or joint filler only.

**Joint Material - Thermoplastic Pipe**

The following specifications apply to pipe provided under ASTM F-794, ASTM F-894 and AASHTO M-278; ASTM D-3212 "Specification for Drain and Sewer Plastic Pipes using Flexible Elastomeric Seals" and ASTM F-477 "Specifications for Elastomeric Seals (gaskets) for Joining Plastic Pipe".

The following specification applies to pipe provided under AASHTO M-294; ASTM D-1056 "Flexible Cellular Material - Sponge or Expanded Rubber" closed cell sponge rubber or mastic sealants conforming to Federal Specifications SS-S-210A "Sealing Compound, Preformed Plastic, for Expansion Joints and Pipe Joints" when using Split Collar Joints. Also, ASTM F-477 "Specification for Elastomeric Seals (gaskets) for Joining Plastic Pipe when using Bell and Spigot Joints".

**Manholes**

ASTM C-478 "Precast Reinforced Concrete Manhole Sections" for precast reinforced concrete riser sections, eccentric cones or flat slab tops. Also, corrugated metal prefabricated manholes conforming to the requirements AASHTO M-36 "Corrugated Steel Pipe, Metallic Coated for Sewers and Drains". Shop drawings to be submitted for approval by the Engineer.

**Frame, Cover, Grates and Accessories**

ASTM A-48 "Gray Iron Castings for Frames, Covers and Grates". Class should be a minimum of No. 30B unless, malleable iron castings conforming to ASTM A-47 are specified for heavier loadings. Frame, cover and grate shall conform to the City Standard Detail for dimensions and minimum weight.

Cast iron manhole steps shall have a minimum tensile strength of 35,000 psi and shall be asphalt coated.
Extruded aluminum alloy steps shall conform with ASTM B-221 and be either 6005-T5 or 6005-T6 extrusions.

Polypropylene coated steel steps shall conform to ASTM 2146 Type II Grade 43758 with grade 60 steel conforming to ASTM A-615.

All steps and installation shall conform to OSHA Standard 29 CFR 1910.27 "Fixed Ladders".

Concrete

All cast in place Portland cement concrete for drainage structures shall have a minimum 28 day compressive strength of 4,000 psi, shall have Type II cement (unless otherwise specified) with air entraining admixtures and shall conform to all the requirements of Sections 500 and 600 of these Specifications.

Mortar

Cement mortar used for repair work shall be mixed in the proportions of one (1) part of air-entrained Type II cement conforming to ASTM C-150 to two and one half (2-1/2) parts of clean, well graded sand meeting this requirement of AASHTO M-45.

The grading for sand shall be as shown below:

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Percent Passing Each Sieve</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 4</td>
<td>100</td>
</tr>
<tr>
<td>No. 8</td>
<td>95-100</td>
</tr>
<tr>
<td>No. 16</td>
<td>70-100</td>
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<tr>
<td>No. 30</td>
<td>40-70</td>
</tr>
<tr>
<td>No. 50</td>
<td>10-35</td>
</tr>
<tr>
<td>No. 100</td>
<td>2-15</td>
</tr>
</tbody>
</table>

Reinforcing Steel

Reinforcing bars shall conform to ASTM A-615 "Specifications for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement" and shall be Grade 60 or Grade 40 as specified by design requirements. All bars shall be deformed unless otherwise specified.

Smooth welded wire fabric shall conform to ASTM A-82 "Cold-Drawn Steel Wire for Concrete Reinforcement". Wire shall be galvanized where specified on the plans.

All reinforcing bars and wire fabric shall conform to the minimum design, placing and construction requirements for reinforced concrete ACI-318 and as otherwise noted on the plans.
**Structural Steel**

Structural carbon steel for bolted or welded construction shall conform to ASTM A-36 "Structural Steel". Where specified, structural steel shall be galvanized in conformance with ASTM A-123 "Zinc (Hot-Galvanized) Coatings on Products Fabricated from Rolled, Pressed and Forged Steel Shapes, Plates, Bars and Strip".

**Bedding Material - Granular**

Where called for on plans or otherwise specified by bedding class, bedding material for pipe and culvert shall consists of clean, granular material meeting the requirements for structural backfill. For thermoplastic plastic pipe materials only, see Section 637.06. PP backfill materials per ASTM D2321 shall be used for the bedding, haunch, and initial backfill zones.

For the AASHTO classification system, granular materials shall be defined as cohesionless sands and gravel of A-1, A-2 and A-3 group classification having 35% or less passing the No. 200 sieve. Maximum particle size shall not exceed 1-1/2 inches.

The material shall have a liquid limit not exceeding 35 and a plasticity index not over 6 when tested in accordance with AASHTO T-89 and T-90 respectively. Where corrosion parameters are established for metal pipe, the granular material shall be compatible with the service life requirements.

For the unified soil classification system, granular materials shall be defined as sands and gravels in soil groups GW, GP, GM, GC, SW, SP, SM and SC having more than 50% retained on the No. 200 sieve.

Granular bedding material for pipe installation may be native trench material or imported material providing the materials are in conformance with the above soil classifications.

**C. Revisions to Colorado Department of Transportation Standard Specifications**

The definition of the Engineer in the Colorado Department of Transportation (CDOT) Standard Specifications is revised to mean the Engineer as defined in Section 100 of the City of Colorado Springs Engineering Division Standard Specifications.

References within the CDOT Standard Specifications that identify approval by CDOT are hereby revised to mean approval by the Engineer.

References within the CDOT Standard Specifications that identify requirements with CDOT Procedures are in effect to the extent the Engineer determines applicability to the City project.

References within the CDOT Standard Specifications that identify pre-approved products that are on the CDOT Approved Products List are recognized by the City as acceptable materials for this City project.
The following Revisions supplement or modify the Colorado Department of Transportation (CDOT) Standard Specifications for Road and Bridge Construction. Measurement and Payment for all bid items shall be in accordance with Section H, Measurement and Payment, and shall take precedence over the measurement and payment sections of the Standard Specifications or revisions thereof.

Revision of Section 206 - Compaction
Revision of Sections 206 and 601 – Maturity Meter and Concrete Form and Falsework Removal
Revision of Section 208 – Erosion Control Supervisor
Revision of Sections 601 and 701 – Cements and Pozzolans
Revision of Sections 601 and 711 – Liquid Membrane Forming Compounds For Curing Concrete
Revision of Section 601 – Concrete Batching
Revision of Section 601 – Concrete Finishing
Revision of Section 601 – Concrete Slump Acceptance
Revision of Section 603 – Culvert Pipe Inspection
Revision of Section 625 – Construction Surveying
Revision of Section 703 – Concrete Aggregates
Revision of Section 712 – Water For Mixing or Curing Concrete
Revision of Section 712 – Geotextiles

REVISION OF SECTION 206
COMPACTION

Sections 206 of the Standard Specifications are hereby revised for this project as follows:

In subsection 206.03, delete the fourth and fifth paragraphs and replace with the following:

Backfill shall consist of approved materials uniformly distributed in layers brought up equally on all sides of the structure. Each layer of backfill shall not exceed 6 inches before compacting to the required density and before successive layers are placed. Structure backfill (Class 1) shall be compacted to a density of not less than 95 percent of maximum dry density determined in accordance with AASHTO T 180 as modified by CP 23. Backfill shall be compacted at ± 2 percent of Optimum Moisture Content (OMC).

Structure backfill (Class 2) shall be compacted to a density of not less than 95 percent of maximum dry density. The maximum dry density and OMC for A-1, A-2-4, A-2-5 and A-3 materials will be determined in accordance with AASHTO T 180 as modified by CP 23. The maximum dry density and OMC for all other materials will be determined in accordance with AASHTO T 99 as modified by CP 23. Materials shall be compacted at ± 2 percent of Optimum Moisture Content (OMC). Materials having greater than 35 percent passing the 75 μm (No. 200) sieve shall be compacted at 0 to 3 percent above OMC.
Sections 206 and 601 of the Standard Specifications are hereby revised for this project as follows:

In subsection 206.03, delete the ninth paragraph and replace with the following:

Backfill material shall not be deposited against newly constructed masonry or concrete structures, until the concrete has developed a compressive strength of 0.8 $f'c$, except in cases where the structures support lateral earth pressure. Concrete compressive strength for structures supporting lateral earth pressure shall conform to subsection 601.12 (o). Concrete compressive strength shall be determined by maturity meters.

In subsection 601.09, delete (h) and replace with the following:

(h) *Removal of Forms.* The forms for any portion of the structure shall not be removed until the concrete is strong enough to withstand damage when the forms are removed.

Unless specified in the plans, forms shall remain in place for members that resist dead load bending until concrete has reached a compressive strength of at least 80 percent of the required 28 day strength, 0.80$f'c$. Forms for columns shall remain in place until concrete has reached a compressive strength of at least 1,000 psi. Forms for sides of beams, walls or other members that do not resist dead load bending shall remain in place until concrete has reached a compressive strength of at least 500 psi.

Forms and supports for cast-in-place concrete box culverts (CBCs) shall not be removed until the concrete compressive strength exceeds 0.6 $f'c$ for CBCs with spans up to and including 12 feet, and 0.67 $f'c$ for CBCs with spans exceeding 12 feet but not larger than 20 feet. Forms for CBCs with spans larger than 20 feet shall not be removed until after all concrete has been placed in all spans and has attained a compressive strength of at least 0.80$f'c$.

Concrete compressive strength shall be determined by maturity meters. At the pre-pour conference, the Contractor shall submit the location where maturity meters will be placed.

The Contractor shall provide maturity meters and all necessary wires and connectors. The Contractor shall be responsible for the placement and maintenance of the maturity meter and wire. At a minimum a maturity meter will be placed at the mid-span of beams and at support locations. Placement shall be as directed by the Engineer.

For structures with multiple maturity meters, the lowest compressive strength shall determine when the forms can be removed.

Acceptance cylinders shall not be used for determining compressive strength to remove forms.
When field operations are controlled by maturity meters, the removal of forms, supports and housing, and the discontinuance of heating and curing may begin when the concrete is found to have the required compressive strength.

Forms for median barrier, railing or curbs, may be removed at the convenience of the Contractor after the concrete has hardened.

All forms shall be removed except permanent steel bridge deck forms and forms used to support hollow abutments or hollow piers when no permanent access is available into the cells. When permanent access is provided into box girders, all interior forms and loose material shall be removed, and the inside of box girders shall be cleaned.

REVISION OF SECTIONS 206 AND 601
MATURITY METER AND CONCRETE
FORM AND FALSEWORK REMOVAL

In subsection 601.11, delete (e) and replace with the following:
Falsework Removal. Unless specified in the plans or specifications, falsework shall remain in place until concrete has attained a minimum compressive strength of 0.80f’c. Falsework supporting any span of a simple span bridge shall not be released until after all concrete, excluding concrete above the bridge deck, has attained a compressive strength of at least 0.80f’c.

Falsework supporting any span of a continuous or rigid frame bridge shall not be released until after all concrete, excluding concrete above the bridge deck, has been placed in all spans and has attained the compressive strength of at least 0.80f’c.

Falsework for arch bridges shall be removed uniformly and gradually, beginning at the crown, to permit the arch to take its load slowly and evenly.

Falsework supporting overhangs and deck slabs between girders shall not be released until the deck concrete has attained a compressive strength of at least 0.80f’c.

Falsework for pier caps which will support steel or precast concrete girders shall not be released until the concrete has attained a compressive strength of at least 0.80f’c. Girders shall not be erected onto such pier caps until the concrete in the cap has attained the compressive strength of at least 0.80f’c.

Falsework for cast-in-place prestressed portions of structures shall not be released until after the pre-stressing steel has been tensioned.

Concrete compressive strength shall be determined by maturity meters. At the pre-pour conference, the Contractor shall submit the location that maturity meters will be placed.

The Contractor shall provide maturity meters and all necessary wires and connectors. The Contractor shall be responsible for the placement and maintenance of the maturity meters and wires. At a minimum a maturity meter will be placed at the mid-span of beams and at support locations. Placement shall be as directed by the Engineer.
For structures with multiple maturity meters, the lowest compressive strength shall determine when the falsework can be removed. Acceptance cylinders shall not be used for determining compressive strength to remove falsework. Subsection 601.12 (I) shall include the following after the first paragraph:

Concrete compressive strength shall be determined by maturity meters.

Subsection 601.12 shall include the following:

**Backfilling Structures that Support Lateral Earth Pressure.** Concrete compressive strengths shall reach \( f'c \) before backfilling operations can begin with heavy equipment, such as skid-steers or self-powered riding compactors. Concrete compressive strengths shall reach 0.8 \( f'c \) before backfilling operations can begin with hand operated equipment. Concrete compressive strength shall be determined by maturity meters.

**REVISION OF SECTIONS 206 AND 601**
**MATURITY METER AND CONCRETE FORM AND FALSEWORK REMOVAL**

Delete subsections 601.13 (2) and 601.13 (3) and replace with the following:

The minimum curing period shall be from the time the concrete has been placed until the concrete has met a compressive strength of 80 percent of the required field compressive strength. The Contractor shall develop a maturity relationship for the concrete mix design in accordance with CP 69. The Contractor shall provide the maturity meter and all necessary thermocouples, thermometers, wires and connectors. The Contractor shall place, protect and maintain the maturity meters and associated equipment. Locations where the maturity meters are placed shall be protected in the same manner as the rest of the structure.

Subsection 601.17 shall include the following:

**Maturity Meter Strength.** When maturity meters are specified for determining strength for removing forms, removing false work, backfilling against structures or loading the structure, the Contractor shall provide the Engineer a report of maturity relationships in accordance with CP 69 prior to placement of concrete. If a maturity meter fails, is tampered with, is destroyed or was not placed, the following shall apply:

The minimum curing time or waiting time for removing forms, removing false work, backfilling against structures or loading the structure shall be 28 days.

The Contractor may choose at his own expense to core the structure represented by the maturity meter. Cores will be obtained and tested according to CP 65. Cores will be a minimum of 4 inches in diameter. A minimum of three cores in a two square foot area will be obtained. If the compressive strength of any one core differs from the average by more than 10 percent that compressive strength will be deleted and the average strength will be determined using the compressive strength of the remaining two cores.
If the compressive strength of more than one core differs from the average by more than 10 percent the average strength will be determined using all three compressive strengths of the cores. The average compressive strength of the cores shall be achieve the specified compressive strength of the structure. A structure may only be cored once.

**REVISION OF SECTION 208**

**EROSION CONTROL SUPERVISOR**

Section 208 of the Standard Specifications is hereby revised for this project as follows: In subsection 208.03(c), delete the first paragraph and replace with the following: *Erosion Control Supervisor. When included in the Contract, the Contractor shall assign to the project an individual to serve in the capacity of the Erosion Control Supervisor (ECS). The ECS shall be a person other than the Superintendent. The ECS shall be experienced in all aspects of construction and have satisfactorily completed the Transportation Erosion Control Supervisor (TECS) training program authorized by the Department. A copy of the TECS certificate shall be placed in the SWMP Notebook confirming certification number and that the qualification has not expired. Proof that this requirement has been met shall be submitted to the Engineer prior to or at the environmental preconstruction conference. The ECS shall act as the SWMP Administrator on the project and verify conformance with the City of Colorado Springs Drainage Criteria Manual Volume II. The SWMP Administrator shall be responsible for oversight of the implementation, maintenance, and revision of the SWMP for the duration of the project. The ECS shall use the information provided in CDOT’s Erosion Control and Stormwater Quality Guide and the CDPS-SCP.*

**REVISION OF SECTIONS 601 AND 701**

**CEMENTS AND POZZOLANS**

Sections 601 and 701 of the Standard Specifications are hereby revised for this project as follows:

In subsection 601.03, first paragraph, the following shall be added to the table:

| High-Reactivity Pozzolans | 701.04 |

Subsection 601.03 shall include the following:

Pozzolans shall consist of Fly Ash, Silica Fume and High-Reactivity Pozzolan.

In subsection 601.04, delete the third and fourth paragraphs and replace with the following:

Cementitious material requirements are as follows:

Class 0 requirements for sulfate resistance shall be one of the following:

ASTM C 150 Type I, II or V
CITY OF COLORADO SPRINGS

ASTM C 595 Type IL, IP, IP(MS), IP(HS) or IT

ASTM C 1157 Type GU, MS or HS

ASTM C 150 Type III cement if it is allowed, as in Class E concrete
Class 1 requirements for sulfate resistance shall be one of the following:

ASTM C 150 Type II or V; Class C fly ash shall not be substituted for cement.

ASTM C 595 Type IP(MS) or IP(HS).

ASTM C 1157 Type MS or HS; Class C fly ash shall not be substituted for cement.

When ASTM C 150 Type III cement is allowed, as in Class E concrete, it shall have no
more than 8 percent C3A. Class C fly ash shall not be substituted for cement.

ASTM C 595 Type IL; having less than 0.10 percent expansion at 6 months when tested
according to ASTM C 1012. Class C fly ash shall not be substituted for cement.

ASTM C 595 Type IT; having less than 0.10 percent expansion at 6 months when
tested according to ASTM C 1012.

Class 2 requirements for sulfate resistance shall be one of the following:

ASTM C 150 Type V with a minimum of a 20 percent substitution of Class F fly ash by
weight

ASTM C 150 Type II or III with a minimum of a 20 percent substitution of Class F fly ash
by weight. The Type II or III cement shall have no more than 0.040 percent expansion at
14 days when tested according ASTM C 452.

ASTM C 1157 Type HS; Class C fly ash shall not be substituted for cement.

ASTM C 150 Type II, III, or V plus High-Reactivity Pozzolan where the blend has less
than 0.05 percent expansion at 6 months or 0.10 percent expansion at 12 months when
tested according to ASTM C 1012

REVISION OF SECTIONS 601 AND 701
CEMENTS AND POZZOLANS

ASTM C 1157 Type MS plus Class F fly ash or High-Reactivity Pozzolan where the blend has less
than 0.05 percent expansion at 6 months or 0.10 percent expansion at 12 months when tested according to ASTM C 1012

A blend of portland cement meeting ASTM C 150 Type II or III with a minimum of 20
percent Class F fly ash by weight, where the blend has less than 0.05 percent
expansion at 6 months or 0.10 percent expansion at 12 months when tested according
to ASTM C 1012.

ASTM C 595 Type IP(HS).

ASTM C 595 Type IL plus Class F fly ash or High-Reactivity Pozzolan where the blend has less than 0.05 percent expansion at 6 months or 0.10 percent expansion at 12 months when tested according to ASTM C 1012.

ASTM C 595 Type IT; having less than 0.05 percent expansion at 6 months or 0.10 percent expansion at 12 months when tested according to ASTM C 1012.

Class 3 requirements for sulfate resistance shall be one of the following:

A blend of portland cement meeting ASTM C 150 Type II, III, or V with a minimum of a 20 percent substitution of Class F fly ash by weight, where the blend has less than 0.10 percent expansion at 18 months when tested according to ASTM C 1012.

ASTM C 1157 Type HS having less than 0.10 percent expansion at 18 months when tested according to ASTM C 1012. Class C fly ash shall not be substituted for cement.

ASTM C 1157 Type MS or HS plus Class F fly ash or High-Reactivity Pozzolan where the blend has less than 0.10 percent expansion at 18 months when tested according to ASTM C 1012.

ASTM C 150 Type II, III, or V plus High-Reactivity Pozzolan where the blend has less than 0.10 percent expansion at 18 months when tested according to ASTM C 1012.

ASTM C 595 Type 1L plus High-Reactivity Pozzolan where the blend has less than 0.10 percent expansion at 18 months when tested according to ASTM C 1012.

ASTM C 595 Type IP(HS) or IT having less than 0.10 percent expansion at 18 months when tested according to ASTM C 1012.

When fly ash or High-Reactivity Pozzolan is used to enhance sulfate resistance, it shall be used in a proportion greater than or equal to the proportion tested in accordance to ASTM C1012, shall be the same source and it shall have a calcium oxide content no more than 2.0 percent greater than the fly ash or High-Reactivity Pozzolan tested according to ASTM C 1012.

In subsection 601.05 delete the first paragraph and replace with the following:
601.05 Proportioning. The Contractor shall submit a Concrete Mix Design for each class of concrete being placed on the project. Concrete shall not be placed on the project before the Concrete Mix Design Report has been reviewed and approved by the Engineer. The Concrete Mix Design will be reviewed and approved following the procedures of CP 62. The Concrete Mix Design will not be approved when the laboratory trial mix data are the results from tests performed more than two years in the past or aggregate data are the results from tests performed more than two years in the past. The concrete mix design shall show the weights and sources of all ingredients including cement, pozzolan, aggregates, water, additives and the water to cementitious material ratio (w/cm). When determining the w/cm, the weight of cementitious material (cm) shall be the sum of the weights of the cement, fly ash, silica fume and High-Reactivity Pozzolan.

In subsection 601.05, delete the 12th, 13th, 14th, 15th, and 16th paragraphs and replace with the following:

The Concrete Mix Design Report shall include Certified Test Reports showing that the cement, fly ash, High-Reactivity Pozzolan and silica fume meet the specification requirements and supporting this statement with actual test results. The certification for silica fume shall state the solids content if the silica fume admixture is furnished as slurry.

For all concrete mix designs with ASTM C150 cements, up to a maximum of 20 percent Class C, 30 percent Class F or 30 percent High-Reactivity Pozzolan by weight of total cementitious material may be substituted for cement.

For all concrete mix designs with ASTM C595 Type IL cements, up to a maximum of 20 percent Class C, 30 percent Class F or 30 percent High-Reactivity Pozzolan by weight of total cementitious material may be substituted for cement.

For all concrete mix designs with ASTM C595 Type IP, IP(MS), IP(HS) or IT cements; fly ash or High-Reactivity Pozzolan shall not be substituted for cement.

For all concrete mix designs with ASTM C1157 cements, the total pozzolan content including pozzolan in cement shall not exceed 30 percent by weight of the cementitious material content.

When the Contractor’s use of fly ash or High-Reactivity Pozzolan results in delays to the project, when it is necessary to make changes in admixture quantities, the source, or the Contractor performs , the cost of such delays and corrective actions shall be borne by the Contractor.

The Contractor shall submit a new Concrete Mix Design Report meeting the above requirements when a change occurs in the source, type, or proportions of cement, fly
ash, High-Reactivity Pozzolan, silica fume or aggregate. When a change occurs in the source of approved admixtures, the Contractor shall submit a letter stamped by the Concrete Mix Design Engineer approving the changes to the existing mix design. The change will need to be approved by the Engineer prior to use.

In subsection 601.06, second paragraph, delete (9) and replace with the following:

(9) Type, brand, and amount of cement, fly ash and High-Reactivity Pozzolan

**REVISION OF SECTIONS 601 AND 701 CEMENTS AND POZZOLANS**

In subsection 601.06, delete (a) and replace with the following:

*Portland Cement, Fly Ash, High-Reactivity Pozzolan and Silica Fume.* These materials may be sacked or bulk. No fraction of a sack shall be used in a batch of concrete unless the material is weighed.

All bulk cement shall be weighed on an approved weighing device. The bulk cement weighing hopper shall be sealed and vented to preclude dusting during operation. The discharge chute shall be so arranged that cement will not lodge in it or leak from it.

Separate storage and handling equipment shall be provided for the fly ash, silica fume and High-Reactivity Pozzolan. The fly ash, silica fume, and High-Reactivity Pozzolan may be weighed in the cement hopper and discharged with the cement.

In subsection 701.01 delete and replace the second paragraph with the following:

All concrete, including precast, prestressed and pipe shall be constructed with one of the following hydraulic cements, unless permitted otherwise.

- ASTM C 150 Type I
- ASTM C 150 Type II
- ASTM C 150 Type V
- ASTM C 595 Type IL
- ASTM C 595 Type IP
- ASTM C 595 Type IP(MS)
- ASTM C 595 Type IP(HS)
- ASTM C 1157 Type GU, consisting of no more than 15 percent limestone
- ASTM C 1157 Type MS, consisting of no more than 15 percent limestone
- ASTM C 1157 Type HS, consisting of no more than 15 percent limestone

In subsection 701.02 add the following after the first paragraph:

Blending of pozzolans according to ASTM D5370 is permitted to meet the requirements of ASTM C 618.
Add subsection 701.04 immediately following subsection 701.03 as follows:

**701.04 High-Reactivity Pozzolans.** High-Reactivity Pozzolans (HRP) shall conform to the requirements of AASHTO M321. HRPs are but not limited to metakaolin, rice hull ash, zirconium fume, ultra-fine fly ash, and fume from the production of 50 percent ferrosilicon (with SiO2 less than 85 percent).

HRPs shall meet the following optional requirement of AASHTO M321: The sulfate expansion at 14 days shall not exceed 0.045 percent.

HRP shall be from a preapproved source listed on the Department’s Approved Products List. The HRP intended for use on the project shall have been tested and accepted prior to its use. Certified Test Reports showing that the HRP meets the specification requirements and supporting this statement with actual test results shall be submitted to the Engineer.

The HRP shall be subject to sampling and testing by the Department. Test results that do not meet the physical and chemical requirements may result in the suspension of the use of HRP until the corrections necessary have been taken to ensure that the material conforms to the specifications.

**REVISION OF SECTIONS 601 AND 711**

**LIQUID MEMBRANE-FORMING COMPOUNDS FOR CURING CONCRETE**

Sections 601 and 711 of the Standard Specifications are hereby revised for this project as follows:

In subsection 601.13 (b), first paragraph, delete the second sentence and replace with the following:

A volatile organic content (VOC) compliant curing compound conforming to ASTM C 309, Type 2 shall be used on surfaces where curing compound is allowed, except that Type 1 curing compound shall be used on exposed aggregate or colored concrete, or when directed by the Engineer.

Delete subsection 711.01 and replace with the following:

**711.01 Curing Materials.** Curing materials shall conform to the following requirements:

<table>
<thead>
<tr>
<th>Material</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burlap Cloth made from Jute or Kenaf</td>
<td>AASHTO M 182</td>
</tr>
<tr>
<td>Liquid Membrane-Forming Compounds for Curing Concrete</td>
<td>ASTM C 309</td>
</tr>
<tr>
<td>Sheet Materials for Curing Concrete</td>
<td>AASHTO M 171*</td>
</tr>
</tbody>
</table>

*Only the performance requirements of AASHTO M171 shall apply.*
CITY OF COLORADO SPRINGS

Straw used for curing shall consist of threshed straw of oats, barley, wheat, or rye. Clean field or marsh hay may be substituted for straw when approved by the Engineer. Old dry straw or hay which breaks readily in the spreading process will not be accepted.

**REVISION OF SECTION 601**
**CONCRETE BATCHING**

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

In subsection 601.06, delete (13) and (17) and replace with the following:

(13) Gallons of water added by truck operator, the time the water was added and the quantity of concrete in the truck each time water is added.

(17) Water to cementitious material ratio.

**REVISION OF SECTION 601**
**CONCRETE FINISHING**

Section 601 of the Standard Specifications are hereby revised for this project as follows:

In subsection 601.12 (a) delete the fifth paragraph and replace it with the following:

Water shall not be added to the surface of the concrete to assist in finishing operations.

Hand finishing should be minimized wherever possible. The hand finishing methods shall be addressed in the Quality Control Plan for concrete finishing. Hand finished concrete shall be struck off and screeded with a portable screed that is at least 2 feet longer than the maximum width of the surface to be struck off. It shall be sufficiently rigid to retain its shape. Concrete shall be thoroughly consolidated by hand vibrators. Hand finishing shall not be allowed after concrete has been in-place for more than 30 minutes or when initial set has begun. Finishing tools made of aluminum shall not be used.

The Contractor shall provide a Quality Control Plan (QCP) to ensure that proper hand finishing is accomplished in accordance with current Industry standards. It shall identify the Contractor’s method for ensuring that the provisions of the QCP are met. The QCP shall be submitted to the Engineer at the Preconstruction Conference. Concrete placement shall not begin until the Engineer has approved the QCP. The QCP shall identify and address issues affecting the quality finished concrete including but not limited to:

- Timing of hand finishing operations
- Methodology to place and transport concrete
- Equipment and tools to be utilized
- Qualifications and training of finishers and supervisors
When the Engineer determines that any element of the approved QCP is not being implemented or that hand finished concrete is unacceptable, work shall be suspended. The Contractor shall supply a written plan to address improperly placed material and how to remedy future hand finishing failures and bring the work into compliance with the QCP. The Engineer will review the plan for acceptability prior to authorizing the resumption of operations.

In subsection 601.14(a) delete the fourth paragraph.

REVISION OF SECTION 601
CONCRETE SLUMP ACCEPTANCE

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

Delete the fifth paragraph of Subsection 601.05 and replace with the following:

Except for Class BZ concrete, the slump of the delivered concrete shall be the slump of the approved concrete mix design plus or minus 2.0 inch. The laboratory trial mix must produce an average compressive strength at least 115 percent of the required field compressive strength specified in Table 601-1. When entrained air is specified in the Contract for Class BZ concrete, the trial mix shall be run with the required air content.

Delete Subsection 601.17 (b), 601.17 (d) and Table 601-3 and replace with the following:

*Slump.* Slump acceptance, but not rejection, may be visually determined by the Engineer. Any batch that exceeds the slump of the approved concrete mix design by 2.0 inches will be retested. If the slump is exceeded a second time, that load is rejected. If the slump is greater than 2 inches lower than the approved concrete mix design, the load can be adjusted with a water reducer, or by adding water (if the w/cm allows) and retested. Portions of loads incorporated into structures prior to determining test results which indicate rejection as the correct course of action shall be subject to reduced payment or removal as determined by the Engineer.

*Pay Factors.* The pay factor for concrete which is allowed to remain in place at a reduced price shall be according to Table 601-3 and shall be applied to the unit price bid for Item 601, Structural Concrete.

If deviations occur in air content and strength within the same batch, the pay factor for the batch shall be the product of the individual pay factors.
### Table 601-3
**PAY FACTORS**

<table>
<thead>
<tr>
<th>Deviations From Specified Air (Percent)</th>
<th>Pay Factor (Percent)</th>
<th>Below Specified Strength (psi) [ &lt; 4500 psi Concrete]</th>
<th>Pay Factor (Percent)</th>
<th>Below Specified Strength (psi) [ ≥ 4500 psi Concrete]</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0-0.2</td>
<td>98</td>
<td>1-100</td>
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<td>1-100</td>
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<td>501-600</td>
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<td>15</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Reject</td>
<td>Over 1000</td>
<td></td>
</tr>
</tbody>
</table>
REVISION OF SECTION 603
CULVERT PIPE INSPECTION

Section 603 of the Standard Specifications is hereby revised for this project as follows: Delete the first paragraph of subsection 603.09 and replace with the following:

603.09 Backfilling. After the conduit or section of conduit is placed, it shall be inspected before any backfill is placed. Reinforced concrete pipe (RCP) shall be visually inspected in accordance with AASHTO LRFD Bridge Construction Specifications, Section 27.6. Conduit found to be damaged shall be replaced, and conduit found to be out of alignment or unduly settled shall be taken up and relaid. The trench shall then be backfilled with material in accordance with Section 206.

REVISION OF SECTION 625
CONSTRUCTION SURVEYING

Section 625 of the CDOT Standard Specifications for Road and Bridge Construction is hereby revised for this project as follows:

Subsection 625.02 shall be revised as follows:

Delete the last paragraph (one sentence) and replace with the following: Traffic Control shall be in accordance with the requirements of Section 800 of the City of Colorado Springs Engineering Division Standards Specifications and Revision of Section 800, Work Zone Traffic Control.

Subsection 625.04 shall be revised as follows:

The following sentence shall be added and become the first sentence of the second paragraph: Construction Surveying shall complete a check of the survey control provided in the plans and provide data to the Engineer that both confirms the check and identifies any issues or discrepancies between the check and the plans.

REVISION OF SECTION 703
CONCRETE AGGREGATES

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

Delete the second paragraph of subsection 703.00 and Table 703-1.

Delete subsections 703.01 and 703.02 and replace with the following:

703.01 Fine Aggregate for Concrete. Fine aggregate for concrete shall conform to the requirements of AASHTO M 6, Class A. The minimum sand equivalent, as tested in accordance with Colorado Procedure 37 shall be 80 unless otherwise specified. The
fineness modulus, as determined by AASHTO T 27, shall not be less than 2.50 or
greater than 3.50 unless otherwise approved.

**703.02 Coarse Aggregate for Concrete.** Coarse aggregate for concrete shall conform
to the requirements of AASHTO M 80, Class A aggregates, except that the percentage
of wear shall not exceed 45 when tested in accordance with AASHTO T 96.

**REVISION OF SECTION 712**
**WATER FOR MIXING OR CURING CONCRETE**

Section 712 of the Standard Specifications is hereby revised for this project as follows:

Delete subsection 712.01 and replace it with the following:

**712.01 Water.** Water used in mixing or curing concrete shall be reasonably clean and
free of oil, salt, acid, alkali, sugar, vegetation, or other substance injurious to the
finished product. Concrete mixing water shall meet the requirements of ASTM C1602.
The Contractor shall perform and submit tests to the Engineer at the frequencies listed
in ASTM C1602. Potable water may be used without testing. Where the source of
water is relatively shallow, the intake shall be so enclosed as to exclude silt, mud, grass,
and other foreign materials.

**REVISION OF SECTION 712**
**GEOTEXTILES**

Section 712 of the Standard Specifications is hereby revised for this project as follows:
In subsection 712.08, delete the third and fourth paragraphs and replace with the
following:

Physical requirements for all geotextiles shall conform to the requirements of AASHTO
M-288. Materials shall be selected from the New York Department of Transportation’s
Approved Products List of Geosynthetic materials that meet the National Transportation
Product Evaluation Program (NTPEP) and AASHTO M-288 testing requirements. The
current list of products that meet these requirements is located at:

www.dot.ny.gov

The Geotextile Approved Products List may be accessed by clicking on the following
tabs once on the NYDOT site to:
A To Z Site Index
Approved List
Approved Products
Materials and Equipment
Geosynthetics for Highway Construction
Geotextiles
In subsection 712.08, delete Table 712-2 and replace with the following

Table 712-2
TYPICAL VALUES OF PERMEABILITY COEFFICIENTS

<table>
<thead>
<tr>
<th>Turbulent Flow, Particle Size Range</th>
<th>Effective Size</th>
<th>Permeability Coefficient $k$</th>
<th>Turbulent Flow, Particle Size Range</th>
<th>Effective Size</th>
<th>Permeability Coefficient $k$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Millimeters (inches)</td>
<td>D max</td>
<td>D min</td>
<td>D 20 mm (inches)</td>
<td>Millimeters (inches)</td>
<td>D max</td>
</tr>
<tr>
<td>Turbulent Flow</td>
<td></td>
<td></td>
<td></td>
<td>D max</td>
<td>D min</td>
</tr>
<tr>
<td>Derrick STONE</td>
<td>3000  (120)</td>
<td>900  (36)</td>
<td>1200 (48)</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>One-man STONE</td>
<td>300  (12)</td>
<td>100  (4)</td>
<td>150 (6)</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Clean, fine to coarse GRAVEL</td>
<td>80  (3)</td>
<td>10  (¼)</td>
<td>13  (½)</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Fine, uniform GRAVEL</td>
<td>8  (¾)</td>
<td>1.5  (1/16)</td>
<td>3  (¾)</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Very coarse, clean, uniform SAND</td>
<td>3  (¾)</td>
<td>0.8  (1/32)</td>
<td>1.5  (1/16)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Laminar Flow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uniform, coarse SAND</td>
<td>2  (¾)</td>
<td>0.5  (1/64)</td>
<td>0.6</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>Uniform, medium SAND</td>
<td>0.5</td>
<td>0.25</td>
<td>0.3</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Clean, well-graded SAND &amp; GRAVEL</td>
<td>10</td>
<td>0.05</td>
<td>0.1</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>Uniform, fine SAND</td>
<td>0.25</td>
<td>0.05</td>
<td>0.06</td>
<td>$4 \times 10^{-4}$</td>
<td></td>
</tr>
<tr>
<td>Well-graded, silty SAND &amp; GRAVEL</td>
<td>5</td>
<td>0.01</td>
<td>0.02</td>
<td>$4 \times 10^{-4}$</td>
<td></td>
</tr>
<tr>
<td>Silty SAND</td>
<td>2</td>
<td>0.005</td>
<td>0.01</td>
<td>$1.0 \times 10^{-4}$</td>
<td></td>
</tr>
<tr>
<td>Uniform SILT</td>
<td>0.05</td>
<td>0.005</td>
<td>0.006</td>
<td>$0.5 \times 10^{-4}$</td>
<td></td>
</tr>
<tr>
<td>Sandy CLAY</td>
<td>1.0</td>
<td>0.001</td>
<td>0.002</td>
<td>$0.05 \times 10^{-4}$</td>
<td></td>
</tr>
<tr>
<td>Silty CLAY</td>
<td>0.05</td>
<td>0.001</td>
<td>0.0015</td>
<td>$0.01 \times 10^{-4}$</td>
<td></td>
</tr>
<tr>
<td>CLAY (30% to 50% clay sizes)</td>
<td>0.05</td>
<td>0.0005</td>
<td>0.0008</td>
<td>$0.001 \times 10^{-4}$</td>
<td></td>
</tr>
<tr>
<td>Colloidal CLAY (-2 μm 50%)</td>
<td>0.01</td>
<td>10</td>
<td>40</td>
<td>$10^{-9}$</td>
<td></td>
</tr>
</tbody>
</table>


Note: Since the permeability coefficient of the soil will be unknown in most non-critical, non-severe applications for erosion control and drainage, the soil-permeability coefficients listed in Table 712-2 may be used as a guide for comparing the permeability coefficient of the fabric with that of the in-place soil.
F.1 MEASUREMENT OF PAY QUANTITIES

The Contractor shall make all measurements and determine all quantities and amount of work done under the Contract, subject to approval by the Engineer. At the time measurements are made for quantity determinations, the Engineer or his authorized assistant shall be present to verify such measurements. From quantity figures so ascertained, it will be the Contractor’s responsibility to prepare a monthly periodical estimate of the work accomplished to date. This estimate shall be submitted to the Engineer each month for his review and check no later than the date established at the preconstruction conference. The form of such monthly estimates is to be subject to the approval of the Engineer.

No measurement will be made for:

Work performed or materials placed outside of line indicated in the plans or established by the Engineer.

Materials wasted, used, or disposed of in manner not called for under the contract. Rejected materials, (including materials rejected after it has been placed, if the rejection is due to the Contractor’s failure to comply with the provisions of the contract).

Hauling and disposal of rejected materials.

Materials on hand after completion of the work.

Any other work or material when payment is contrary to any provision of the contract.

All incidental costs necessary for proper performance of the work.

F.2 ESTIMATED QUANTITIES

The estimated quantities shown in the Bid Form are estimates only, being given only as the basis for comparison of the bids, and the City does not warrant, expressly or by implication, that the actual amount of work will correspond therewith. The right to increase or decrease the amount of any class or portion of the work, or to make changes in the work required as may be deemed necessary, is reserved by the City as provided elsewhere in these specifications. The basis of payment will be the actual unit bid items of work performed and measured in accordance with the contract. All prospective bidders should note that certain bid items may be included in the Bid Form to establish a unit price should the use of those items become necessary during
construction. Allowance will not be made for loss of anticipated profits of additional compensation should the use of these items be deemed unnecessary.

**F.3 PAYMENT FOR LUMP SUM ITEMS**

Measurement shall be for work actually completed.

**F.4 PAYMENT FOR MATERIAL ON HAND**

Partial payments may be made on monthly estimates to the extent of 90 percent of the cost of materials not yet incorporated in the completed work, if the materials conform to the following requirements:

A. Meet the requirements of the Contract based upon inspections or testing by the Engineer

B. Are delivered to or stockpiled in the vicinity of the project or other storage site(s) specifically approved by the Engineer

C. Are properly stored, protected, and insured as to loss, damage, and title.

Material delivered to an off-site storage facility will be considered for partial payment only if:

The storage site has been approved by the Engineer.

The off-site storage of materials is required for more than thirty calendar days.

The material is tagged, labeled, or otherwise identified as belonging to the project.

The cost of transportation to the site is provided for in advance.

The cost of the material on hand will be determined by written evidence supplied by the Contractor in sufficient detail as will permit the Engineer to determine the Contractor’s actual cost of the materials. The Contractor shall furnish the Engineer with an invoice prior to the progress payment.

**F.5 DESCRIPTION AND PAYMENT**

Payment will be made only for those items listed in the Bid Form. All other items required for the work shall be considered incidental to the construction.
F.6 BASE BID ITEM DESCRIPTIONS

Bid Item No. 1: Mobilization (LS)

a. Measurement

Payment will be according to the following schedule:

When 5% of the original contract amount is earned, 20% of the amount bid for mobilization will be paid.
When 20% of the original contract amount is earned, 50% of the amount bid for mobilization will be paid.
When 35% of the original contract amount is earned, 60% of the amount bid for mobilization will be paid.
When 75% of the original contract amount is earned, 100% of the amount bid for mobilization will be paid.

The total sum of all payments shall not exceed the original contract amount bid for the item, regardless of the fact that the Contractor may have, for any reason, shut down the work on the project or moved equipment away from the project and then back again.

Mobilization shall be in accordance with Section 626 of the CDOT Standard Specifications for Road and Bridge Construction.

b. Payment

Payment shall be made at the applicable contract lump sum price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for mobilization shall include, but is not limited to, full compensation for all labor, equipment, tools and materials necessary to mobilize; prepare the project staging area, including, potholing; cleaning up of site; establishment of sanitary facilities; installation of project construction signs; permitting; and all other costs incurred or labor and operations which must be performed prior to beginning the other items under the contract. Payment shall also include Contractor public relations management and responsibilities, including coordination and regular communications with or notifications to local businesses, property owners, and residences about construction activities that will affect them, project progress, addressing their concerns, etc.

Bid Item No. 2: Clearing & Grubbing (LS)

a. Measurement

The quantity of Clearing & Grubbing to be paid for shall be one lump sum for, grubbing and removing and disposing of vegetation and debris within the limits of the work accepted by the Engineer as complying with the plans and specifications.
Clearing & Grubbing shall be in accordance with Section 220 of the City of Colorado Springs Engineering Division Standard Specifications and with the Revision of Section 220 – Removal of Structures and Obstructions.

b. Payment

Payment shall be made at the applicable contract lump sum price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for removal of trees complying with the plans and specifications and shall be paid for under its own bid item.

Bid Item No. 3: Removal of Asphalt Mat (SY)

a. Measurement

The quantity of Removal of Asphalt Mat to be paid for shall be determined by measurement of the number of square yards of material actually removed, disposed of and accepted by the Engineer as complying with the plans and specifications.

Removal of Asphalt Mat shall be in accordance with Section 220 of the City of Colorado Springs Engineering Division Standard Specifications and with the Revision of Section 220 – Removal of Structures and Obstructions included in these specifications.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for removal of asphalt mat shall include removal, full depth saw cutting of existing asphalt mat prior to removal, removal of asphalt mat, hauling, and off-site disposal of asphalt mat material. Areas of existing asphalt pavements shall be removed to full depth as required to the lines and grades indicated in the plans. Excavation required to complete the work shall be performed in accordance with Section 200 of the City of Colorado Springs Engineering Division Standard Specifications, and will not be paid for separately, but shall be included in the related bid item necessary to complete the work.

Bid Item No. 4: Removal of Concrete Curb and Gutter (LF)

a. Measurement

The quantity of Removal of Curb and Gutter to be paid for shall be determined by measurement of the number of lineal feet of actually removed and accepted by the Engineer as complying with the plans and specifications.
Removal of Curb and Gutter shall be in accordance with Section 220.05 of the City of Colorado Springs Engineering Division Standard Specifications and with the Revision of Section 220.05 – Removal of Pavements, Sidewalks, Curbs, etc., included in these specifications.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for Removal of Curb and Gutter shall include the removal and offsite disposal of all Curb and Gutter material.

**Bid Item No. 5: Removal of Concrete Sidewalk (SY)**

a. Measurement

The quantity of Removal of Concrete Sidewalk to be paid for shall be determined by measurement of the number of square yards of material actually removed, disposed of and accepted by the Engineer as complying with the plans and specifications.

Removal of Concrete Sidewalk shall be in accordance with Section 220 of the City of Colorado Springs Engineering Division Standard Specifications and with the Revision of Section 220 – Removal of Structures and Obstructions included in these specifications.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for Removal of Concrete Sidewalk shall include saw cutting, removal, hauling, and off-site disposal of existing sidewalk material. Any excavation required to complete the work shall be performed in accordance with Section 200 of the City of Colorado Springs Engineering Division Standard Specifications, and will not be paid for separately, but shall be included in the related bid item.

**Bid Item No. 6: Removal of Concrete Curb Ramp (SY)**

a. Measurement

The quantity of Removal of Concrete Curb Ramp to be paid for shall be determined by measurement of the number of square yards of material actually removed, disposed of and accepted by the Engineer as complying with the plans and specifications.

Removal of Concrete Curb Ramp shall be in accordance with Section 220 of the City of Colorado Springs Engineering Division Standard Specifications and with the Revision of Section 220 – Removal of Structures and Obstructions included in these specifications.
b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for Removal of Concrete Curb Ramp shall include saw cutting, removal, hauling, and off-site disposal of existing ramp material. Any excavation required to complete the work shall be performed in accordance with Section 200 of the City of Colorado Springs Engineering Division Standard Specifications, and will not be paid for separately, but shall be included in the related bid item.

**Bid Item No. 7: Removal of Concrete/Asphalt Driveway (SY)**

a. Measurement

The quantity of Removal of Concrete/Asphalt Driveway to be paid for shall be determined by measurement of the square yards of items of concrete driveway actually removed, completed and accepted by the Engineer as complying with the plans and specifications.

Removal of Concrete/Asphalt Driveway shall be in accordance with Section 240 of the City of Colorado Springs Engineering Division Standard Specifications and with the Revision of Section 240 – Reset Structures.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for Removal of Concrete/Asphalt Driveway shall include the removal and off-site disposal of unusable material.

**Bid Item No. 8: Removal of Concrete Pan (LF)**

a. Measurement

The quantity of Removal of Concrete Pan to be paid for shall be determined by measurement of the number of lineal feet of actually removed and accepted by the Engineer as complying with the plans and specifications.

Removal of Concrete Pan shall be in accordance with Section 220 of the City of Colorado Springs Engineering Division Standard Specifications and with the Revision of Section 220.05 – Removal of Pavements, Sidewalks, Curbs, etc., included in these specifications.
b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for Removal of Concrete Pan shall include the removal and offsite disposal of all pan material.

**Bid Item No. 9: Removal of Structure (EA)**

a. Measurement

The quantity of Removal of Structure to be paid for shall be determined by measurement of the number of structures (including inlets, manholes) actually removed and accepted by the Engineer as complying with the plans and specifications.

Removal of Structure shall be in accordance with Section 220.03 of the City of Colorado Springs Engineering Division Standard Specifications and with the Revision of Section 220.03 – Removal of Bridges, Culverts, and Other Drainage Structures, etc., included in these specifications.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and protect existing utilities as shown on the plans, plan detail sheets or described in the project specifications necessary to complete the work. Payment for Removal of Structure shall include the removal and offsite disposal of all removed curb inlet material.

**Bid Item No. 10: Removal of Pipe (18-inch) (LF)**

a. Measurement

The quantity of Removal of Pipe to be paid for shall be determined by measurement of the number of lineal feet of actually removed and accepted by the Engineer as complying with the plans and specifications.

Removal of Pipe shall be in accordance with Section 220 of the City of Colorado Springs Engineering Division Standard Specifications and with the Revision of Section 220.05 – Removal of Pavements, Sidewalks, Curbs, etc., included in these specifications.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and protect existing utilities as shown on the plans, plan detail sheets or described in the project specifications.
necessary to complete the work. Payment for Removal of Pipe shall include the removal and offsite disposal of all pipe material.

**Bid Item No. 11: Abandon Pipe (EA)**

a. Measurement

The quantity of Abandon Pipe to be paid for shall be determined by measurement of the number of pipes of actually plugged and abandoned and accepted by the Engineer as complying with the plans and specifications.

Abandon Pipe shall be in accordance with Section 220 of the City of Colorado Springs Engineering Division Standard Specifications. Per section 220.02, ends of culverts shall be filled with concrete or a concrete plug, a minimum length of 9 inches (1/2 of the pipe diameter).

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

**Bid Item No. 12: Removal of Tree (EA)**

a. Measurement

The quantity of Removal of Tree shall be paid per each for the designated trees removed, disposed of and accepted by the Engineer as complying with the plans and specifications. Payment will be made for trees of trunk diameter over 3-Inch in diameter. Removal of all remaining trees and brushes shall be considered incidental shall be included in the cost of the item Clearing & Grubbing. The Contractor shall be responsible for visiting the site and determining the overall effort that is necessary to complete the work.

Removal of Tree shall be in accordance with Section 220 of the City of Colorado Springs Engineering Division Standard Specifications and with the Revision of Section 220 – Removal of Structures and Obstructions included in these specifications.

b. Payment

Payment shall be made for each removed tree and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for removal of trees shall include the cutting, removal, hauling, and off-site disposal of the designated trees.
**Bid Item No. 13: Remove and Replace Fence (Chain Link, 6 ft) (LS)**

a. **Measurement**

The quantity of Remove and Replace Fence (Chain Link) to be paid for shall be one lump sum for removal of the existing fence, replace of new 6 ft chain link fence, and new 6 ft man gate, within the limits of work accepted by the Engineer as complying with the plans and specifications.

Remove and Replace Fence (Chain Link) shall be in accordance with Section 220 of the City of Colorado Springs Engineering Division Standard Specifications and with the Revision of Section 220 – Remove of Structures and Obstructions included in these specifications.

b. **Payment**

Payment shall be made at the applicable contract lump sum for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for Remove and Replace Fence (Chain Link) shall include the removal and replacement all fencing material, including new 4 foot wide man-gate as required to accommodate construction activities.

**Bid Item No. 14: Remove and Reset Sign (EA)**

a. **Measurement**

The quantity of Remove and Reset Sign to be paid for each of the designated signs actually removed and accepted by the Engineer as complying with the plans and specifications.

Remove and Reset Sign shall be in accordance with Section 220 of the City of Colorado Springs Engineering Division Standard Specifications and with the Revision of Section 220 – Remove of Structures and Obstructions included in these specifications.

b. **Payment**

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for Remove and Reset Sign shall include the removal and replacement all sign material required to accommodate construction activities.
Bid Item No. 15: Pipe (18 Inch) (Complete in Place) (LF)

a. Measurement

The quantity of Pipe (18 Inch) to be paid for shall be determined by measurement of the number linear feet of Storm Drain Pipe (18 Inch) actually completed and accepted by the Engineer as complying with the plans and specifications.

Pipe (18 Inch) shall be in accordance with Section 635.01 and 635.04C of the City of Colorado Springs Engineering Division Standard Specifications.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to install Pipe (18 Inch) and protect existing utilities as shown on the plans, plan detail sheets or described in the project specifications. Any structure excavation and backfill required to complete the work shall be performed in accordance with Section 206 of the CDOT Standard Specifications for Road and Bridge Construction, and will not be paid for separately, but shall be included in the related bid item.

Bid Item No. 16: Pipe (24 Inch) (Complete in Place) (LF)

a. Measurement

The quantity of Pipe (24 Inch) to be paid for shall be determined by measurement of the number linear feet of Storm Drain Pipe (24 Inch) actually completed and accepted by the Engineer as complying with the plans and specifications.

Pipe (24 Inch) shall be in accordance with Section 635.01 and 635.04C of the City of Colorado Springs Engineering Division Standard Specifications.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to install Pipe (24 Inch) and protect existing utilities as shown on the plans, plan detail sheets or described in the project specifications. Any structure excavation and backfill required to complete the work shall be performed in accordance with Section 206 of the CDOT Standard Specifications for Road and Bridge Construction, and will not be paid for separately, but shall be included in the related bid item.
Bid Item No. 17: Concrete End Section (24 inch) (EA)

a. Measurement

The quantity of Concrete End Section (24 inch) to be paid for shall be determined by measurement of the number of concrete end sections (24 inch) actually installed. Excavation and backfill for the end section will not be measured separately, but shall be included in the contract unit price for the concrete end section (24 inch).

Concrete end section (24 inch) shall be in accordance with Section 600 of the City of Colorado Springs Engineering Division Standard Specifications and with the City of Colorado Springs Standard Drawings.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to install concrete end section (24 inch) and protect existing utilities as shown on the plans, plan detail sheets or described in the project specifications. Except as otherwise indicated on the plans or in the specifications, all connecting devices will not be measured and paid for separately but shall be included in the work.

Bid Item No. 18: Type 16 Combination Single (5 foot depth) (EA)

a. Measurement

The quantity of Type 16 Combination Single (5 foot depth) to be paid for shall be determined by measurement of the number of Type 16 Combination Single Inlets (5 foot) actually installed. Excavation and backfill for the inlets will not be measured separately, but shall be included in the contract unit price for the Type 16 Combination Single (5 foot).

Type 16 Combination Single (5 foot) shall be in accordance with Section 600 of the City of Colorado Springs Engineering Division Standard Specifications and with the City of Colorado Springs Standard Drawings.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to install Type 16 Combination Single (5 foot) and protect existing utilities as shown on the plans, plan detail sheets or described in the project specifications. Except as otherwise indicated on the plans or in the specifications, all connecting devices will not be measured and paid for separately but shall be included in the work.
Bid Item No. 19: Type 16 Combination Single (10 foot depth) (EA)

a. Measurement

The quantity of Type 16 Combination Single (10 foot depth) to be paid for shall be determined by measurement of the number of Type 16 Combination Single (10 foot) actually installed. Excavation and backfill for the inlets will not be measured separately, but shall be included in the contract unit price for the Type 16 Combination Single (10 foot).

Type 16 Combination Single (10 foot) shall be in accordance with Section 600 of the City of Colorado Springs Engineering Division Standard Specifications and with the City of Colorado Springs Standard Drawings.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to install Type 16 Combination Single (10 foot) and protect existing utilities as shown on the plans, plan detail sheets or described in the project specifications. Except as otherwise indicated on the plans or in the specifications, all connecting devices will not be measured and paid for separately but shall be included in the work.

Bid Item No. 20: Type 16 Combination Double (5 foot depth) (EA)

a. Measurement

The quantity of Type 16 Combination Double (5 foot depth) to be paid for shall be determined by measurement of the number of Type 16 Combination (5 foot) actually installed. Excavation and backfill for the inlets will not be measured separately, but shall be included in the contract unit price for the Type 16 Combination Double (5 foot).

Type 16 Combination Double (5 foot) shall be in accordance with Section 600 of the City of Colorado Springs Engineering Division Standard Specifications and with the City of Colorado Springs Standard Drawings.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to install Type 16 Combination Double (5 foot) and protect existing utilities as shown on the plans, plan detail sheets or described in the project specifications. Except as otherwise indicated on the plans or in the specifications, all connecting devices will not be measured and paid for separately but shall be included in the work.
**Bid Item No. 21: Type 16 Combination Double (10 foot depth) (EA)**

a. **Measurement**

The quantity of Type 16 Combination Double (10 foot depth) to be paid for shall be determined by measurement of the number of Type 16 Combination (10 foot) actually installed. Excavation and backfill for the inlets will not be measured separately, but shall be included in the contract unit price for the Type 16 Combination Double (10 foot).

Type 16 Combination Double (10 foot) shall be in accordance with Section 600 of the City of Colorado Springs Engineering Division Standard Specifications and with the City of Colorado Springs Standard Drawings.

b. **Payment**

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to install Type 16 Combination Double (10 foot) as shown on the plans and specifications. Except as otherwise indicated on the plans or in the specifications, all connecting devices will not be measured and paid for separately but shall be included in the work.

**Bid Item No. 22: Type 16 Valley Single (5 foot depth) (EA)**

a. **Measurement**

The quantity of Type 16 Valley Single (5 foot depth) to be paid for shall be determined by measurement of the number of Type 16 Valley (5 foot) actually installed. Excavation and backfill for the inlets will not be measured separately, but shall be included in the contract unit price for the Type 16 Valley Single (5 foot).

Type 16 Valley Single (5 foot) shall be in accordance with Section 600 of the City of Colorado Springs Engineering Division Standard Specifications and with the City of Colorado Springs Standard Drawings.

b. **Payment**

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to install Type 16 Valley Single (5 foot) as shown on the plans and specifications. Except as otherwise indicated on the plans or in the specifications, all connecting devices will not be measured and paid for separately but shall be included in the work.
Bid Item No. 23: 4 Foot Diameter Manhole (10 Foot Depth) (EA)

a. Measurement

The quantity of 4 Foot Diameter Manhole (10 Foot Depth) to be paid for shall be determined by measurement of the number of 4 Foot Diameter Manhole (10 Foot) actually installed. Excavation and backfill for the manhole will not be measured separately, but shall be included in the contract unit price for the 4 Foot Diameter Manhole (10 Foot Depth).

4 Foot Diameter Manhole (10 Foot Depth) shall be in accordance with Section 600 of the City of Colorado Springs Engineering Division Standard Specifications and with the City of Colorado Springs Standard Drawings.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to install 4 Foot Diameter Manhole (10 Foot Depth) and protect existing utilities as shown on the plans, plan detail sheets or described in the project specifications. Except as otherwise indicated on the plans or in the specifications, all connecting devices will not be measured and paid for separately but shall be included in the work.

Bid Item No. 24: 6 Foot Diameter Manhole (10 Foot Depth) (EA)

a. Measurement

The quantity of 6 Foot Diameter Manhole (10 Foot Depth) to be paid for shall be determined by measurement of the number of 6 Foot Diameter Manhole (10 Foot) actually installed. Excavation and backfill for the manhole will not be measured separately, but shall be included in the contract unit price for the 6 Foot Diameter Manhole (10 Foot Depth).

6 Foot Diameter Manhole (10 Foot Depth) shall be in accordance with Section 600 of the City of Colorado Springs Engineering Division Standard Specifications and with the City of Colorado Springs Standard Drawings.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to install 6 Foot Diameter Manhole (10 Foot Depth) and protect existing utilities as shown on the plans, plan detail sheets or described in the project specifications. Except as otherwise indicated on the plans or in the specifications, all connecting devices will not be measured and paid for separately but shall be included in the work.
Bid Item No. 25: Aggregate Base Course (Class 6) (6 inches) (SY)

a. Measurement

The quantity of Aggregate Base Course (Class 6)(6 inches) to be paid for shall be determined by measurement of the number of square yards of aggregate base course material actually delivered, placed, and accepted by the Engineer as complying with the plans and specifications. Truck delivery tickets shall be submitted to the Engineer for quantity verification.

Aggregate Base Course (Class 6) (6 inches) shall be in accordance with Section 300 of the City of Colorado Springs Engineering Division Standard Specifications.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. This includes compaction and water, if needed.

Bid Item No. 26: Aggregate Base Course (Class 4) (4 inches) (SY)

a. Measurement

The quantity of Aggregate Base Course (Class 4)(4 inches) to be paid for shall be determined by measurement of the number of square yards of aggregate base course material actually delivered, placed, and accepted by the Engineer as complying with the plans and specifications. Truck delivery tickets shall be submitted to the Engineer for quantity verification.

Aggregate Base Course (Class 4)(4 inches) shall be in accordance with Section 300 of the City of Colorado Springs Engineering Division Standard Specifications.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. This includes compaction and water, if needed.

Bid Item No. 27: Asphalt Concrete Pavement (4-Inch) (SY)

a. Measurement

The quantity of Asphalt Concrete Pavement (4-Inch) to be paid for shall be determined by measurement of the number of square yards of material actually furnished, constructed, and accepted by the Engineer as complying with the plans and
specifications. Truck delivery tickets shall be submitted to the Engineer for quantity verification.

Asphalt Concrete Pavement (4-Inch) shall be in accordance with Section 400 of the City of Colorado Springs Engineering Division Standard Specifications and the Pikes Peak Region Asphalt Paving Specifications.

Tack coats of emulsified asphalt (slow setting) shall be applied as required for asphalt concrete pavement construction and shall be in accordance with Sections 400 and 410 of the City of Colorado Springs Engineering Division Standard Specifications and the Pikes Peak Region Asphalt Paving Specifications. However, tack coats of emulsified asphalt (slow setting) will not be measured for payment.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all materials; for preparation, mixing, delivery, placing and compaction of these materials; and for all labor, equipment, tools and incidentals necessary to complete the work. Payment shall also include all materials and work necessary to furnish and apply tack coats of emulsified asphalt (slow setting) as required for asphalt concrete pavement construction.

Bid Item No. 28: Concrete Sidewalk (4 inch) (SY)

a. Measurement

The quantity of Concrete Sidewalk (4 inch) to be paid for shall be determined by measurement of the number of square yards of sidewalk actually constructed and accepted by the Engineer as complying with the plans and specifications.

Concrete Sidewalk (4 inch) shall be in accordance with Section 500 of the City of Colorado Springs Engineering Division Standard Specifications.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for concrete sidewalk shall include all materials such as concrete, prepping of subgrade, setting of forms, finishing and curing of concrete, joints, and all other items of work involved in construction of concrete sidewalk that are not included in other bid items. Excavation required to complete the work shall be performed in accordance with Section 200 of the City of Colorado Springs Engineering Division Standard Specifications, and will not be paid for separately, but shall be included in the related bid item. Compacted Aggregate Base Course (Class 6) shall be used as approved by the Engineer for base material below concrete sidewalks and shall be paid for under its own bid item.
Bid Item No. 29: Curb and Gutter Type 1 (LF)

a. Measurement

The quantity of Curb and Gutter, Type 1 to be paid for shall be determined by measurement of the number of linear feet of Curb and Gutter, Type 1 actually constructed and accepted by the Engineer as complying with the plans and specifications. Curb and Gutter, Type 1 will be measured along the bottom/middle of the valley gutter. Deduction in length will be made for drainage structures, such as catch basins, drop inlets, etc., installed in the gutter.

Measurement will not be made for the variable concrete volume that is required for the bottom of the new variable thickness concrete pan/gutter to always extend a minimum of 6-Inch below the top of the adjacent existing concrete pavement, no matter the required height of the finished pan/gutter grade, so that a dowelled construction joint can be provided where required.

Curb and Gutter, Type 1 shall be in accordance with Section 500 of the City of Colorado Springs Engineering Division Standard Specifications and with the City of Colorado Springs Standard Drawings.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for Curb and Gutter, Type 1 shall include all materials such as concrete and dowel bars, forming and form removal, drilling and installation of dowel bars in adjacent existing concrete pavement, finishing and curing of concrete, contraction and expansion joints, grading, compaction, and all other items of work involved in construction of curb and gutter. Excavation required to complete the work shall be performed in accordance with Section 200 of the City of Colorado Springs Engineering Division Standard Specifications, and will not be paid for separately, but shall be included in the related bid item.

Bid Item No. 30: Concrete Driveway (SY)

a. Measurement

The quantity of Concrete Driveway to be paid for shall be determined by measurement of the number of square yards of concrete driveway actually constructed and accepted by the Engineer as complying with the plans and specifications.

Concrete Driveway shall be in accordance with Section 500 of the City of Colorado Springs Engineering Division Standard Specifications.
b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for concrete driveway shall include all materials such as concrete, prepping of subgrade, setting of forms, finishing and curing of concrete, joints, and all other items of work involved in construction of concrete driveway that are not included in other bid items. Excavation required to complete the work shall be performed in accordance with Section 200 of the City of Colorado Springs Engineering Division Standard Specifications, and will not be paid for separately, but shall be included in the related bid item. Compacted Aggregate Base Course (Class 6) shall be used as approved by the Engineer for base material below concrete driveways and shall be paid for under its own bid item.

Bid Item No. 31: Asphalt Driveway (SY)

a. Measurement

The quantity of Asphalt Driveway to be paid for shall be determined by measurement of the number of square yards of concrete driveway actually constructed and accepted by the Engineer as complying with the plans and specifications.

Asphalt Driveway shall be in accordance with Section 500 of the City of Colorado Springs Engineering Division Standard Specifications.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all materials; for preparation, mixing, delivery, placing and compaction of these materials; and for all labor, equipment, tools and incidentals necessary to complete the work. Payment shall also include all materials and work necessary to furnish and apply tack coats of emulsified asphalt (slow setting) as required for asphalt concrete pavement construction.

Bid Item No. 32: Gutter Type 2 (LF)

a. Measurement

The quantity of Gutter Type 2 to be paid for shall be determined by measurement of the number of linear feet of gutter actually constructed and accepted by the Engineer as complying with the plans and specifications. Gutter will be measured along the bottom of the face of the curb. Deduction in length will be made for drainage structures, such as catch basins, drop inlets, etc., installed in the curb and gutter.
Measurement will not be made for the variable concrete volume that is required for the bottom of the new variable thickness concrete pan/gutter to always extend a minimum of 6-Inch below the top of the adjacent existing concrete pavement, no matter the required height of the finished pan/gutter grade, so that a dowelled construction joint can be provided where required.

Gutter Type 2 shall be in accordance with Section 500 of the City of Colorado Springs Engineering Division Standard Specifications and with the City of Colorado Springs Standard Drawings.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for Gutter Type 2 shall include all materials such as concrete and dowel bars, forming and form removal, drilling and installation of dowel bars in adjacent existing concrete pavement, finishing and curing of concrete, contraction and expansion joints, grading, compaction, and all other items of work involved in construction of curb and gutter. Excavation required to complete the work shall be performed in accordance with Section 200 of the City of Colorado Springs Engineering Division Standard Specifications, and will not be paid for separately, but shall be included in the related bid item.

Bid Item No. 33: Concrete Curb Ramp (SY)

a. Measurement

The quantity of Concrete Curb Ramp to be paid for shall be determined by measurement of the number of square yards of concrete curb ramp actually constructed and accepted by the Engineer as complying with the plans and specifications.

Concrete Curb Ramp shall be in accordance with Section 500 of the City of Colorado Springs Engineering Division Standard Specifications.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for concrete curb ramp shall include all materials such as concrete, prepping of subgrade, setting of forms, finishing and curing of concrete, joints, and all other items of work involved in construction of concrete sidewalk that are not included in other bid items. Excavation required to complete the work shall be performed in accordance with Section 200 of the City of Colorado Springs Engineering Division Standard Specifications, and will not be paid for separately, but shall be included in the related bid item. Compacted Aggregate Base Course (Class 6) shall be
used as approved by the Engineer for base material below concrete sidewalks and shall be paid for under its own bid item.

**Bid Item No. 34: Riprap (9-Inch) (CY)**

a. Measurement

The quantity of Riprap (9-Inch) to be paid for shall be determined by measurement of the number of cubic yards of Riprap (9-Inch) actually constructed and accepted by the Engineer as complying with the plans and specifications.

Riprap (9-Inch) shall be in accordance with Section 624 of the City of Colorado Springs Engineering Division Standard Specifications.

b. Payment

Payments shall be made at the unit price set forth in the approved contract documents and shall be full compensation for all materials, tools, equipment and labor necessary to complete the work under this section in accordance with the approved contract documents and these specifications. Payment shall also include all filter and geotextile materials. Any excavation required to complete the work shall be performed in accordance with Section 200 of the City of Colorado Springs Engineering Division Standard Specifications and will not be paid for separately, but shall be included in the related bid item.

**Bid Item No. 35: Construction Surveying (LS)**

a. Measurement

Construction Surveying will not be measured, but will be paid for on a lump sum basis. Construction surveying shall include all items of work involved in conducting construction staking and surveying.

Construction Surveying shall be in accordance with Section 625 of the CDOT Standard Specifications for Road and Bridge Construction, with the Revision of Section 625 – Construction Surveying, and with Colorado Springs General Provisions 108 and Special Provision 8.17 – Staking Work.

b. Payment

Payment shall be made at the applicable contract lump sum price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work.

Payment for construction surveying will be the contract lump sum bid and will be full compensation for all surveying work necessary to complete the project as shown on the
plans, to include all resetting of stakes, marks, monuments Secondary and Primary Control points, and preparing supplemental or amended Project Control Diagrams.

Partial payment for construction surveying, as determined by the Engineer, will be made as the work progresses. The Contractor shall submit a schedule of estimated contractor construction surveying time as required on the Survey Tabulation Sheet before the first partial payment is made. Copies of the Survey Records for all completed survey work shall be submitted to the Engineer prior to payment of the monthly estimate.

Before final payment is made, the following two items shall be completed, bear the seal and signature of the responsible PLS or PE identified in subsection 625.01, and have copies submitted to the Engineer for review:

All survey records

Supplemental or amended Project Control Diagram (a copy of which shall be submitted to the Region Survey Coordinator)

**Bid Item No. 36: Work Zone Traffic Control and Trail Detour (LS)**

**a. Measurement**

Work Zone Traffic Control and Trail Detour will not be measured, but will be paid for on a lump sum basis for all temporary construction traffic control, fencing and signage actually furnished, implemented, maintained, and accepted by the Engineer as complying with the plans and specifications.

Work Zone Traffic Control shall be in accordance with the City of Colorado Springs Supplement to MUTCD for Traffic Controls for Street Construction, Utility Work, and Maintenance Operations; with Section 800 of the City of Colorado Springs Engineering Division Standard Specifications; and with the Revision of Section 800 – Work Zone Traffic Control. Trail Detour shall be approved by Engineer and City Parks, Recreation and Cultural Services prior to closure of trail.

**b. Payment**

Payment shall be made at the applicable contract lump sum price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for work zone traffic control shall include contractor preparation, submittals, revisions, permits, and full execution of all approved traffic control plans necessary to complete the project. Payment shall also include all Contractor provided traffic control devices, temporary barriers or attenuators, advanced signage, variable message signs, temporary pavement markings, temporary removal or covering of conflicting permanent signing and striping, flagging operations, moving of traffic control for different phases of work, regular maintenance, traffic control management and supervisor, traffic control inspection, setup and removal of temporary
traffic control at the respective beginning and completion of the project, and all other construction traffic control work and elements that are not specifically included in other pay items in the contract.

Partial payment for Work Zone Traffic Control and Midland Trail Detour, as determined by the Engineer, will be made as the work progresses. The Contractor shall submit a schedule of estimated duration and items before the first partial payment is made.

**Bid Item No. 37: Erosion Control** (LS)

a. Measurement

Payment will be according to the following schedule:

30% of the amount bid for Erosion Control will be paid upon placement and acceptance of initial erosion control BMPs.
50% of the amount bid for Erosion Control will be paid upon placement and acceptance of interim erosion control BMPs.
70% of the amount bid for Erosion Control will be paid upon placement and acceptance of final BMPs.
100% of the amount bid for mobilization will be paid upon final stabilization.

The total sum of all payments shall not exceed the original contract amount bid for the item, regardless of the fact that the Contractor may have, for any reason, shut down the work on the project or moved equipment away from the project and then back again.

b. Payment

Payment shall be made at the applicable contract lump sum price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment for Erosion Control shall include, but is not limited to, full compensation for all labor, equipment, tools and materials necessary to provide erosion control BMPs and maintain construction MS4 permit.

Water Line Relocation (12-inch) shall be in accordance with Colorado Springs Utilities Water Line Extension and Service Standards. CSU provides lowering detail and notes as A7-1 in 2017 Standards.

b. Payment

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to install Water Line Relocation (12-inch) as shown on the plans and specifications. Except as otherwise indicated on the plans or in the specifications, all connecting devices will not be measured and paid for separately but shall be included in the work.
Bid Item No. 38: Water Service Reconnection (EA)

a. Measurement

The quantity of Water Service Reconnection to be paid for shall be determined by the number of Water Service Reconnections actually installed. The Contractor shall excavate a trench to allow for the cut, adjustment and reconnection of the existing service. The trench shall then be backfilled by the Contractor. The trench for the water service shall be excavated to meet all applicable OSHA trench safety requirements.

Water Service Reconnection shall be in accordance with Colorado Springs Utilities Water Line Extension and Service Standards and City of Colorado Spring Standard Drawings.

b. Payment

Water service reconnection shall be measured per each for trench excavated, water service reconnected and trench backfilled. Payment will be at the contract unit price per each and will be full compensation for all labor, equipment, and incidentals necessary to complete the work.
SCHEDULE G – SCOPE OF WORK

Reconstruct storm drainage piping systems, install curbing and handicap ramps, pavement removal and replacement to install storm drainage systems and stabilization of disturbed areas.
## SCHEDULE H - LIST OF EXHIBITS

<table>
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EXHIBIT 1 SAMPLE CONTRACT

The Construction Sample Contract Template, Version 112316, may be found on the City website, at the following address:

EXHIBIT 2  MINIMUM INSURANCE REQUIREMENTS

MINIMUM INSURANCE REQUIREMENTS

The following listed minimum insurance requirements shall be carried by all contractors and consultants unless otherwise specified in the City’s solicitation package, Special Provisions or Standard Specifications.

<table>
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<tr>
<th>Requirement</th>
<th>Details</th>
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<tbody>
<tr>
<td><strong>Workers’ Compensation and Employers Liability</strong></td>
<td>As required by statute. Employers Liability coverage is to be carried for a minimum limit of $100,000.</td>
</tr>
<tr>
<td><strong>Automobile Liability</strong></td>
<td>Covering any auto (including owned, hired, and non-owned autos) with a minimum of $1,000,000 each accident combined single limit.</td>
</tr>
<tr>
<td><strong>Commercial General Liability</strong></td>
<td>For limits not less than $1,000,000 combined single limit for bodily injury and property damage for each occurrence. Coverage shall include blanket contractual, broad form property damage, products and completed operations and contractors protective endorsements.</td>
</tr>
<tr>
<td><strong>Liquor Legal Liability Insurance</strong></td>
<td>If the event producer is a business that manufactures, distributes, sells, or serves alcoholic beverages, and intends to serve or sell alcoholic beverages at an event, they must also submit a Certificate of Insurance providing proof of a liquor legal liability insurance policy or properly endorsed general liability policy.</td>
</tr>
<tr>
<td>a. If this event producer hires a vendor to serve or sell alcoholic beverages, rather than providing the alcohol themselves, they must submit a Certificate of Insurance from the vendor providing proof of a liquor legal liability insurance policy or properly endorsed general liability policy.</td>
<td></td>
</tr>
<tr>
<td>b. In either case, the minimum acceptable limit of liability per claim and aggregate is $1,000,000. This requirement applies to the business or group which serves or sells the alcohol.</td>
<td></td>
</tr>
<tr>
<td><strong>Technology Errors and Omissions Liability</strong></td>
<td>Including Network Security and Privacy Liability not less than $3,000,000 per loss with a $3,000,000 aggregate.</td>
</tr>
<tr>
<td>a. The policy shall provide a waiver of subrogation.</td>
<td></td>
</tr>
<tr>
<td>b. The insurance shall provide coverage for liability arising from theft, dissemination and/or use of confidential information stored or transmitted in electronic form.</td>
<td></td>
</tr>
<tr>
<td>c. Network Security Liability arising from the unauthorized access to, use of or tampering to gain access to your services including denial of service, unless caused by a mechanical or electrical failure</td>
<td></td>
</tr>
<tr>
<td>d. Liability arising from the 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 theron.</td>
<td></td>
</tr>
<tr>
<td><strong>Excess Liability</strong></td>
<td>For limits not less than $1,000,000 combined single limit for bodily injury and property damage for each occurrence.</td>
</tr>
</tbody>
</table>
Builders Risk or Installation Floater Insurance: Contractor shall purchase and maintain property insurance written on a builder’s risk “all-risk” or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the Owner has an insurable interest in the property.

Professional Liability Insurance covering any damages caused by an error, omission or any negligent acts with limits of not less than $1,000,000 per occurrence and in the aggregate. The coverage shall have an extended reporting period of 2 years following the date of substantial completion of the project for reporting of claims.

Pollution Legal Liability Insurance for limits of not less than $1,000,000 for sudden and accidental incidents including on-site clean-up for new conditions, third party liability for bodily injury and property damage at on-site and off-site locations, and third party clean-up for new and pre-existing conditions.

Except for workers’ compensation and employer’s liability insurance, the City of Colorado Springs must be named as an additional insured. Certificates of Insurance must be submitted before commencing the work and provide 30 days’ notice prior to any cancellation, non-renewal, or material changes to policies required under the contract.

All coverage furnished by contractor is primary, and any insurance held by the City of Colorado Springs is excess and non-contributory.

The undersigned certifies and agrees to carry and maintain the insurance requirements indicated above throughout the contract Period of Performance.

__________________________________________
(Name of Company)

___________________________________________
(Signature) (Date)
EXHIBIT 3 – QUALIFICATION STATEMENT

CITY OF COLORADO SPRINGS
QUALIFICATION STATEMENT

This statement will provide information which will enable the City to evaluate the qualifications of your firm and staff with regard to the requirements of this Invitation for Bid. Please complete this form in its entirety and submit it (in the number of copies requested) along with the other required proposal documents. If a request in the Qualification Statement is contained in the Bid, indicate the section in the Bid where that information can be found.

(PRINT)
FIRM NAME: ____________________________
ADDRESS: ____________________________
CITY STATE ZIP: ________________________
AUTHORIZED REPRESENTATIVE: ____________
TITLE: _________________________________
PHONE: __________________ FAX: __________
E-MAIL ADDRESS: ________________________

1. TYPE OF BUSINESS

CORPORATION ☐ INDIVIDUAL ☐
PARTNERSHIP ☐ JOINT VENTURE ☐
OTHER: _____________________________

2. TYPE OF LICENSE & LOCATION

3. TYPE OF SERVICE TO BE PROVIDED FOR RFP: _____________________________

4. NUMBER OF YEARS IN BUSINESS: ______________________________________

5. ON A SEPARATE SHEET PROVIDE A BRIEF HISTORY OF YOUR FIRM, STAFF SIZE AND EXPERIENCE. SUBMIT A RESUME FOR THE PROJECT MANAGER AND EACH KEY PERSONNEL ASSIGNED TO THIS PROJECT.

6. WHAT OTHER NAME(S) HAS YOUR COMPANY OPERATED UNDER: __________

7. HAVE YOU OR YOUR FIRM EVER FAILED TO COMPLETE ANY WORK AWARDED TO YOU? YES ☐ NO ☐ IF “YES”, EXPLAIN:

8. HAS ANY OFFICER OR PARTNER OF YOUR ORGANIZATION EVER BEEN AN OFFICER OR PARTNER OF ANOTHER ORGANIZATION THAT FAILED TO COMPLETE A CONTRACT WITHIN THE LAST FIVE (5) YEARS? YES ☐ NO ☐ IF “YES”, EXPLAIN:

RFP YR-NMBR

B18-005MZ STORM DRAIN IMPROVEMENT PROJECT
9. HAS YOUR FIRM OR ANY PARTNERS OR OFFICERS EVER BEEN INVOLVED IN ANY BANKRUPTCY ACTION?  YES  □  NO  □  IF “YES”, EXPLAIN:  
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

10. ARE YOU PRESENTLY INVOLVED IN ANY LITIGATION WITH ANY GOVERNMENT AGENCY?  YES  □  NO  □  IF “YES”, EXPLAIN TYPE, KIND, PLAINTIFF, DEFENDANT, ETC., AND STATE THE CURRENT STATUS: 
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

11. BANK REFERENCE:  
ADDRESS:   
CONTACT:  PHONE:  

12. LIST THREE (3) SIMILAR PROJECTS (LOCAL OR STATE-WIDE) FROM LAST FIVE (5) YEARS - INCLUDE LOCATION OF PROJECT, SIZE OF PROJECT (CONTRACT AMOUNT), CONTACT NAME, ADDRESS, TELEPHONE NUMBERS  
NOTE: DETAILED INFORMATION ON THESE PROJECTS MAY ALSO BE REQUESTED IN THE RFP PACKAGE.  
1. Location of Project:  
   Size of Project:  
   Contract Amount:  
   Contact Name and Title:  
   Contract Address:  
   Contact telephone and FAX Numbers:  

2. Location of Project:  
   Size of Project:  
   Contract Amount:  
   Contact Name:  
   Contact Address:  
   Contact telephone and FAX Numbers:  

3. Location of Project:  
   Size of Project:  
   Contract Amount:  
   Contact Name:  
   Contact Address:  
   Contact telephone and FAX Numbers:  

13. LIST CURRENT SIMILAR PROJECTS (LOCAL OR STATE-WIDE) UNDER CONTRACT - INCLUDE LOCATION OF PROJECT, SIZE OF PROJECT (CONTRACT AMOUNT) CONTACT NAME, ADDRESS, TELEPHONE NUMBERS.  
NOTE: DETAILED INFORMATION ON THESE PROJECTS MAY ALSO BE REQUESTED IN THE RFP PACKAGE.  
1. Location of Project:  
   Size of Project:  
   Contract Amount:  
   Contact Name and Title:
2. Location of Project:
   Size of Project:
   Contact Name and Title:
   Contact Address:
   Contact telephone and FAX Numbers:

3. Location of Project:
   Size of Project:
   Contract Amount:
   Contact Name and Title:
   Contact Address:
   Contact telephone and FAX Numbers:

14. LIST OF SUB-CONTRACTORS TO BE USED FOR THIS PROJECT:
    (INCLUDE NAME, ADDRESS, TELEPHONE NUMBER, TYPE OF WORK)

1. Name:
   Address:
   Telephone Number:
   Type of Work:

2. Name:
   Address:
   Telephone Number:
   Type of Work:

3. Name:
   Address:
   Telephone Number:
   Type of Work:

IF ADDITIONAL INFORMATION IS PROVIDED ON A SEPARATE SHEET FOR ANY OF THE ITEMS, CLEARLY SPECIFY WHERE IT CAN BE LOCATED IN YOUR BID PACKAGE.
EXHIBIT 4 -- REPRESENTATIONS AND CERTIFICATIONS

1. INSURANCE REQUIREMENTS

Offeror shall comply with all insurance requirements and will submit the Insurance Certificates prior to performance start date. If limits are different from the stated amounts, Offeror shall explain variance. Certain endorsements and “additionally insured” statements may require further clarification and specific statements on a project specific basis and should have been described in the Offeror’s Bid.

2. ETHICS VIOLATIONS

a) The Offeror shall have in place and follow reasonable procedures designed to prevent and detect possible violations described in this clause in its own operations and direct business relationships.
b) Offeror certifies the Offeror has not violated or caused any person to violate, and shall not violate or cause any person to violate, the City’s Code of Ethics contained in Article 3, of Chapter 1 of the City Code and in the City’s Procurement Rules and Regulations.
c) When the Offeror has reasonable grounds to believe that a violation described in this clause may have occurred, the Offeror shall promptly report the possible violation to the City Contracts Specialist in writing.
d) In addition, the Offeror must report any conflict or apparent conflict, current or discovered during the performance of the Contract, to the City Contracts Specialist.
e) The Offeror shall not engage in providing gifts, meals or other amenities to City employees. The right of the Offeror to proceed may be terminated by written notice issued by City Contracts Specialist if Offeror offered or gave a gratuity to an officer, official, or employee of the City and intended by the gratuity to obtain a contract or favorable treatment under a contract.
f) The Offeror shall cooperate fully with the City or any agency investigating a possible violation on behalf of the City. If any violation is determined, the Offeror will properly compensate the City.
g) The Offeror agrees to incorporate the substance of this clause (after substituting “Contractor” for “Offeror”) in all subcontracts under this offer.
3. ILLLEGAL ALIENS

If Offeror has any employees or subcontractors, Offeror shall comply with § 8-17.5-101, et seq., C.R.S. regarding Illegal Aliens – Public Contracts for Services, and this section of this Agreement. 8-17.5-102 includes, in part, that:

1. Offeror shall not:
   a. Knowingly employ or contract with an illegal alien to perform work under this Agreement; or
   b. Enter into a contract with a subcontractor that fails to certify to Offeror that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement.

2. Offeror has verified or attempted to verify that Offeror does not employ any illegal aliens and, will participate in the E-Verify Program or State Department program in order to confirm eligibility of all employees who are newly hired to perform work under public contract for services.

3. Offeror will not use E-Verify Program or State Department program procedures to undertake pre-employment screening of job applicants while the public contract for services is being performed.

4. If Offeror obtains actual knowledge that a subcontractor performing work under this Agreement knowingly employs or contracts with an illegal alien, Provider shall:
   a. Notify the subcontractor and the City within three days that Offeror has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and
   b. Terminate the subcontract with the subcontractor if within three days of receiving such notice, the subcontractor does not stop employing or contracting with the illegal alien. However, the Offeror shall not terminate the contract with the subcontractor if during this three day period:
      i. The subcontractor provides information which establishes that the subcontractor has not knowingly employed or contracted with an illegal alien, and
      ii. The Offeror will not employ the illegal aliens in the performance of any City contract.

5. Offeror shall comply with any reasonable request by the Department of Labor and Employment made in the course of an investigation that the Department is undertaking pursuant to the authority established in §8-17.5-102(5), C.R.S.

6. If Offeror violates this provision, the City may terminate the contract for a breach of contract. If the Agreement is terminated, the Offeror shall be liable for actual and consequential damages.

Initials for 3

4. COOPERATION WITH OTHER CONTRACTORS

Other City activities/contracts may be in progress or start during the performance of this
contract. The Offeror shall coordinate the work harmoniously with the other contractors or City personnel, if applicable.

Initials for 4

5. INTERNET USE

Should the Offeror require access to City Internet resources in the performance of this requirement, a “Contractor’s Internet Use Agreement” form must be separately signed by each individual having access to the City Network. The completed Contractor’s Internet Use Agreement will be maintained with this agreement. Inappropriate use of the City Network will be grounds for immediate termination of any awarded contract.

Initials for 5

6. LITIGATION

If awarded a contract, Offeror shall notify the City within five (5) calendar days after being served with a summons, complaint, or other pleading in any matter which has been filed in any federal or state court or administrative agency. The Offeror shall deliver copies of such document(s) to the City’s Procurement Services Manager. The term "litigation" includes an assignment for the benefit of creditors, and filings of bankruptcy, reorganization and/or foreclosure.

Initials for 6

7. CONTRACTOR’S REGISTRATION INFORMATION

Offeror’s firm verifies and states that they are (check all that apply):

- Large Business (i.e. do not qualify as a small business or non-profit)
- Nonprofit
- Small Business
- Minority Owned Business/Small Disadvantaged Business
- Woman Owned Business
Veteran Owned Business
Service-Disabled Veteran Owned Business
HUBZone Business

Note: The City accepts self-certification for these categories in accordance with Small Business Administration (SBA) standards. The SBA size standards are found on the SBA website https://www.sba.gov/content/am-i-small-business-concern.

Initials for 7

8. CONTRACTOR PERSONNEL

a) The Offeror shall appoint one of its key personnel as the “Authorized Representative” who shall have the power and authority to interface with the City and represent the Offeror in all administrative matters concerning this Bid and any awarded contract, including without limitation such administrative matters as correction of problems, modifications, and reduction of costs.
b) The Authorized Representative shall be the person identified in the Offeror’s Bid, unless the Offeror provides written notice to the City naming another person to serve as its Authorized Representative. Communications received by the City Contracts Specialist from the Authorized Representative shall be deemed to have been received from the Offeror.

The individual, ____________________________ (Name)
with position, ____________________________ (Title)
Can be reached at
Work telephone number: _______________________
Home telephone number: _______________________
Cellular telephone number: _______________________
E-mail address: _______________________________

Initials for 8

9. OFFEROR’S CERTIFICATION

The undersigned hereby affirms that:
a) He/She is a duly authorized agent of the Offeror;
b) He/She has read and agrees to the City’s standard terms and conditions attached.
c) The offer is presented in full compliance with the collusive prohibitions of the City of Colorado Springs. The Offeror certifies that no employee of its firm has discussed, or
compared the offer with any other offeror or City employee and has not colluded with any other offeror or City employee.

d) The Offeror certifies that it has checked all of its figures, and understands that the City will not be responsible for any errors or omissions on the part of the Offeror in preparing its Bid.

e) By submitting an offer the Offeror certifies that it has complied and will comply with all requirements of local, state, and federal laws, and that no legal requirements have been or will be violated in making or accepting this solicitation.

I hereby certify that I am submitting the Bid based on my company’s capabilities to provide quality products and/or services on time.

Initials for 9

10. OFFEROR CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS:

1. The Offeror certifies to the best of its knowledge and belief, that (i) the Offeror and/or any of its Principals
   a. Are ( ), Are not ( ) presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;
   b. Have ( ), Have not ( ), within a three year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, local) contract or subcontract; violation of Federal or state antitrust statutes relation to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statement, tax evasion, or receiving stolen property; and
   c. Are ( ), Are not ( ) presently indicated for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in any paragraphs above.

2. The Offeror shall provide immediate written notice to the City Contracts Specialist if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reasons of changed circumstances.

3. The certification in paragraph 1. above, is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the City, the City Contracts Specialist may terminate the contract resulting from this solicitation for default. Termination for default may result in additional charges being levied for the costs incurred by the City to initiate activities to replace the awarded Contractor.
11. ACCEPTANCE OF CITY CONTRACTS SPECIALIST’S SOLE AUTHORITY FOR CHANGES

Unless otherwise specified in the Contract, the Offeror hereby agrees that any changes to the scope of work, subsequent to the original contract signing, shall be generated in writing and an approval signature shall be obtained from the City Contracts Specialist prior to additional work performance.

12. CITY CONTRACTOR SAFETY PROGRAM

The Offeror hereby agrees to adhere to a worker safety program for contractor employees on a City job site or location. By initialing below, the Offeror has reviewed the information and will abide by the City Policy which is available for review:


13. ACCEPTANCE OF CITY ENVIRONMENTALLY PREFERRED PURCHASING (EPP) POLICY

The City of Colorado Springs is committed to buying more environmentally preferable goods and services, as long as they meet performance needs, are available within a reasonable time and at a reasonable cost. The Offeror hereby acknowledges review of this policy by initialing below.


14. FRAUD, WASTE AND ABUSE

Everyone has a duty to report any suspected unlawful act impacting the City of Colorado Springs operations and its enterprises. Anyone who becomes aware of the existence or apparent existence of fraud, waste, and abuse in City of Colorado Springs
is encouraged to report such matters to the City Auditor’s Office in writing or on the telephone hotline 385-2387 (ADTR). Written correspondence can be mailed to:

City Auditor  
P.O. Box 2241  
Colorado Springs CO 80901  

Or via email CityAuditManagement@springsgov.com. Any of these mechanisms allow for anonymous reporting. For more information, please go to the website https://coloradosprings.gov/cityfraud.

_______________________________________

Signature of Authorized Representative

Printed Name:

Title:

Date:
EXHIBIT 5 CITY OF COLORADO SPRINGS BID BOND

1. KNOW ALL MEN BY THESE PRESENTS, THAT:

(Name) As Principal, hereinafter called Principal, and

(Address)

(SURETY Name) a corporation organized and existing under the laws of the State of:

(SURETY Address)

and AUTHORIZED TO DO BUSINESS IN THE STATE OF COLORADO, as Surety, hereinafter called Surety, are held firmly bound to the CITY OF COLORADO SPRINGS, COLORADO, as Obligee, hereinafter called the Obligee, in the sum of: (Insert Bid Amount in Words)

($ DOLLARS),

lawful money of the United States of America, for payment of which sum well and truly to be made, the Principal and the Surety bind themselves, their heirs, executors, successors and assigns, jointly and severally, firmly by these presents.

2. WHEREAS, the Principal has submitted to the Obligee,

a contract bid dated the ______ day of __________________ For the following contract:

3. NOW THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH THAT, If Principals bid is accepted by Obligee and Principal is awarded the contract in whole or in part, and the Principal shall enter into the contract with the Obligee in accordance with the terms of such bid, and give such Payment, Performance, and Maintenance bond or bonds as may be specified in the bidding or contract documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such contract and give such bond or bonds, if the Principal shall promptly pay to the Obligee the amount of this bond as set forth herein above, then this obligation shall be null and void, otherwise this obligation to remain in full force and effect.

Signed and sealed on the dates set forth below:

FOR:
(Witness) (Principals Name)

BY:

ITS:

This ______ day of __________________

FOR:
(Witness) (Surety’s Name)

BY:

ITS:

This ______ Day of __________________

Bond # ________________ This Bond (is) (is not) a SBA Guaranteed Bond.
EXHIBIT 6 – NOTIFICATION OF UTILITIES

General Information
It is the responsibility of the Contractor to notify all applicable utilities (including, but not limited to Colorado Springs Utilities) for utility locations at least two business days or twenty-four hours prior to commencing any work. Should any street be closed off for any amount of time, the Contractor must notify the Traffic Department. See the City of Colorado Springs Standard Specifications General Provisions for more information regarding utilities.

The City of Colorado Springs Standard Specifications and General Provisions indicated on the RFP for this project are included by reference. The above document may be reviewed or purchased at the City Administration Building, Engineering Division, at 30 South Nevada, Suite 403, Colorado Springs, Colorado, between the hours of 8:00 A.M. and 5:00 P.M., Monday through Friday, except holidays.

Telephone References
1. Utility Notification Center of Colorado 1-800-922-1987
2. Colorado Springs Utilities Electric (719) 448-4811
3. Colorado Springs Utilities Water, Wastewater (719) 448-4200
4. Traffic Department (719) 385-5908
5. Colorado Springs Utilities Gas Emergencies (719) 520-0100
6. Cable Television (719) 633-6616
7. Telephone 1-800-954-0211

Standard Utility Color Code
1. Natural Gas Yellow
2. Electric Red
3. Water Blue
4. Wastewater Green

Contractor Responsibilities
1. Contact Colorado Springs Utilities, and/or other applicable utilities company or provider, at least twenty four hours prior to starting the project so that our service inspector can make contact on the job site.

2. All replacement taps will have to be coordinated and notification must be given to Colorado Springs Utilities twenty four hours prior to scheduling.

3. Any water interruption to properties involved must be notified at least twenty-four hours prior to shut down and coordinated with a service inspector.

4. If in the event a property or business is involved that cannot be without water the Contractor will be responsible for keeping them in water while the shut down is in effect.

5. If for any reason when water is restored after the shut down that a property has no water and Colorado Springs Utilities is contacted to determine the problem, the Contractor will be responsible for digging, regardless of the time of day to restore service. Contractor must provide Colorado Springs Utilities with a name and telephone number of an after hours contact in case of emergency.

6. All services which would be replaced will have to meet our water specifications and be approved by the Water service inspector.

7. All materials pertaining to lowering or replacing water service lines, regardless of size, will be the responsibility of the Contractor unless otherwise specified in Engineering
Specifications and Plans.

8. If for any reason it would not be feasible to shut down and notify affected properties, it would be the responsibility of the Contractor to provide temporary water for the houses or businesses involved.

Pre-excavation Checklist
1. Indicate all gas and other utility lines a set of construction plans.

2. Notify City of Colorado Springs Underground Utility Line Locators at least two business days in advance at the division numbers listed above.

3. Utilities locations should be marked on the ground by City Locators.

4. All employees should be briefed on the marking and the standard utility color codes.

5. Employees should be trained on excavation and safety procedures for natural gas lines.

6. When excavation approaches gas lines, employees should expose lines by careful hand digging and probing.

7. Contact the City Forester for any tree protection requirements that may be included on contract specifications