



REQUEST FOR PROPOSAL

Construction

R24-104MZ

Date issued: August 19, 2024

PARK VISTA DRAINAGE IMPROVEMENTS

THE CITY OF COLORADO SPRINGS

The City of Colorado Springs requests Fixed Unit Price proposals, as detailed in this Request for Proposal (RFP), for Park Vista Drainage Improvements.

This RFP is posted to Rocky Mountain E-Purchasing BidNet Direct and the City of Colorado Springs' Procurement Services Website. It is available for all vendors free of charge, following free registration, at the Rocky Mountain E-Purchasing BidNet Direct website.

SUBMITTALS FOR THIS PROJECT WILL ONLY BE ACCEPTED ON THE ROCKY MOUNTAIN E-PURCHASING BIDNET DIRECT 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.

<https://www.bidnetdirect.com/>

BIDNET Support

800-835-4603

Estimated Project Magnitude: \$10,000,000.00 - \$11,000,000.00

The project is partially funded by a Federal Grant (ARPA)

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Interviews (if applicable)	TBD
Award of Contract	EST October 1, 2024
Notice to Proceed	EST October 31, 2024

1.2 SUBMISSION OF PROPOSAL

Proposals are to be submitted electronically on BidNet Direct (www.bidnetdirect.com). Please review the submission requirements **well in advance** of submission date and time, and allow for ample time to upload each required document. It is recommended that Offerors begin the submission process at least one (1) day in advance of the proposal deadline.

Offerors are solely responsible to ensure all required proposal documents are uploaded and submitted correctly, and that a **confirmation number** is obtained upon successful submission. Customer support for BidNet Direct may be reached at (800) 835-4603.

*******NO LATE OFFERS WILL BE ACCEPTED*******

Date/Time: Proposals shall be received on or before 2:00PM September 20, 2024.

Identification of Proposal:

Proposals must be submitted to the BidNet Direct Procurement Platform (www.bidnetdirect.com). The solicitation number and Offeror name must be clearly marked within the proposal.

Proposal No.: R24-104MZ
Due Date and Time: September 20, 2024 2:00PM

Any offer that is submitted without being properly marked may be opened for identification prior to the deadline for receipt of proposals and then resealed.

1.3 NUMBER OF COPIES

Offerors shall submit **one (1)** softcopy to the BidNet Direct platform. Upon submission, all proposal documents shall become and remain the property of the City of Colorado Springs.

1.4 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 Offeror whose offer is accepted and is awarded the contract to provide the products or services specified in the RFP.

The term "Offer" means the proposal.

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

The term "Project" refers to Park Vista Drainage Improvements.

The term "Request for Proposal" or "RFP" means this solicitation of a formal, negotiable proposal/offer. Any offer that is accepted will be the offer that is deemed by the City of Colorado Springs to be most advantageous in terms of the criteria designated in the RFP.

1.5 RFP OBJECTIVE

The objective of this RFP is to provide sufficient information to enable qualified Offerors to submit written proposals to the City of Colorado Springs. The RFP is not a contractual offer or commitment to purchase products or services. The Offeror may present options and variables to the scope while still meeting the minimum requirements of this solicitation. Innovative proposals/solutions are encouraged and considered in the selection and/or award.

All information included in proposals must be legible. Any and all corrections and or erasures must be initialed by Offeror. Each proposal shall be accompanied by a cover letter signed by an authorized representative of the Offeror. The contents of the proposal submitted by the successful Offeror may become part of any contract awarded as a result of this solicitation.

1.6 CONFIDENTIAL OR PROPRIETARY INFORMATION

If an Offeror believes that parts of an offer are confidential, then the Offeror must so specify. The Offeror must include in bold letters the term "CONFIDENTIAL" on that part of the offer which the Offeror believes to be confidential. The Offeror must submit in writing specific detailed reasons, including any relevant legal authority, stating why the Offeror believes the material to be confidential. Vague and general claims as to confidentiality will not be accepted. The City of Colorado Springs will be the sole judge as to whether a claim is acceptable. Decisions regarding the confidentiality of information will be made when requests are made to make the information public. All offers and parts of offers, which are not marked as confidential, will automatically be considered public information after the contract is awarded. The successful offer may be considered public information even though parts are marked confidential.

1.7 AMENDMENTS

Amendments to this RFP may be issued at any time prior to the time set for receipt of proposals. Offerors are required to acknowledge receipt of any amendments issued to this RFP by returning a signed copy of each amendment issued. Signed copies of each amendment must be received on or before the time set for receipt of offers.

The City of Colorado Springs will post all amendments on BidNet Direct under the Rocky Mountain E-Purchasing Group (www.BidNetDirect.com). It is the Offeror's responsibility to check the website for posted amendments or contact the Contracts Specialist listed in RFP §1.1 to confirm the number of amendments which have been issued.

1.8 WITHDRAWAL OR MODIFICATION OF OFFERS

Any Offeror may modify or withdraw an offer in writing at any time prior to the deadline for submission of an offer.

1.9 ACCEPTANCE

Any offer received and not withdrawn shall be considered an offer, which may be accepted by the City of Colorado Springs based on initial submission without discussions or negotiations.

By submitting an offer in response to this solicitation, the Offeror agrees that any offer it submits may be accepted by the City of Colorado Springs at any time within 90 calendar days from the date of submission deadline.

The City of Colorado Springs reserves the right (a) to reject any or all offers,(b) to waive informalities and minor irregularities in offers received, and/or (c) to accept any portion of an offer if deemed in the best interest of the City of Colorado Springs. Failure of the Offeror to provide in its offer any information requested in the RFP may result in rejection of the offer for non-responsiveness.

1.10 PROPOSAL PREPARATION COST

The cost of proposal preparation is not a reimbursable cost. Proposal preparation shall be at the Offeror's sole expense and is the Offeror's total and sole responsibility.

1.11 AWARD

The City of Colorado Springs intends to make an award using the evaluation criteria listed in this RFP to determine the best value, considering all factors and criteria in the proposals submitted. Best value means the expected outcome of an acquisition that, in the City's estimation, provides the greatest overall benefit in response to the requirements detailed in the RFP. The City of Colorado Springs reserves the right to reject any or all offers and to not make an award.

1.12 PERFORMANCE PERIOD

The performance period for the project detailed in this RFP will be established as **JANUARY 1, 2025 – JUNE 30, 2026.** Notice to proceed is contingent upon final CLOMR approval and property acquisition.

1.13 DEBRIEFING

Offerors not selected may request a debriefing on the selection process as well as discussion of the strengths and weaknesses of their proposal upon receipt of notification that their offer was not selected.

A debriefing may be scheduled by contacting the Contracts Specialist listed above. The Contracts Specialist must receive a written request for debriefing no later than ten (10) calendar days after issuance of a notification that the Offeror's offer was not selected.

1.14 SUBSTANTIVE PROPOSALS

By responding to this RFP, the Offeror certifies (a) that Offeror's proposal is genuine and is not made in the interest of, or on behalf of, an undisclosed person, firm, or corporation; (b) that Offeror has not directly or indirectly induced or solicited any other offerors to put in a false or sham proposal; (c) that Offeror has not solicited or induced any other person, firm, or corporation to refrain or abstain from proposing an offer or proposal; (d) that Offeror has not sought by collusion

to obtain for themselves any advantage over any other offerors or over the City of Colorado Springs; and (e) that 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.

1.15 OFFEROR'S QUALIFICATIONS

Each Offeror must complete Exhibit 1 – Qualifications Documents.

No contract will be awarded to any Offeror who is in arrears to the City, upon any debt or contract, or who is in default, in any capacity, upon any obligation to the City or is deemed to be irresponsible or unreliable by the City based on past performance.

1.16 NON-COLORADO ENTITIES

If Offeror is a foreign entity, Offeror shall comply with C.R.S. section 7-90-801, "Authority to transact business or conduct activities required," and section 7-90-802, "Consequences of transacting business or conducting activities without authority."

Before or at the time that the contract is awarded to an entity organized or operating outside the State of Colorado, such entity shall obtain authorization to do business in the State of Colorado, designate a place of business herein, and appoint an agent for service of process.

Such entity must furnish the City of Colorado Springs with a certificate from the Secretary of the State of Colorado to the effect that a certificate of authority to do business in the State of Colorado has been issued by that office and is still valid. The entity shall also provide the City with a certified copy of the designation of place of business and appointment of agent for service of process from the Colorado Secretary of State, or a letter from the Colorado Secretary of State that such designation of place of business and agent for service of process has been made.

1.17 PROCUREMENT RULES AND REGULATIONS

All projects 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 website www.coloradosprings.gov. The Contracts Specialist may also provide a softcopy of the Rules and Regulations upon request. Any discrepancies regarding conflicting statements, decisions, irregularities, clauses, or specifications will be rectified utilizing the City's Procurement Rules and Regulations, when applicable. It is the Offeror's responsibility to advise the Contracts Specialist listed in this RFP of any perceived discrepancies prior to the date and time the offer is due.

1.18 FAIR TREATMENT OF OFFERORS

The City Procurement Services Division shall be responsible for ensuring the procurement of products, commodities, and services are in a manner that affords all responsible businesses a fair and equal opportunity to compete. If an Offeror believes that a procurement is not conducted in a fair and equitable manner, the Offeror is encouraged to inform the City Procurement Services Manager as soon as possible.

1.19 ORDER OF PRECEDENCE

Any inconsistency in this solicitation shall be resolved by giving precedence in the following order:

- A. Sections I-IV of this Solicitation
- B. Special Construction Terms and Conditions
- C. General Construction Terms and Conditions
- D. Exhibits
- E. Plans
- F. Detailed Plans
- G. Standard Drawings
 - a. Calculated dimensions will govern over scaled dimensions.
- H. Special Specifications
- I. Standard Specifications

1.20 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 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.

Forms and instructions can be downloaded at <https://coloradosprings.gov/sales-tax>. Questions can be directed to the City Sales Tax Division at (719) 385-5903 or Construction_SalesTax@coloradosprings.gov.

Our Registration Numbers are as follows:

City of Colorado Springs
Federal I.D.: 84-6000573
Federal Excise: A-138557
State Sales Tax: 98-03479

1.21 BOND REQUIREMENTS

The Offeror is advised that the successful Offeror shall be required to furnish to the City of Colorado Springs, upon award, one copy of each: Performance Bond, Labor and Materials Payment Bond, and a Maintenance Bond in the amount of 100% of the total contract within ten (10) calendar days after notification of award of a contract. The cost of all bonds shall be included in Offeror's offer.

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 of Colorado Springs against liens of any kind.
- D. Be, when a surety bond is furnished, from a surety company operating lawfully in the State of Colorado and be accompanied with an acceptable "Power-of-Attorney" form attached to each bond copy.
- E. Be issued from a surety company that is acceptable to the City of Colorado Springs.
- F. Be submitted using the forms in the Exhibit section of this solicitation.

1.22 INTERPRETATION OF QUANTITIES IN PROPOSAL FORM

Except as otherwise provided in this RFP, the quantities appearing in the proposal form are estimates prepared for the comparison of proposals.

After award, payment to the Contractor will be made in accordance with the following procedures:

- A. Measurement required. When the Contract requires measurement of work performed or material furnished, payment will be made for actual quantities measured and accepted.
- B. Measurement Not Required. When the Contract does not require quantities of work performed or materials furnished to be measured, payment will be made for the quantities appearing in the Contract.

The estimated quantities of work to be performed and materials to be furnished may be increased, decreased or omitted.

1.23 INTERPRETATION OF PLANS AND SPECIFICATIONS

Any change to proposal forms, plans, or specifications prior to the opening of proposals will be issued by the City in the form of an Amendment. Certain individuals may be named in the RFP that have authority to provide information, clarification or interpretation to Offerors prior to opening of proposals. Information obtained from persons other than those named individuals is invalid and shall not be used for proposal purposes.

1.24 EXAMINATION OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, AND SITE OF WORK.

The Offeror is expected to examine the site of the proposed work, the proposal, plans, specifications, supplemental specifications, special provisions, and Contract forms, before submitting a proposal. The submission of a proposal will be considered conclusive evidence that the Offeror has made this examination and is aware of the conditions to be encountered in performing the work according to the Contract.

Boring logs and other records of subsurface investigations, if they exist, are available for inspection by Offerors. These logs and records are made available so that all Offerors have access to identical subsurface information that is available to the City, and is not intended as a substitute for personal investigation, interpretation, and judgment of the Offerors.

The City does not warrant the adequacy of boring logs and other records of subsurface investigations, and such information is not considered to be a part of the Contract. When a log of test borings is included in the subsurface investigation record, the data shown in the individual log of each test boring apply only to that particular boring and are not intended to be conclusive

as to the character of any material between or around test borings. If Offerors use this information in preparing a proposal, it is used at their own risk, and Offerors are responsible for all conclusions, deductions, and inferences drawn from such information.

Offerors may conduct subsurface investigations at the project site at Offeror's expense; the City will afford them this opportunity prior to public opening of proposals.

If an Offeror discovers an apparent error or omission in the proposal form, estimated quantities, plan, or specifications, the Offeror shall immediately notify the Contracting Specialist to enable the City to make any necessary revisions. The City may consider it to be detrimental to the City for an Offeror to submit an obviously unbalanced unit proposal price.

1.25 COMBINATION OR CONDITIONAL PROPOSALS

If an RFP is issued for projects in combination and separately, the Offeror may submit proposals either on the combination or on separate units of the combination. The City reserves the right to make awards on combination or separate proposals to the advantage of the City. Combination proposals will be considered, only when specified.

1.26 ANTI-COLLUSION AFFIDAVIT

The Offeror by signing their proposal submitted to the City is certifying that the Offeror has not participated in any collusion or taken any action in restraint of free competitive bidding. This statement may also be in the form of an affidavit provided by the City and signed by the Offeror. The original of the signed anti-collusion affidavit, if separately required and provided with the RFP, shall be submitted with the proposal. The proposal will be rejected if it does not contain the completed anti-collusion affidavit.

1.27 MATERIAL GUARANTY

The successful Offeror may be required to furnish a complete statement of the origin, composition, and manufacture of materials used in the construction of the work together with samples, which will be tested for conformance with Contract requirements.

SECTION II – PROPOSAL CONTENT

2.0 PROPOSAL CONTENT

Section II provides instructions regarding the format and content required for proposals submitted in response to this solicitation.

2.1 PROPOSAL FORMAT

Offeror's written proposal should include concise, but complete, information, emphasizing why the Offeror is best or best qualified to provide the required services. The Offeror's written proposal should include the information in the format outlined below and must be limited to no more than twenty-five (25) pages. **A page shall be defined as 8-1/2" x 11"; single sided, with one inch margins, and a minimum font of Times New Roman 10.** The only exception to the 8-1/2" x 11" paper size is the proposed project schedule. It may be submitted on 11" x 17" paper. Each 11" x 17" page for the schedule shall be counted in the overall page limitations above. Each section of the proposal should be labeled to clearly follow the requirements sections identified in this section of the RFP. The following listed Exhibits must be filled out and returned with the proposal and are not counted against the page limit:

Exhibit 1	Qualifications Documents
Exhibit 4	Federal Forms
Schedule A	Price Sheet

2.2 COVER LETTER

The cover letter shall be no more than three pages. The cover letter shall contain at least the following information.

- A. RFP Number and Project Name.
- B. Statement that the Offeror is qualified to perform the work.
- C. Certification Statement that the information and data submitted are true and complete to the best knowledge of the individual signing the letter.
- D. Name, telephone number, email address, and physical address of the individual to contact regarding the proposal.
- E. The signature of an authorized principal, partner, or officer of the Offeror.

2.3 PROPOSAL CERTIFICATION

The Offeror must fill out and submit Exhibit 1 with its Proposal.

2.4 ORGANIZATIONAL BACKGROUND AND OVERVIEW

The Offeror must provide a brief history and overview of its company and its organizational structure, with special emphasis on how this project will fit within that structure. Also include principal place of business location(s), office locations, size of firm, and financial stability (annual public reports or private financial statements shall be included in an appendix or under separate cover; private financial information will be kept confidential by the City).

2.5 PROPOSAL NARRATIVE/TECHNICAL AND MANAGEMENT APPROACH

In the proposal narrative/technical and management approach section, the Offeror should explain what the Offeror will do and how it will perform if awarded a contract.

2.5.1 TECHNICAL AREA

The Offeror must explain its overall solution, considering the scope of work or statement of work provided. The content must include, but not necessarily be limited to, the following information.

A. Understanding of and Compliance with Technical Requirements

In the Technical Area, the Offeror should address each work area in sufficient detail to demonstrate a clear and full understanding of the work necessary to complete the project. The proposal should not merely parrot the requirements of the RFP. Further, the Offeror should provide evidence of sufficient planning to ensure the work is completed on schedule and within budget. It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions:

1. Does the proposal demonstrate a firm understanding of the requirements and goals of the Statement of Work, as well as industry standards and reasonable expectations for a company in the industry?
2. Does the proposal fully and completely address each requirement and goal of the Statement of Work?
3. Does the proposal provide solutions to indicate that requirements and goals will be met on schedule?
4. Does the technical solution seem realistic?
5. Does it generally appear that the Offeror knows and thoroughly understands the business and the RFP requirements?

B. Project Approach

In the Technical Area, the Offeror should clearly present proposed solutions and indicate that it has performed adequate planning to accomplish project tasks as defined in the Statement of Work. Innovations, efficiencies, and detailed specifics are all encouraged.

The Offeror must at least address the following areas:

1. Construction phasing and traffic control for the project. Explain the phases, traffic control for each phase, and the logic in the construction phasing.
2. Erosion and sediment control during all phases of construction as well as post construction efforts through permit closure.
3. Coordination with utilities. Discuss Offeror's understanding of the key utility relocations required for this project and how Offeror will coordinate and phase construction to both facilitate and accommodate those relocations and the constraints that they impose.
4. Schedule Management. Discuss Offeror's approach to schedule management including updating and reporting progress of the work.
5. Quality Control. Discuss Offeror's quality control plan, processes and approach to ensure that the City receives a quality product.

6. Safety. Discuss Offeror's approach and commitment to safety for both construction workers and the public traveling through the construction site.
7. Potential issues that Offeror foresees with this project and how Offeror would make adjustments if encountered. Describe factors limiting construction phasing flexibility and potential remedies.

It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions.

1. Does the proposal include a complete plan to accomplish each requirement, including subcontracting (if applicable)?
2. Does the proposal demonstrate that appropriate and qualified personnel and equipment will be provided to carry out the requirement?
3. Is the proper level of effort directed toward each requirement? Does the level of effort look unrealistically low or unreasonably high?

2.5.2 MANAGEMENT AREA

The Offeror must explain its method of managing the work to be performed. The content must include, but no necessarily be limited to, the following information.

A. Program Management Controls

In the Management Area, the Offeror should provide:

1. A plan of operation, to include management of personnel, workload, schedule, and budget
2. An organization chart which demonstrates clear and effective lines of authority, responsibility, and communication for management, supervisory, and technical personnel. The plan should address which job classification or personnel will be assigned to each task and how that determination is made. Basic human resource management concepts should be addressed, including hiring, firing, discipline, incentive plans, etc.
3. If the Offeror plans to subcontract more than 10% of the work, include information on how the Offeror plans to manage its subcontractors.
4. A detailed construction schedule for the project showing the key construction activities and how they will meet or improve the City's timeframe and maximize construction efficiency to provide the best value to the City and minimize impacts to the public. The schedule shall be based on the Offeror's understanding and approach to the work as addressed above. Schedules should address controls to ensure the project will remain on schedule and on budget. Schedules submitted for this project shall assume a start date of January 1, 2025.

It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions.

1. Does the proposal address the issues above in sufficient detail to demonstrate a sophisticated and mature management control system?
2. Are program management controls consistent with the technical portion of the proposal, especially regarding schedule and level of effort?

3. Do the plan and controls indicate that the Offeror will obtain, keep, and efficiently utilize high-quality personnel?
4. Does the proposal explain how the Offeror will address corrective actions in case of delays (e.g. expediting materials, additional resources, etc.)?
5. Does the proposal explain how the Offeror will remain within schedule and budget?

B. Past Performance/Relevant Experience and Key Personnel

In the Management Area, the Offeror should provide at least three references or name contracts demonstrating that it successfully provided services/products that are the same or similar to those required in the RFP. The proposal should adequately explain how the projects were completed on schedule and within budget. It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions.

1. Does the proposal include at least three references or past performance citations?
2. Are the references or past performance citations relevant to the requirements of the Statement of Work of the RFP?
3. Does the Offeror explain how they were successful on the projects provided as past performance?
4. Does the Offeror apply the past performance to the City requirement in such a way as to demonstrate added value due to experience?

C. Key Personnel

In the Management Area, resumes must be provided for all personnel considered key, as required by the RFP. Resumes do not count toward the page limit. It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions. Explain how the key personnel were related to the projects cited as relevant past performance.

1. Does the Offeror provide complete resumes, including education, experience, background information, accomplishments, and other pertinent information?
2. Does the Offeror provide resumes for all key personnel, as required by the RFP?
3. Do the resumes demonstrate adequate professional, technical, and management levels to accomplish the work effectively and efficiently?

2.6 PRICE AREA

In the Price Area, the Offeror should provide a detailed breakdown of the price for each year of performance. The price must be all-inclusive and include all unit costs for material, labor, other direct costs (e.g. travel), indirect costs (i.e. overhead and general and administrative costs), and profit/fee. Offers must include sufficient detail to allow insight into the fairness and reasonableness of the price. If the contract type will be Time and Material (T&M) labor categories, labor rates, separated profit, and estimated material costs must be included in detail.

In addition, although price may not be the most important factor, it is still very important to the City of Colorado Springs. The Offeror's pricing must be competitive as compared to the budget amount, market pricing in the industry, and the pricing of other Offerors. It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions.

1. How does the price compare to the industry competition?
2. If low, is it unrealistically low?
3. If high, is there demonstrated added value for the additional cost?

2.7 PROPOSAL PRESENTATION

Presentation is an important factor. Offerors should provide a highly professional product, which is complete, accurate, easily understood, and effectively presented.

2.8 EXCEPTIONS

All Offerors must complete Exhibit 1, Exceptions Form and return it with their proposal. Some terms and conditions are not negotiable. Exceptions may be grounds for rendering the proposal unacceptable without further discussions.

2.9 INSURANCE REQUIREMENTS

All Offerors must complete Exhibit 1, Qualifications Documents and return with their proposal. Lack of responsiveness in this area may be grounds for rendering the proposal unacceptable without further discussions.

SECTION III – EVALUATION FACTORS

3.0 EVALUATION AND AWARD

Section III provides information regarding evaluation criteria and scoring. It also includes information regarding proposal selection and award of the resultant contract.

3.1 EVALUATION CRITERIA

3.1.1 TECHNICAL AREA – UNDERSTANDING OF AND COMPLIANCE WITH TECHNICAL REQUIREMENTS

See Section II - Item 2.5.1A

3.1.2 TECHNICAL AREA – PROJECT APPROACH

See Section II - Item 2.5.1B

3.1.3 MANAGEMENT AREA – PROGRAM MANAGEMENT CONTROLS

See Section II - Item 2.5.2A

3.1.4 MANAGEMENT AREA – PAST PERFORMANCE/RELEVANT EXPERIENCE/KEY PERSONNEL

See Section II – Item 2.5.2B

3.1.5 PRICE/COST AREA – PRICE/COST

See Section II – Item 2.6

3.1.6 PROPOSAL PRESENTATION AREA – PROPOSAL PRESENTATION

See Section II – Item 2.7

3.1.7 EXCEPTIONS AND INSURANCE

See Section II – Items 2.8 and 2.9

3.2 RANKING

- A. The order of ranking or importance in the evaluation shall be as follows:

First: Price/Cost Area
Second: Technical Area
Third: Management Area
Fourth: Proposal Presentation Area

- B. Possible scores for each criterion shall be as follows:

5 – Exceptional
4 – Very Good
3 – Satisfactory
2 – Marginal
1 – Unacceptable

- C. Definitions for scoring are as follows:

Exceptional – The proposal meets all and exceeds many of the requirements of the RFP to the benefit of the City, and the information provided is of such a nature as to answer all questions without need for further inquiry. There are no corrective actions required, and no compromise of requirements is needed.

Very Good – The proposal meets all and exceeds some of the requirements of the RFP to the benefit of the City, and the information provided is of such a nature as to answer most questions without need for further inquiry. There are no corrective actions required, and no compromise of requirements is needed.

Satisfactory – The proposal meets the requirements of the RFP, and the information provided is of such a nature as to answer many questions without need for further inquiry. There are very few corrective actions required, and no substantive compromise of requirements is needed.

Marginal – The proposal does not meet some of the requirements of the RFP, and the information provided is of such a nature as to require some clarification. There are some corrective actions required, and some non-substantive compromise of requirements is needed.

Unacceptable – The proposal does not meet many of the requirements of the RFP, and the information provided is of such a nature as to require much clarification. There are many corrective actions required, and substantive compromise of requirements is needed.

D. Area Scoring

The score for each area will be determined by multiplying the sum of the criteria in each area by the area evaluation factor. The area evaluation factors are as follows:

Price/Cost Area: .60
Technical Area: .20
Management Area: .15
Proposal Presentation Area: .5

E. Final/Overall Scoring

The final proposal score will be determined by adding the area scoring. The sum of the area scores will be the final/overall score.

3.3 SELECTION COMMITTEE

A selection committee will review all proposals. Through this process, the City will determine which proposals are acceptable or unacceptable. The City will notify, in writing, the Offerors whose proposals are deemed to be unacceptable. Those Offerors offering proposals deemed to be acceptable by the City will be evaluated and scored by the selection committee. This scoring will determine which Offerors are considered to be in the competitive range and may be the basis for an award decision without further steps.

If the selection committee elects not to award based upon evaluation scoring, it may engage in a forced elimination process. To inform this process, it may require oral presentations or interviews with the Offerors considered to be in the competitive range. If oral presentations or interviews are

conducted, they may also be scored, or they may simply be considered as information supporting the forced elimination process. The selection committee may request revisions to the proposal from each of the Offerors at the conclusion of the interviews. The intent of the forced elimination process is to reach consensus. The decision will be based on all relevant factors, and based upon perception of best value. The final decision may or may not exactly reflect scoring ranking.

The City also reserves the right to request best and final offers from all Offerors at any point in the proposal evaluation process.

3.4 AWARD OF CONTRACT

It is anticipated that there will be negotiations or discussions with Offerors. However, the City reserves the right to award without negotiations or discussions. The City also reserves the right to award a contract not necessarily or merely to the Offeror with the most advantageous price. The City intends to award to the Offeror that demonstrates the best value to the City and the most substantiated ability to fulfill the requirements contained in this Request for Proposal. A contract prepared by the City will be finalized and/or negotiated with the successful Offeror. In the event a contract cannot be negotiated with the top ranked Offeror, the City may enter into negotiations with the second highest ranked Offeror, or the City may decide to call for new proposals. Immediately after the notice of award, the successful Offeror will begin planning in conjunction with the City of Colorado Springs staff (to be designated by the City) to ensure fulfillment of all its obligations. The successful Offeror may be expected to attend regular meetings as required by the City to assist in the preparation for startup.

SECTION IV – SPECIAL CONTRACT TERMS AND CONDITIONS

4.0 SPECIAL CONTRACT TERMS AND CONDITIONS/SPECIAL SOLICITATION PROVISIONS

In addition to the special contract terms and conditions listed below, the City's sample contract, see Exhibit 2, contains contract terms and conditions.

ADA Standards: It is a requirement of the City and required by law that any new or renovated facility meet the scoping and technical requirements of the 2010 ADA Standards for newly designed and constructed or altered local government facilities, public accommodations, and facilities. The selected Design Professional shall design the project so it both conforms to the 2010 ADA Standards, as applicable and as amended, and is readily accessible to and usable by individuals with disabilities. The selected Contractor shall build the project so it both conforms to the 2010 ADA Standards, as applicable and as amended, and is readily accessible to and usable by individuals with disabilities. Facilities that are designed, constructed, and/or altered facilities that meet or exceed the IBC 2015/ANSI A117.1 2009, used by Pikes Peak Regional Building Department, will be accepted as meeting or exceeding the 2010 ADA Standards.

SECTION V – EXHIBITS

5.0 EXHIBITS

Exhibit 1	Qualifications Documents
Exhibit 2	Sample Contract
Exhibit 3	Evaluation Scoresheet
Exhibit 4	Federal Forms

EXHIBIT 1 QUALIFICATIONS DOCUMENTS

FOLLOWS THIS PAGE



SOLICITATION QUALIFICATIONS DOCUMENTS

Please complete all sections of this document including the Solicitation Certification, Representations and Certifications, Qualification Statement, Exceptions, Minimum Insurance Requirements, and Signature Page.

Please submit all completed documents with your bid/ proposal and sign the Minimum Insurance Requirements and Signature Page.

Solicitation:

Solicitation Number:

Firm Name:

Date:

Address:

Federal Tax ID #:

Tax Classification:

Sole Proprietorship

Partnership

C Corporation

S Corporation

LLC

Nonprofit

DUNS Number:

OFFEROR REPRESENTATIVE

Offeror has appointed the following as the offeror's representative and contact for all questions or clarifications in regard to this offeror.

Name:

Telephone:

E-mail:



SOLICITATION CERTIFICATION

PLACE OF BUSINESS

Company's Principal Place of Business

Does Offeror Have an established office or facility in Colorado Springs? YES NO

If Yes, Indicate address below if different from principal place of business.

Year Facility Was Established

Percent of Work to be performed from principal place of business.

Percent of Work to be performed from Colorado Springs Facility

INSURANCE

Indicate your ability to provide a certificate of insurance evidencing the required coverage types and limits specified in Minimum Insurance Requirements Exhibit. (The certificate of insurance must reflect the City of Colorado Springs as an Additional Insured, as applicable.)

Initial Here

Indicate your Ability to Comply with the following requirements:

The City shall be added as an Additional Insured to all liability policies

YES

NO



Your property and liability insurance company is licensed to do business in Colorado

YES

NO

Your property and liability insurance company has an AM best rating of not less than B+ and/or VII

YES

NO

Worker's Compensation Insurance is carried for all employees and covers work done in Colorado.

YES

NO

Provide the name of your property and liability insurance company here:

FINANCIAL STATEMENTS

Current Financial Statements are not required for this solicitation.

Current Financial Statements are required for this solicitation. Please include financial statements as a separate document with your proposal.

Initial Here

COMPLETED PROPOSAL

Provide the completed and signed proposal. (Proposals must be identified as specified in this RFP document). All required Exhibits are attached.

Initial Here



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 proposal.

Initial Here #1

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) The Offeror must disclose with the signing of this proposal, the name of any officer, director, or agent who is also an employee of the City and any City employee who owns, directly or indirectly, an interest of ten percent (10%) or more in the Offeror’s firm or any of its branches.
- e) 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.
- f) 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.
- g) 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.
- h) The Offeror agrees to incorporate the substance of this clause (after substituting “Contractor” for “Offeror”) in all subcontracts under this offer.

Initial Here #2



3. 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.

Initial Here #3

4. 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 contact.

Initial Here #4

5. 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.

Initial Here #5

6. 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>.

Initial Here #6

7. 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 proposal 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 proposal, 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.

Name:

Telephone:

E-mail:

Initial Here #7

8. 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 proposal.
- 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 proposal based on my company's capabilities to provide quality products and/or services on time.

Initial Here #8

9. 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

Are Are Not

Presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency.

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

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.

Initial Here #9

10. 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.

Initial Here #10

11. 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:

<https://coloradosprings.gov/finance/page/procurement-regulations-and-documents>

Initial Here #11

12. 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.

<https://coloradosprings.gov/finance/page/procurement-regulations-and-documents>

Initial Here #12



13. 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 FraudHotline@ColoradoSprings.gov. Any of these mechanisms allow for anonymous reporting. For more information, please go to the website <https://coloradosprings.gov/cityfraud>.

Initial Here #13



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 solicitation. Please complete this form in its entirety. If a request in the Qualification Statement is contained in the proposal, indicate the section in the proposal where that information can be found.

1. TYPE OF LICENSE(S) HELD

2. TYPE OF SERVICE TO BE PROVIDED FOR THIS SOLICITATION

3. NUMBER OF YEARS IN BUSINESS

4. FIRM HISTORY & STAFF QUALIFICATIONS

In your proposal 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.

5. WHAT OTHER NAME(S) HAS YOUR COMPANY OPERATED UNDER

My Firm has not operated under any other names

6. HAVE YOU OR YOUR FIRM EVER FAILED TO COMPLETE ANY WORK AWARDED TO YOU?

Yes No

If Yes, Please Explain



7. HAS ANY OFFICER OF PARTNER OF YOUR ORGANIZATION EVER BEEN AN OFFICER OR PARTNER OF ANOTHER ORGANIZATION THAT FIALED TO COMPLETE A CONTRACT WITHIN THE LAST FIVE (5) YEARS?

Yes No

If Yes, Please Explain

8. HAS YOUR FIRM OR ANY PARTNERS OR OFFICERS EVER BEEN INVOLVED IN ANY BANKRUPTCY ACTION?

Yes No

If Yes, Please Explain

9. ARE YOU PRESENTLY INVOLVED IN ANY LITIGATION WITH ANY GOVERNMENT AGENCY?

Yes No

If Yes, Please Explain Type, Kind, Plaintiff, Defendant, etc. and state the current status:

10. BANK REFERENCE

Bank Name:

Address:

Contact:

Phone #:

E-mail:



11. SIMILAR PROJECTS

List Three similar projects (local or state-wide) from the last five (5) years. Include the location of the project, size of project (contract amount), contract name and information.

NOTE: Detailed information on these projects may also be requested in the solicitation package

Indicate here if this information is provided within your proposal and identify where in the proposal it is located.

1. Company:

Location of Project:

Contract Amount:

Contract Period of Performance:

Company Representative:

Representative's Title:

Representative's Address:

Representative's Phone #:

Representative's E-mail:

Brief Description of service/goods provided and how your firm was successful carrying out the scope of work of the contract.

2. Company:

Location of Project:

Contract Amount:

Contract Period of Performance:

Company Representative:



Representative's Title:

Representative's Address:

Representative's Phone #:

Representative's E-mail:

Brief Description of service/goods provided and how your firm was successful carrying out the scope of work of the contract.

3. Company:

Location of Project:

Contract Amount:

Contract Period of Performance:

Company Representative:

Representative's Title:

Representative's Address:

Representative's Phone #:

Representative's E-mail:

Brief Description of service/goods provided and how your firm was successful carrying out the scope of work of the contract.



12. SIMILAR PROJECTS CURRENTLY UNDER CONTRACT

list three projects currently under contract and in progress (local or state-wide) from the last five (5) years. Include the location of the project, size of project (contract amount), contract name and information. NOTE: Detailed information on these projects may also be requested in the solicitation package

Indicate here if this information is provided within your proposal and identify where in the proposal it is located.

1. Company:

Location of Project:

Contract Amount:

Contract Period of Performance:

Company Representative:

Representative's Title:

Representative's Address:

Representative's Phone #:

Representative's E-mail:

Brief Description of service/goods provided.

2. Company:

Location of Project:

Contract Amount:

Contract Period of Performance:

Company Representative:



Representative's Title:

Representative's Address:

Representative's Phone #:

Representative's E-mail:

Brief Description of service/goods provided.

3. Company:

Location of Project:

Contract Amount:

Contract Period of Performance:

Company Representative:

Representative's Title:

Representative's Address:

Representative's Phone #:

Representative's E-mail:

Brief Description of service/goods provided.



13. ADDITIONAL QUALIFICATION REQUIREMENTS

There are no additional qualification requirements for this solicitation.

There are additional qualification requirements as follows:



EXCEPTIONS

Please Indicate below if there are any exceptions taken to any of the terms, conditions, or specifications of these proposal documents or contract.

If there are exceptions taken to any of the terms, conditions, or specifications of the proposal document or contract, they must be clearly stated on an additional document attached to this exhibit and returned with your proposal.

NOTE: All potential Offerors are hereby advised that exceptions taken may be considered during the evaluation phase which may affect the final scoring of proposals. Offerors stipulating that the City must use their contract or agreement may be determined non-responsive and their Proposal determined unacceptable.

Please indicate below:

My Firm has no exceptions.

My Firm does have exceptions. (Attach Exceptions to this exhibit)



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.

- Commercial General Liability for limits not less than \$1,000,000 combined single limit with \$2,000,000 aggregate for bodily injury and property damage for each occurrence. Coverage shall include blanket contractual, broad form property damage, products and completed operations.
- Workers' Compensation and Employers Liability as required by statute. Employers Liability coverage is to be carried for a minimum limit of \$1,000,000.
- Automobile Liability covering any auto (including owned, hired, and non-owned autos) with a minimum of \$1,000,000 each accident combined single limit.
- Professional Liability Insurance covering any damages caused by an error, omission or any negligent acts with limits of not less than \$2,000,000 per occurrence and in the aggregate.
 - In the event that any professional liability insurance required by this Contract is written on a claims-made basis, Consultant warrants that any retroactive date under the policy shall precede the effective date of this Contract; and that either continuous coverage will be maintained or an extended discovery period will be exercised for a period of three (3) years beginning at the time work under this Contract is completed
 - Policy shall contain a waiver of subrogation against the CITY.
- Pollution Legal Liability Insurance shall apply to sudden and gradual pollution conditions resulting from the escape or release of smoke, vapors, fumes, acids, alkalis, toxic chemicals, liquids, or gases, natural gas, waste materials, or other irritants, contaminants, or pollutants (including asbestos). If the coverage is written on a claims-made basis, the Contractor warrants that any retroactive date applicable to coverage under the policy precedes the effective date of this Contract; and that continuous coverage will be maintained or an extended discovery period will be exercised for a period of three (3) years beginning from the time that work under this contract is completed. Policy limits shall be no less than \$1,000,000 per loss with \$2,000,000 aggregate coverage.

Except for workers' compensation and employer's liability insurance and Professional Liability, 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.

Name of Company

Signature

Date



SIGNATURE PAGE

By signing below, the Offeror certifies that no person or firm other than the Offeror or as otherwise indicated has any interest whatsoever in this offer or any Contract that may be entered into as a result of this offer and that in all respects the offer is legal and firm, submitted in good faith without collusion or fraud.

The undersigned additionally declares that it has carefully examined the Bid/Proposal information and the complete Solicitation prior to submitting a Bid / Proposal. The Offeror's signature will be considered the Offeror's acknowledgement of understanding and ability to comply with all items in the solicitation.

The undersigned acknowledges and understands the terms, conditions, Specifications and all Requirements contained and/or referenced and are legally authorized by the Offeror to make the above statements or representations.

Signature

Name (Printed)

Company Name

Title

Date

EXHIBIT 2 SAMPLE CONTRACT
CONSTRUCTION CONTRACT

Contract Number:		Project Name/Title	
Vendor/Contractor			
Contact Name:		Telephone:	
Email Address:			
Address:			
Federal Tax ID #		Please check one:	<input type="checkbox"/> Corporation <input type="checkbox"/> Individual <input type="checkbox"/> Partnership
City Contracting Specialist		City Dept Rep	
NOT TO EXCEED Contract Amount:		City Account #	
Contract Type:	Fixed Unit Price	Period of Performance:	

1. INTRODUCTION

THIS Fixed Unit Price CONTRACT ("Contract") is made and entered into this XXX day of XXX, 2022 by and between the City of Colorado Springs, a Colorado municipal corporation and home rule city, in the County of El Paso, State of Colorado, (the "City"), and _____ (the "Contractor").

THE CITY AND THE CONTRACTOR HEREBY AGREE AS FOLLOWS:

The City has heretofore prepared the necessary Contract Documents for the following Activity: XXXX.

The Contractor did on the XXX day of XXX, 2022 submit to the City the Contractor's written offer and proposal to do the work therein described under the terms and conditions therein set forth and furnish all materials, supplies, labor, services, transportation, tools, equipment, and parts for said work in strict conformity with the accompanying Contract Documents, which are attached hereto and incorporated herein by this reference, including the following:

1. This Contract
2. Schedule A – Price Sheet
3. Schedule B – General Construction Terms and Conditions
4. Schedule C – Special Contract Terms and Conditions
5. Schedule D – General Specifications
6. Schedule E – Special and Technical Specifications
7. Schedule F – Scope of Work
8. Exhibit 1 – Performance, Labor and Material Payment, and Maintenance Bonds
9. Exhibit 2 – Minimum Insurance Requirements

2. COMPENSATION/CONSIDERATION

THIS FIXED UNIT PRICE CONTRACT is established at the Not to Exceed amount of \$xxxxxxx.

Subject to the terms and conditions of the Contract Documents, Contractor agrees to furnish all materials and to perform all work as set forth in its proposal and as required by the Contract Documents.

All pricing is in accordance with the fixed unit prices found in Schedule A, as proposed by the Contractor. Payment made for actual quantities as set forth in Schedule B, General Construction Terms and Conditions. At no time shall the total obligation of the City exceed the not to exceed amount of this Contract.

3. TERM OF CONTRACT

Contractor will start work promptly after the Notice to Proceed and continue to work diligently until completed. The Contractor shall complete all work on an as ordered basis throughout the Contract period which is **the date of Notice to Proceed through April 30, 2022** ("Period of Performance") as per the specifications and drawings. The Contractor shall provide a two-year guarantee on all work performed under this Contract after the job has been completed and accepted.

4. INSURANCE

The Contractor shall provide and maintain acceptable Insurance Policy(s) consistent with the Minimum Insurance Requirements attached as Exhibit 2, which includes Property, Liability, and as otherwise listed in Exhibit 2. The City of Colorado Springs shall be reflected as an additional insured on the Property and Liability policy(s).

Further, Contractor understands and agrees that Contractor shall have no right of coverage under any existing or future City comprehensive, self, or personal injury policies. Contractor shall provide insurance coverage for and on behalf of Contractor that will sufficiently protect Contractor, or Contractor's agents, employees, servants or other personnel, in connection with the services which are to be provided by Contractor pursuant to this Contract, including protection from claims for bodily injury, death, property damage, and lost income. Contractor shall provide worker's compensation insurance coverage for Contractor and all Contractor personnel. Contractor shall file applicable insurance certificates with the City and shall also provide additional insurance as indicated in this Contract. ***A CURRENT CERTIFICATE OF INSURANCE IS REQUIRED PRIOR TO COMMENCEMENT OF SERVICES LISTING THE CITY AND XXXX AS ADDITIONALLY INSURED.***

5. RESPONSIBILITY OF THE CONTRACTOR

- A. The Contractor shall be responsible for the professional quality, technical accuracy, and the coordination of all Scope of Work services furnished by the Contractor under this Contract. The Contractor shall, without additional compensation, correct or revise any errors or deficiencies in services provided under this Contract to the satisfaction of the City.
- B. The City's review, approval of, acceptance of, or payment for the services required under this Contract shall not be construed to operate as a waiver of any rights under this Contract or of any cause of action arising out of the performance of this Contract, and the Contractor shall be and remain liable to the City for any and all damages to the City caused by the Contractor's negligent performance of any of the services furnished under this Contract.

- C. The rights and remedies of the City provided for under this Contract are in addition to any other rights and remedies provided by law.
- D. If the Contractor is comprised of more than one legal entity, each such entity shall be jointly and severally liable hereunder.

6. WORK OVERSIGHT

- A. The extent and character of the work to be done by the Contractor shall be subject to the general approval of the City's delegated Project Manager.
- B. If any of the work or services being performed does not conform with Contract requirements, the City may require the Contractor to perform the work or services again in conformity with Contract requirements, at no increase in Contract amount. When defects in work or services cannot be corrected by re-performance, the City may (1) require the Contractor to take necessary action to ensure that future performance conforms to Contract requirements and (2) reduce the Contract price to reflect the reduced value of the work or services performed.
- C. If the Contractor fails to promptly perform the defective work or services again or to take the necessary action to ensure future performance is in conformity with Contract requirements, the City may (1) by Contract or otherwise, perform the services and charge to the Contractor any cost incurred by the City that is directly related to the performance of such work or service or (2) terminate the Contract for breach of contract.

7. SUBCONTRACTORS, ASSOCIATES, AND OTHER CONTRACTORS

- A. Any subcontractor, outside associates, or other contractors used by the Contractor in connection with Contractor's work under this Contract shall be limited to individuals or firms that are specifically identified by the Contractor in the Contractor's proposal and agreed to by the City. The Contractor shall obtain the City's Project Manager's written consent before making any substitution of these subcontractors, associates, or other contractors.
- B. The Contractor shall include a flow down clause in all of its subcontracts, agreements with outside associates, and agreements with other contractors. The flow down clause shall cause all of the terms and conditions of this Contract, including all of the applicable parts of the Contract Documents, to be incorporated into all subcontracts, agreements with outside associates, and agreements with other contractors. The flow down clause shall provide clearly that there is no privity of contract between the City and the Contractor's subcontractors, outside associates, and other contractors.

8. KEY PERSONNEL

The key personnel listed in the proposal and/or below will be the individuals used in the performance of the work. If any of the listed key personnel leave employment or are otherwise not utilized in the performance of the work, approval to substitute must be obtained by the Contractor from the City's Project Manager. Any substitute shall have the same or a higher standard of qualifications that the key personnel possessed at the time of Contract award.

9. START AND CONTINUANCE OF WORK

It is further agreed that the Contractor will start work promptly and continue to work diligently until this Contract is completed.

10. APPROPRIATION OF FUNDS

This Contract is expressly made subject to the limitations of the Colorado Constitution and Section 7-60 of the Charter of the City of Colorado Springs. Nothing herein shall constitute, nor be deemed to constitute, the creation of a debt or multi-year fiscal obligation or an obligation of future appropriations by the City Council of Colorado Springs, contrary to Article X, § 20, Colo. Const., or any other constitutional, statutory, or charter debt limitation. Notwithstanding any other provision of this Contract, with respect to any financial obligation of the City which may arise under this Agreement in any fiscal year after the year of execution, in the event the budget or other means of appropriation for any such year fails to provide funds in sufficient amounts to discharge such obligation, such failure (i) shall act to terminate this 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 this Contract, including any sub-agreement, attachment, schedule, or exhibit thereto, by the City. As used herein, the term "appropriation" shall mean and include the due adoption of an appropriation ordinance and budget and the approval of a Budget Detail Report (Resource Allocations) which contains an allocation of sufficient funds for the performance of fiscal obligations arising under this Contract.

11. CHANGES

The Contractor and the City agree and acknowledge as a part of this Contract that no change order or other form or order or directive may be issued by the City which requires additional compensable work to be performed, which work causes the aggregate amount payable under the Contract to exceed the amount appropriated for this Contract as listed above, unless the Contractor has been given a written assurance by the City that lawful appropriations to cover the costs of the additional work have been made or unless such work is covered under a remedy-granting provision of this Contract. The Contractor and the City further agree and acknowledge as a part of this Contract that no change order or other form or order or directive which requires additional compensable work to be performed under this Contract shall be issued by the City unless funds are available to pay such additional costs, and, regardless of any remedy-granting provision included within this Contract, the Contractor shall not be entitled to any additional compensation for any change which increases or decreases the Contract completion date, or for any additional compensable work performed under this Contract, and expressly waives any rights to additional compensation, whether by law or equity, unless, prior to commencing the additional work, the Contractor is given a written change order describing the change in Contract completion date or the additional compensable work to be performed, and setting forth the amount of compensation to be paid, and such change order is signed by the authorized City representative, as defined below. The amount of compensation to be paid, if any, shall be deemed to cover any and all additional, direct, indirect or other cost or expense or profit of the Contractor whatsoever. It is the Contractor's sole responsibility to know, determine, and ascertain the authority of the City representative signing any change order under this Contract.

No change, amendment, or modification to this Contract shall be valid unless duly approved and issued in writing by the City of Colorado Springs Procurement Services Division. The City shall not be liable for any costs incurred by the Contractor resulting from work performed for changes not issued in writing by the City of Colorado Springs Procurement Services Division.

The following personnel are authorized to sign changes, amendments, or modifications to this Contract.

The Department Manager: up to \$149,999.99

The City of Colorado Springs Deputy Chief of Staff: \$150,000.00 to \$499,999.99

The City of Colorado Springs Chief of Staff: \$500,000.00 to \$1,999,999.99

The Mayor of Colorado Springs: Unlimited

12. ECONOMIC PRICE ADJUSTMENT

- A. The Contractor shall notify the City of Colorado Springs Procurement Services Division if, at any time during contract performance, the rate of pay for labor or the unit prices for material shown in Schedule A experiences a significant increase. A change in price shall be considered significant when the unit price of an item increases by 10% from the execution date of this Contract. The Contractor shall furnish notice of this increase within 60 days after the increase, or within any additional period that the City Procurement Services Division may approve in writing, but not later than the date of final payment under this Contract. The notice shall include the Contractor's proposal for an adjustment in the Contract unit prices to be negotiated under paragraph (b) of this clause, and shall include, in the form required by the City Procurement Services Division, supporting data explaining the cause, effective date, and amount of the increase and the amount of the Contractor's adjustment proposal.
- B. Promptly after the City Procurement Services Division receives the notice and data under paragraph (a) of this clause, the City Procurement Services Division and the Contractor shall negotiate a price adjustment in the contract unit prices and its effective date. However, the City Procurement Services Division may postpone the negotiations until an accumulation of increases in the labor rates (including fringe benefits) and unit prices of material shown in Schedule A results in an adjustment allowable under paragraph (c)(3) of this clause. The City Procurement Services Division shall modify this contract (1) to include the price adjustment and its effective date and (2) to revise the labor rates (including fringe benefits) or unit prices of material as shown in Schedule A to reflect the increases resulting from the adjustment. The Contractor shall continue performance at current rates pending agreement on, or determination of, any adjustment and its effective date.
- C. Any price adjustment under this clause is subject to the following limitations:
 1. Any adjustment shall be limited to the effect on unit prices of the increases in the rates of pay for labor (including fringe benefits) or unit prices for material shown in Schedule A. There shall be no adjustment for:
 - (i) Supplies or services for which the production cost is not affected by such changes;
 - (ii) Changes in rates or unit prices other than those shown in Schedule A; or
 - (iii) Changes in the quantities of labor or material used from those shown in Schedule A for each item.
 2. No upward adjustment shall apply to supplies or services that are required to be delivered or performed before the effective date of the adjustment, unless the Contractor's failure to deliver or perform according to the delivery schedule results from causes beyond the Contractor's control and without its fault or negligence, within the meaning of the Default clause.
 3. There shall be no adjustment for any change in rates of pay for labor (including fringe benefits) or unit prices for material which would not result in a net change of at least 3 percent of the then-current total contract price. This limitation shall not apply, however, if,

after final delivery of all line items, either party requests an adjustment under paragraph (b) of this clause.

4. The aggregate of the increases in any contract unit price made under this clause shall not exceed 10 percent of the original unit price.

13. ASSIGNMENT

No assignment or transfer by the Contractor of this Contract or any part thereof or of the funds to be received thereunder 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 under the terms of this Contract. In addition to the usual recitals in assignment contracts, the following language must be included in the assignment:

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.

14. CHOICE OF LAW

This Contract is subject to and shall be interpreted under the law of the State of Colorado, and the Charter, City Code, Ordinances, Rules and Regulations of the City of Colorado Springs, Colorado, a Colorado home rule city. Court venue and jurisdiction shall be exclusively in the Colorado District Court for El Paso County, Colorado. The Parties agree that the place of performance for this Contract is deemed to be in the City of Colorado Springs, El Paso County, State of Colorado. The Contractor shall ensure that the Contractor and the Contractor's employees, agents, officers and subcontractors are familiar with, and comply with, applicable Federal, State, and Local laws and regulations as now written or hereafter amended.

15. WORKERS' COMPENSATION INSURANCE

Contractor shall take out and maintain during the Period of Performance, 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 subcontractor's employees. Workers' Compensation Insurance shall include occupational disease provisions covering any obligations of the Contractor in accord with the provisions of the Workers' Compensation Act of Colorado.

16. 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, 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 caused by any willful or negligent error, omission or act or a failure to observe any applicable standard of care by the Contractor or any person employed by it or anyone for whose acts the Contractor is legally liable. In consideration of the award of this Contract, to the extent damages are covered by insurance, the Contractor agrees to waive all rights of subrogation against the City, its subsidiary, parent, associated and/or affiliated entities, successors, or assigns, its elected officials, trustees, employees, agents, and volunteers for losses arising from the work performed by the Contractor

for the City. The indemnification obligation shall survive the expiration or termination of this Contract.

17. INDEPENDENT CONTRACTOR

In the performance of the Contractor's obligations under this Contract, it is understood, acknowledged and agreed between the parties that the Contractor is at all times acting and performing as an independent contractor, and the City shall neither have nor exercise any control or direction over the manner and means by which the Contractor performs the Contractor's obligations under this Contract, except as otherwise stated within the Contract terms. The City shall not provide any direction to the Contractor on the work necessary to complete the project. Contractor understands that it is an independent contractor responsible for knowing how to perform all work or tasks necessary to complete project. The Contractor understands and agrees that the Contractor and the Contractor's employees, agents, servants, or other personnel are not City employees. The Contractor shall be solely responsible for payment of salaries, wages, payroll taxes, unemployment benefits or any other form of compensation or benefit to the Contractor or any of the Contractor's employees, agents, servants or other personnel performing services or work under this Contract, whether it is of a direct or indirect nature. Further in that regard, it is expressly understood and agreed that for such purposes neither the Contractor nor the Contractor's employees, agents, servants or other personnel shall be entitled to any City payroll, insurance, unemployment, worker's compensation, retirement or any other benefits whatsoever.

18. APPLICABLE LAW AND LICENSES

In the conduct of the services or work contemplated in this Contract, the Contractor shall ensure that the Contractor and all subcontractors comply with all applicable state, federal and City and local law, rules and regulations, technical standards or specifications. The Contractor shall qualify for and obtain any required licenses prior to commencement of work.

19. PRIOR AGREEMENTS

This is a completely integrated Contract and contains the entire agreement between the parties. Any prior written or oral agreements or representations regarding this Contract shall be of no effect and shall not be binding on the City. This Contract may only be amended in writing, and executed by duly authorized representatives of the parties hereto.

20. INTELLECTUAL PROPERTY

The Parties hereby agree, and acknowledge, that all products, items writings, designs, models, examples, or other work product of the Contractor produced pursuant to this Contract are works made for hire, and that the City owns, has, and possesses any and all ownership rights and interests to any work products of the Contractor made under this Contract, including any and all copyright, trademark, or patent rights, and that compensation to the Contractor for Agreement and acknowledgment of this intellectual property right section of this Contract is included in any compensation or price whatsoever paid to the Contractor under this Contract. It is the intent of the parties that the City shall have full ownership and control of the Contractor's work products produced pursuant to this Contract, and the Contractor specifically waives and assigns to the City all rights which Contractor may have under the 1990 Visual Artists Rights Act, federal, and state law, as now written or later amended or provided. In the event any products, items writings, designs, models, examples, or other work product produced pursuant to this Contract is deemed by a court of competent jurisdiction not to be a work for hire under federal copyright laws, this

intellectual property rights provision shall act as an irrevocable assignment to the City by the Contractor of any and all copyrights, trademark rights, or patent rights in the Contractor's products, items writings, designs, models, examples, or other work product produced pursuant to this Contract, including all rights in perpetuity. Under this irrevocable assignment, the Contractor hereby assigns to the City the sole and exclusive right, title, and interest in and to the Contractor's products, items writings, designs, models, examples, or other work product produced pursuant to this Contract, without further consideration, and agrees to assist the City in registering and from time to time enforcing all copyrights and other rights and protections relating to the Contractor's products, items writings, designs, models, examples, or other work product in any and all countries. It is the Contractor's specific intent to assign all right, title, and interest whatsoever in any and all copyright rights in the Contractor's products, items writings, designs, models, examples, or other work product produced pursuant to this Contract, in any media and for any purpose, including all rights of renewal and extension, to the City. To that end, the Contractor agrees to execute and deliver all necessary documents requested by the City in connection therewith and appoints the City as Contractor's agent and attorney-in-fact to act for and in Contractor's behalf and stead to execute, register, and file any such applications, and to do all other lawfully permitted acts to further the registration, prosecution, issuance, renewals, and extensions of copyrights or other protections with the same legal force and effect as if executed by the Contractor; further, the parties expressly agree that the provisions of this intellectual property rights section shall be binding upon the parties and their heirs, legal representatives, successors, and assigns.

21. WAIVERS

No waiver of default by the City of any of the terms, covenants, and conditions hereof to be performed, kept, and observed by the Contractor shall be construed, or shall operate, as a waiver of any subsequent default of any of the terms, covenants, or conditions herein contained to be performed, kept, and observed by the Contractor.

22. THIRD PARTIES

It is expressly understood and agreed that enforcement of the terms and conditions of this Contract, and all rights of action relating to such enforcement, shall be strictly reserved to the Parties hereto, and nothing contained in this Contract shall give or allow any such claim or right of action by any other or third person or entity on such Contract. It is the express intention of the Parties hereto that any person or entity, other than the Parties to this Contract, receiving services or benefits under this Contract shall be deemed to be incidental beneficiaries only.

23. TERMINATION

A. Termination for Convenience.

By signing this Contract, Contractor represents that it is a sophisticated business and enters into the Contract voluntarily, has calculated all business risks associated with this Contract, and understands and assumes all risks of being terminated for convenience, whether such risks are known or not known. Contractor agrees that the City may terminate this Contract at any time for convenience of the City, upon written notice to the Contractor. Contractor expressly agrees to and assumes the risk that the City shall not be liable for any costs or fees of whatsoever kind and nature if termination for convenience occurs before Contractor begins any work or portion of the work. Contractor further expressly agrees and assumes the risks that the City shall not be liable for any unperformed work, anticipated profits, overhead, mobilizations costs, set-up,

demobilization costs, relocation costs of employees, layoffs or severance costs, administrative costs, productivity costs, losses on disposal of equipment or materials, cost associated with the termination of subcontractors, costs associated with purchase orders or purchases, or any other costs or fees of any kind and nature, if Contractor has started or performed portions of the Contract prior to receiving notice from the City. The City shall be liable only for the portions of work Contractor actually satisfactorily completed up to the point of the issuance of the Notice of Termination for convenience. 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.

B. Termination for Cause: The occurrence of any one or more of the following events ("Event of Default") will justify termination for cause:

1. Contractor's failure to perform the work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule as adjusted from time to time.
2. Contractor's disregard of the laws or regulations of any public body having jurisdiction.
3. Contractor's disregard of the authority of Project Manager.
4. Contractor's violation in any material provision of the Contract Documents.
5. Contractor's failure to make prompt payments to its subcontractors, and suppliers of any tier, or laborers or any person working on the work by, through, or under the Contractor or any of them, any all of their employees, officers, servants, members, and agents.
6. Contractor files a petition commencing a voluntary case under the U.S. Bankruptcy Code, or for liquidation, reorganization, or an arrangement pursuant to any other U.S. or state bankruptcy Laws, or shall be adjudicated a debtor or be declared bankrupt or insolvent under the U.S. Bankruptcy Code, or any other federal or state laws relating to bankruptcy, insolvency, winding-up, or adjustment of debts, or makes a general assignment for the benefit of creditors, or admits in writing its inability to pay its debts generally as they become due, or if a petition commencing an involuntary case under the U.S. Bankruptcy Code or an answer proposing the adjudication of Contractor as a debtor or bankrupt or proposing its liquidation or reorganization pursuant to the Bankruptcy Code or any other U.S. federal or state bankruptcy laws is filed in any court and Contractor consents to or acquiesces in the filing of that pleading or the petition or answer is not discharged or denied within sixty (60) Calendar Days after it is filed.
7. A custodian, receiver, trustee or liquidator of Contractor, all or substantially all of the assets or business of Contractor, or of Contractor's interest in the Work or the Contract, is appointed in any proceeding brought against Contractor and not discharged within sixty (60) Calendar Days after that appointment, or if Contractor shall consent to or acquiesces in that appointment.
8. Contractor fails to commence correction of defective work or fails to correct defective work within a reasonable period of time after written notice.

If one or more of the events identified in Paragraphs 1-8 above occur, City may give Contractor written notice of the event and direct the event be cured. Any such Notice to Cure will provide Contractor a minimum of ten (10) calendar days to prepare and submit to the Project Manager a plan to correct the Event of Default. If such plan to correct the Event of Default is not submitted to the Project Manager within ten (10) days after the date of the written notice or such plan is unacceptable to the City, the City may, give Contractor (and the Surety, if any) written notice that Contractor's services are being terminated for cause. Upon delivery of the termination notice, City may terminate the services of Contractor in whole or in part, exclude

Contractor from the site, and take possession of the work and of all Contractor's tools, appliances, construction equipment, and machinery at the project site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion), incorporate in the work all materials and equipment stored at the site or for which City has paid Contractor but which are stored elsewhere, and finish the work as City may deem expedient. In such case, Contractor shall not be entitled to receive any further payment until Certificate of Completion of the work. In the event City terminates this Contract for Cause and the cost of completing the work exceeds the unpaid balance of the Contract price, Contractor shall pay City for any costs of completion which exceed the Contract price when combined with all amounts previously paid to Contractor. When exercising any rights or remedies under this paragraph City shall not be required to obtain the lowest price for the work performed. 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 the City nor any officer, agent or employee of the City shall be in any way liable or accountable to the Contractor or the Surety for the method by which the completion of the said work, or any portion thereof, may be accomplished or for the price paid.

Where Contractor's services have been so terminated by City, the termination will not affect any rights or remedies of City against Contractor or Surety then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by City will not release Contractor from liability.

- C. Termination Notice. Upon receipt of a termination notice, whether for convenience or cause, 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.
- D. Removal of Equipment. Except as provided 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.

24. BOOKS OF ACCOUNT AND AUDITING

The Contractor shall make available to the City if requested, true and complete records, which support billing statements, reports, performance indices, and all other related documentation. The City's authorized representatives shall have access during reasonable hours to all records, which are deemed appropriate to auditing billing statements, reports, performance indices, and all other related documentation. The Contractor agrees that it will keep and preserve for at least seven years all documents related to the Contract which are routinely prepared, collected or compiled by the Contractor during the performance of this Contract.

The City's Auditor and the Auditor's authorized representatives shall have the right at any time to audit all of the related documentation. The Contractor shall make all documentation available for examination at the Auditor's request at either the Auditor's or Contractor's offices, and without expense to the City.

25. COMPLIANCE WITH IMMIGRATION REFORM AND CONTROL ACT OF 1986

Contractor certifies that Contractor has complied with the United States Immigration Reform and Control Act of 1986. All persons employed by Contractor for performance of this Contract have completed and signed Form I-9 verifying their identities and authorization for employment.

26. LABOR

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 Project Manager shall have the authority to order the removal from the work of any person, including Contractor's or any subcontractor's employees, 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.

In accord with the Keep Jobs in Colorado Act, codified at sections 8-17-101, et seq., C.R.S., 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 et seq.; provided however, that this paragraph shall not apply if the Project receives federal funding.

In no event shall the City be responsible for overtime pay.

27. GRATUITIES

- A. This Contract may be terminated if the Mayor, the Mayor's designee, and/or the Procurement Services Manager determine, in their sole discretion, that the Contractor or any officer, employee, agent, or other representative whatsoever, of the Contractor offered or gave a gift or hospitality to a City officer, employee, agent or Contractor for the purpose of influencing any decision to grant a City contract or to obtain favorable treatment under any City contract.
- B. The terms "hospitality" and "gift" include, but are not limited to, any payment, subscription, advance, forbearance, acceptance, rendering or deposit of money, services, or anything of value given or offered, including but not limited to food, lodging, transportation, recreation or entertainment, token or award.
- C. Contract termination under this provision shall constitute a breach of contract by the Contractor, and the Contractor shall be liable to the City for all costs of reletting the contract or completion of the project. Further, if the Contractor is terminated under this provision, or violates this provision but is not terminated, the Contractor shall be subject to debarment under the City's Procurement Regulations. The rights and remedies of the City provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

28. NON-DISCRIMINATION

In accord with section 24-34-402, C.R.S., Title VII of the Civil Rights Act of 1964, Americans with Disabilities Act of 1990 as amended, all applicable federal and state laws, the Contractor will not discriminate against any employee or applicant for employment because of disability, race, creed, color, sex, sexual orientation, gender identity, gender expression, religion, age, national origin, or ancestry.

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.

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 disability, race, creed, color, sex, sexual orientation, gender identity, gender expression, religion, age, national origin, or ancestry.

29. ORDER OF PRECEDENCE

Any inconsistency in this Contract shall be resolved by giving precedence in the following order:

- A. This Contract document with its terms and conditions
- B. Specific Construction Terms and Conditions
- C. General Construction Terms and Conditions
- D. The Statement of Work
- E. Specific Specifications
- F. General Specifications
- G. Other Appendices, Attachments, Exhibits, or Schedules

30. HEADINGS

The section headings contained in this Contract are for reference purposes only and shall not affect the meaning or interpretation of this Contract.

31. DISPUTES

- A. All administrative and contractual disputes arising from or related to this Contract other than those arising under Unanticipated Circumstances provisions (in section 107.27 of Schedule B General Construction Terms and Conditions) shall be addressed in the following manner:
 - 1. If either Party disputes or disagrees with a Contract term or the other Party's interpretation of a Contract term or has any other administrative or contractual dispute not addressed in the Unanticipated Circumstances provisions, such Party shall promptly give the other Party written notice of said dispute.
 - 2. The Parties shall hold a meeting as soon as reasonably possible, but in no event later than thirty (30) calendar days from the initial written notice of the dispute, attended by persons with decision-making authority regarding the dispute, to attempt in good faith to negotiate a resolution of the dispute; provided, however, that no such meeting shall be deemed to vitiate or reduce the obligations and liabilities of the Parties or be deemed a waiver by a Party of any remedies to which such Party would otherwise be entitled unless otherwise agreed to by the Parties in writing.
 - 3. If, within thirty (30) calendar days after such meeting, the Parties have not succeeded in negotiating a resolution of the dispute, they agree to submit the dispute to non-binding mediation and to bear equally the costs of the mediation.
 - 4. The Parties will jointly appoint a mutually acceptable mediator. If they fail to do so within twenty (20) calendar days from the conclusion of the negotiation period, they shall each select a mediator. The two mediators will then appoint a third mediator who shall conduct mediation for the Parties as the sole mediator.
 - 5. The Parties agree to participate in good faith in the mediation and negotiations for a period of thirty (30) calendar days. The substantive and procedural law of the State of Colorado

shall apply to the proceedings. If the Parties are not successful in resolving the dispute through mediation, then the Parties shall be free to pursue any other remedy afforded by the laws of the State of Colorado.

6. Until final resolution of any dispute hereunder, the Contractor shall diligently proceed with the performance of this Contract as directed by the City. For purposes of this Contract, termination for convenience shall not be deemed a dispute. The City of Colorado Springs and the Contractor agree to notify each other in a timely manner of any claim, dispute, or cause of action arising from or related to this Contract, and to negotiate in good faith to resolve any such claim, dispute, or cause of action. To the extent that such negotiations fail, the City of Colorado Springs and the Contractor agree that any lawsuit or cause of action that arises from or is related to this Contract shall be filed with and litigated only by the Colorado District Court for El Paso County, CO.

32. DELIVERY

The City may cancel this Contract or any portion thereof if delivery is not made when and as specified, time being of the essence in this Contract. Contractor shall pay the City for any loss or damage sustained by the City because of failure to perform in accordance with this Contract.

33. PAYMENTS

All invoices shall be sent to the Project Manager identified in this Contract.

The City will pay the Contractor, upon submission of proper invoices, the prices stipulated in the Contract for services rendered and accepted, less any deductions provided in this Contract within 30 days (Net 30). The City will not pay late fees or interest. Any discount payment terms offered on the invoice may be taken by the City.

All payments for Construction will be made in accordance with the Payment provisions found in Schedule B – General Construction Terms and Conditions.

Each invoice must contain at least the following information:

Contract number, issued purchase order number, invoice number, invoice date, timeframe covered by invoice, type and amount of labor and materials used for that time period, dollar amount in unit price, extended price, and total value of invoice.

34. INSPECTION OF SERVICES

The Contractor is responsible for performing or having performed all inspections and tests necessary to substantiate that the services furnished under this Contract conform to Contract requirements, including any applicable technical requirements for specified manufacturers' parts. This clause takes precedence over any City inspection and testing required in the Contract's specifications, except for specialized inspections or tests specified to be performed solely by the City.

- A. Definition of "services", as used in this clause, includes services performed, workmanship, and material furnished or utilized in the performance of services.
- B. The Contractor shall provide and maintain an inspection system acceptable to the City covering the services under this Contract. Complete records of all inspection work performed

by the Contractor shall be maintained and made available to the City during Contract performance and for as long afterwards as the Contract requires.

- C. The City has the right to inspect and test all services called for by the Contract, to the extent practicable at all times and places during the term of the Contract. The City will perform inspections and tests in a manner that will not unduly delay the work.
- D. If the City performs inspections or test on the premises of the Contractor or a subcontractor, the Contractor shall furnish, and shall require subcontractors to furnish, at no increase in Contract price, all reasonable facilities and assistance for the safe and convenient performance of these duties.

35. SECURITY

The City maintains security requirements regarding access to City buildings and other City workplaces and worksites on City property. All Contractor personnel accessing City buildings, workplaces, or worksites, may be required to produce a valid, Government issued picture identification. Contractor personnel lacking such identification may not be allowed access to such sites. No costs incurred by the Contractor due to City security requirements shall be allowable or payable under this Contract.

36. TIME IS OF THE ESSENCE

In as much as the Contract concerns a needed or required service, the terms, conditions, and provisions of the Contract relating to the time of performance and completion of work are of the essence of this Contract. The Contractor shall begin work on the day specified and shall prosecute the work diligently so as to assure completion of the work within the number of calendar days or date specified, or the date to which the time for completion may have been extended.

37. EMPLOYMENT OF LABOR

The Contractor shall comply with, and defend 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.

38. SALES TAX

The Contractor must have a tax-exemption certificate from the Colorado Department of Revenue for this project. The certificate does not apply to City of Colorado Springs Sales and Use Tax which shall be applicable. The tax exempt project number and the exemption certificate only applies 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**. Such purchases and rentals are subject to full applicable taxation.

All contracts with subcontractors must include the City of Colorado Springs Sales and Use Tax on the work covered by the Contract, and other taxes as applicable.

Note: For all equipment, materials and supplies incorporated into the work purchased from vendors or suppliers not licensed to collect City Sales Tax (i.e. out of state suppliers, etc.), City Use Tax is due and payable to the City. The Contractor shall execute and deliver and shall cause the Contractor's subcontractors to execute and deliver to the City Sales Tax Office, the appropriate ST forms as designated by the City Sales Tax Office. These forms shall list all said equipment, materials and supplies and the corresponding use tax due, along with payment for said taxes. Any outstanding taxes due may be withheld from the final payment due the Contractor and may result in suspension of Contractor from bidding on City projects.

Forms and instructions can be downloaded at <https://coloradosprings.gov/sales-tax>. 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

The Contractor's payment or exemption of State of Colorado, El Paso County and City Sales and Use Taxes shall be as specified herein.

39. SEVERABILITY

If any terms, conditions, or provisions of this Contract shall be held unconstitutional, illegal, or void, such finding shall not affect any other terms, conditions, or provisions of this Contract.

40. LIABILITY OF CITY EMPLOYEES

All authorized representatives of the City are acting solely as agents and representatives of the City when carrying out and exercising the power or authority granted to them under the Contract. There shall not be any liability on them either personally or as employees of the City.

41. USE OF CITY NAME OR LOGO

Except as otherwise provided in this Contract, the Contractor shall not refer to this Contract or the City of Colorado Springs in any advertising or promotions in such a manner as to state or imply that the product or service provided is endorsed or preferred by the City of Colorado Springs, its employees, or its Departments, or is considered by these entities to be superior to other products or services. Any use of the name or logo of the City of Colorado Springs in advertising or promotions must be approved in writing by the City of Colorado Springs Contracts Specialist assigned to the Contract prior to such use.

42. TRAVEL

If travel expenses are included as a line item in this Contract, all travel expenses incurred and billable by the Contractor are subject to City approval. Air travel shall be limited to the round trip "economy coach" fare. Travel from the Colorado Springs Airport is encouraged. Unless there are extenuating circumstances, the Contractor should take advantage of lower airfares by purchasing tickets more than 14 days in advance of travel. In-state travel by air must be more economical than travel by private vehicle. Use of a private vehicle may be reimbursed per mile at the current rate published by the IRS annually. Short-term parking, long-term parking or cab fare associated

with airport departure and arrival may be allowable expenses. Valet parking will not be allowed unless it is the least expensive or only option. Car rental rates may be reimbursed for car rentals no greater than the intermediate or standard classification. The City will not reimburse any other travel methods or expenses. The City will pay for lodging, meals, and miscellaneous expenses on a per diem basis only, in accordance with the current per diem rates published by the IRS annually. The City will not pay for Contractor expenses exceeding the per diem rates. Receipts for all reimbursable expenses must be provided with the Contractor's invoice.

43. ELECTRONIC SIGNATURE

This Agreement and all other documents contemplated hereunder may be executed using electronic signature with delivery via facsimile transmission, by scanning and transmission of electronic files in Portable Document Format (PDF) or other readily available file format, or by copy transmitted via email, or by other electronic means and in one or more counterparts, each of which shall be (i) an original, and all of which taken together shall constitute one and the same agreement, (ii) a valid and binding agreement and fully admissible under state and federal rules of evidence, and (iii) enforceable in accordance with its terms

44. APPENDICES

The following Appendices are made a part of this Agreement:

1. Schedule A – Price Sheet
2. Schedule B – General Construction Terms and Conditions
3. Schedule C – Special Contract Terms and Conditions
4. Schedule D – General Specifications
5. Schedule E – Special and Technical Specifications
6. Schedule F – Scope of Work
7. Exhibit 1 – Performance, Labor and Material Payment, and Maintenance Bonds
8. Exhibit 2 – Minimum Insurance Requirements

CONTRACT SIGNATURE PAGE

IN WITNESS WHEREOF, the parties have caused these presents to be executed on the day and the year first above written.

This Contract is executed in one (1) original copy.

THE CITY OF COLORADO SPRINGS, COLORADO:

SECOND PARTY:
Corporate Name
Signature Date
Title

EXHIBIT 3 – EVALUATION SCORESHEET

**PROPOSAL EVALUATION SCORE SHEET
SOLICITATION NUMBER AND TITLE:**

RFP EVALUATION CRITERIA DESCRIPTION	SCORE
<p>1. TECHNICAL AREA</p> <p>The Offeror must explain its overall solution, considering the scope of work or statement of work provided. The content must include, but not necessarily be limited to, the following information.</p>	
<p>A. Understanding of and compliance with technical requirements</p>	
<p>In the Technical Area, the Offeror should address each work area in sufficient detail to demonstrate a clear and full understanding of the work. The proposal should not merely parrot the requirements of the RFP. Further, the Offeror should provide evidence of sufficient planning to ensure the work is completed on schedule and within budget.</p> <p>Consider the following questions.</p> <ol style="list-style-type: none"> 1. Does the proposal demonstrate a firm understanding of the requirements and goals of the Statement of Work, as well as industry standards and reasonable expectations for a company in the industry? 2. Does the proposal fully and completely address each requirement and goal of the Statement of Work? 3. Does the proposal provide solutions to indicate that requirements and goals will be met on schedule? 4. Does the technical solution seem realistic? 5. Does it generally appear that the Offeror knows and thoroughly understands the business and requirement? <p>COMMENTS:</p>	<p>5 – Exceptional 4 – Very Good 3 – Satisfactory 2 – Marginal 1 – Unacceptable</p>
<p>B. Project Approach</p>	
<p>In the Technical Area, the Offeror should clearly present proposed solutions and indicate that it has performed adequate planning to accomplish tasks as defined in the Statement of Work. Innovations, efficiencies, and detailed specifics are all encouraged.</p> <p>The Offeror must at least address the following areas:</p> <ol style="list-style-type: none"> 1. Construction phasing and traffic control for the project. Explain the phases, traffic control for each phase, and the logic in the construction phasing. 	<p>5 – Exceptional 4 – Very Good 3 – Satisfactory 2 – Marginal 1 – Unacceptable</p>

<ol style="list-style-type: none"> 2. Erosion and sediment control during all phases of construction as well as post construction efforts through permit closure. 3. Coordination with utilities. Discuss your understanding of the key utility relocations required for this project and how you will coordinate and phase your construction to both facilitate and accommodate those relocations and the constraints that they impose. 4. Schedule Management. Discuss your approach to schedule management including updating and reporting progress of the work. 5. Quality Control. Discuss your quality control plan, processes and approach to ensure that the City receives a quality product. 6. Safety. Discuss the contractor’s approach and commitment to safety for both construction workers and the public traveling through the construction site. 7. Potential issues that your firm foresees with this project and how you would make adjustments if encountered. Describe factors limiting construction phasing flexibility and potential remedies. <p>Consider the following questions.</p> <ol style="list-style-type: none"> 1. Does the proposal include a complete plan to accomplish each requirement, including subcontracting (if applicable)? 2. Does the proposal demonstrate that appropriate and qualified personnel and equipment will be provided to carry out the requirement? 3. Is the proper level of effort directed toward each requirement? Does the level of effort look unrealistically low or unreasonably high? <p>COMMENTS:</p>	
<p>Sum of Ratings in Technical Area (Add numbers in Section 1.A. and 1.B):</p>	
<p>2. MANAGEMENT AREA</p> <p>The Offeror must explain its method of managing the work to be performed. The content must include, but no necessarily be limited to, the following information.</p>	
<p>A. Program Management Controls</p>	
<p>In the Management Area, the Offeror should provide a plan of operation, to include management of personnel, workload, schedule, and budget. It should also include an organization chart which demonstrates clear and effective lines of authority, responsibility, and communication for management, supervisory, and technical personnel. The plan should address which job classification or personnel will be assigned to each task and how that determination is made. Basic human resource</p>	<p>5 – Exceptional 4 – Very Good 3 – Satisfactory 2 – Marginal 1 – Unacceptable</p>

<p>management concepts should be addressed, including hiring, firing, discipline, incentive plans, etc. If the Offeror plans to subcontract more than 10% of the work, include information on how the Offeror plans to manage its subcontractors.</p> <p>The Offeror shall provide a detailed construction schedule for the project showing the key construction activities and how they will meet or better the County's timeframe and maximize construction efficiency to provide the best value to the City and minimize impacts to the public. The schedule shall be based on the Offeror's understanding and approach to the work as addressed above. Schedules submitted for this proposal shall assume a start date of January 1, 2025.</p> <p>Consider the following questions.</p> <ol style="list-style-type: none"> 1. Does the proposal address the issues above in sufficient detail to demonstrate a sophisticated and mature management control system? 2. Are program management controls consistent with the technical portion of the proposal, especially regarding schedule and level of effort? 3. Does the plan and controls indicate that the Offeror will obtain, keep, and efficiently utilize high quality personnel? 4. Does the offer address corrective actions? 5. Does the proposal explain how the Offeror will remain within schedule and budget? <p>COMMENTS:</p>	
<p>B. Past Performance/Relevant Experience and Key Personnel</p>	
<p>In the Management Area, the Offeror should provide at least three references or contracts demonstrating that it successfully provided services/products same or similar to those required in the RFP. The proposal should adequately explain how the projects were completed on schedule and within budget.</p> <p>Consider the following questions.</p> <ol style="list-style-type: none"> 1. Does the proposal include at least three references or past performance citations? 2. Are the references or past performance citations relevant to the requirements of the Statement of Work of the RFP? 3. Does the Offeror explain how they were successful on the projects provided as past performance? 4. Does the Offeror apply the past performance to the City requirement in such a way as to demonstrate added value due to experience? <p>In the Management Area, resumes must be provided for all personnel considered key, as required by the RFP. It is highly recommended that the Offeror provide sufficient content and detail to answer completely the following questions. Resumes do not count toward the page limitation. Explain how the key personnel were related to the projects cited as relevant past performance.</p>	<p>5 – Exceptional 4 – Very Good 3 – Satisfactory 2 – Marginal 1 – Unacceptable</p>

<p>Consider the following questions.</p> <ol style="list-style-type: none"> 1. Does the Offeror provide complete resumes, including education, experience, background information, accomplishments, and other pertinent information? 2. Does the Offeror provide resumes for all key personnel, as required by the RFP? 3. Do the resumes demonstrate adequate professional, technical, and management levels to accomplish the work effectively and efficiently? <p>COMMENTS:</p>	
<p>Sum of Ratings in Management Area (Add numbers in Sections 2.A. and 2. B.)</p>	
<p>3. PRICE/COST AREA</p>	
<p>In the Price Area, the Offeror should provide a detailed breakdown of the price for each year of performance. The price must be fully loaded/all-inclusive and include unit cost for material, labor, other direct costs (e.g. travel), indirect costs (i.e. overhead and general and administrative costs), and profit/fee. Offers must include sufficient detail to allow insight into the fairness and reasonableness of the price. If the contract type will be T&M, labor categories, labor rates, separated profit, and estimated material costs must be included in detail.</p> <p>In addition, although price may not be the most important factor, it is still very important to the City of Colorado Springs. The Offeror's pricing must be competitive as compared to the budget amount, market pricing in the industry, and the pricing of the other Offerors.</p> <p>Consider the following questions:</p> <ol style="list-style-type: none"> 1. How does the price compare to the industry competition? 2. If low, is it unrealistically low? 3. If high, is there demonstrated added value for the additional cost? <p>COMMENTS:</p>	<p>5 – Exceptional 4 – Very Good 3 – Satisfactory 2 – Marginal 1 – Unacceptable</p>
<p>Total Price/Cost Area (Insert number from Section 3 evaluation above):</p>	
<p>4. PROPOSAL PRESENTATION</p>	
<p>Presentation is an important factor. Offerors should provide a highly professional product, which is complete, accurate, easily understood, and effectively presented.</p> <p>COMMENTS:</p>	<p>5 – Exceptional 4 – Very Good 3 – Satisfactory 2 – Marginal 1 – Unacceptable</p>

Total Proposal Presentation Area (Insert number from Section 4 evaluation above):	
EXCEPTIONS PROPOSED	
What (if any) exceptions (redlines to our terms and conditions) were proposed? Are they acceptable? COMMENTS:	Pass/Fail
INSURANCE EXCEPTIONS PROPOSED	
What (if any) exceptions (redlines to our insurance terms and conditions) were proposed? Are they acceptable? COMMENTS:	Pass/Fail
TOTAL SCORE – Add Evaluation Scores from Sections 1-4 and location bonus (if applicable). The sum is the total score.	Total Score:

EXHIBIT 4 – FEDERAL FORMS

FOLLOWS THIS PAGE

CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS

The undersigned duly authorized official of the proposer certifies to the best of its knowledge and belief, that it and its principals:

- A. Are not presently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from covered transactions by any Federal department or agency.

- B. Have not within a three-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain or performing a public (federal, state or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements or receiving stolen property.

- C. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state or local) with commission of any of the offenses enumerated in paragraph (B) of this certification; and

- D. Have not within a three-year period preceding this application/proposal had one or more public transaction (federal, state or local) terminated for cause or default.

- E. Are not on the Comptroller General's List of Ineligible Bidders or any similar list maintained by any other governmental entity.

Where the proposer is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

(Check One)

I DO CERTIFY (_____) I DO NOT CERTIFY (_____)

Date: _____

Signature: _____

Title: _____

RESTRICTIONS ON LOBBYING CERTIFICATION

Pursuant to United States Public Law 101-121, Section 319, the undersigned duly authorized official of the proposer hereby certifies, to the best of her/his knowledge and belief, that:

1. No Federal appropriated funds have paid or will be paid, by or on behalf of the undersigned, to any person for the purpose of influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress, in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person or agency for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress, in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit a Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions.

3. The undersigned duly authorized official shall require and ensure that the language of this certification be included in any award documents for subcontracts, grants, loans, and cooperative agreements, and that all subcontractors shall so certify and disclose accordingly.

This Certification is a material representation of fact, upon which reliance was placed when this transaction was made or entered into. The submission of this Certification is a prerequisite for making or entering into this transaction, imposed by Title 31 USC Section 1352. Any proposer (person) who fails to file the required certification shall be subject to civil penalty of not less than ten thousand dollars (\$10,000) and not more than one hundred thousand dollars (\$100,000) for each such failure to file.

Proposer: _____

Signature: _____

Title: _____

Date: _____

NON-COLLUSION AFFIDAVIT

The undersigned duly authorized official of the proposer hereby certifies, to the best of her/his knowledge and belief, that:

1. That I am an officer or employee of the _____ (proposing entity) having the authority to sign on behalf of the corporation, and,

2. That the prices in the attached proposal were arrived at independently by _____ (proposing entity) without collusion, consultation, communication, or any agreement, for the purpose of restricting competition as to any matter relating to such prices with any other proposer or with any other competitor regarding an understanding, or planned common course of action with any other vendor of materials, supplies, equipment, or service described in the RFP/IFB designed to limit independent proposals or competition; and

3. That unless otherwise required by law, the contents and prices contained in the proposal have not been communicated by _____(proposing entity) or its employees or agents to any person not an employee or agent of _____ (proposing entity), or its surety on any bond furnished with the proposal, and will not be communicated to any such person prior to the official opening of the proposal; and,

4. That I have fully informed myself regarding the accuracy of the statements made in this affidavit.

Proposer: _____

Signature: _____

Title: _____

Date: _____

EQUAL EMPLOYMENT STATUS REPORT

Contractor's Name _____

Street Address _____

City _____ State _____ Zip Code _____

This firm is:

<input type="checkbox"/>	Independently owned and operated
<input type="checkbox"/>	An affiliate parent company
<input type="checkbox"/>	A subsidiary of address
<input type="checkbox"/>	A division City and State

#	Statement	Has	Has Not
1	Developed and has on file an affirmative action program in conformance with 41 CFR 60-2		
2	Participated in any previous contract or subcontract subject to the equal opportunity clause either with the City of any Federal Agency		
3	Filed with the City, or where applicable, joint Reporting Committee, or other Federal Agency, all reports due under the applicable contract(s) or subcontract(s)		
4	Contractor's Equal Employment Opportunity Program been subject to a Federal Equal Opportunity Compliance Review, If so state date of Review: _____		

Signature _____

Date _____

Title _____

BUILD AMERICA, BUY AMERICA (BABAA) (if applicable)

The undersigned certifies, to the best of their knowledge and belief, that:

The Build America, Buy America Act (BABAA) requires that no federal financial assistance for “infrastructure” projects is provided “unless all of the iron, steel, manufactured products, and construction materials used in the project are produced in the United States.” Section 70914 of Public Law No. 117-58, §§ 70901-52.

The undersigned certifies that for the _____ (Project Name and Location) _____ the iron, steel, manufactured products, and construction materials used in this contract are in full compliance with the BABAA requirements including:

1. All iron and steel used in the project are produced in the United States. This means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
2. All manufactured products purchased with federal financial assistance must be produced in the United States. For a manufactured product to be considered produced in the United States, the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55% of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation.
3. All construction materials are manufactured in the United States. This means that all manufacturing processes for the construction material occurred in the United States.

“The, _____ [Contractor or Subcontractor] ___, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the [Contractor or Subcontractor] understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.”

Signature of [Contractor’s or Subcontractor’s] Authorized Official

Name and Title of [Contractor’s or Subcontractor’s] Authorized Official

Date

SECTION VI – SCHEDULES

6.0 SCHEDULES

Schedule A	Price Sheet
Schedule B	General Construction Terms and Conditions
Schedule C	Technical Provisions
Schedule D	Scope of Work
Schedule E	Measurement and Payment
Schedule F	Technical Specifications
Schedule G	Clauses for Contracts Subject to Federal Requirements
Schedule H	Construction Plan Set
Schedule I	Utility Plan Set
Schedule J	GEC Plans
Schedule K	Design Report
Schedule L	Stormwater Management Plan

SCHEDULE A – PRICE SHEET

PLEASE COMPLETE SCHEDULE A – PRICE SHEET IN EXCEL FORMAT

PLEASE ENTER PROJECT BASE PRICE IN BIDNET SPREADSHEET (TOTAL PROJECT COST)

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:

<https://www.coloradosprings.gov/finance/page/procurement-regulations-and-documents>

The referenced General Construction Terms and Conditions will be incorporated in the resultant Contract.

SCHEDULE C – TECHNICAL PROVISIONS

FOLLOWS THIS PAGE

**SCHEDULE C – TECHNICAL PROVISIONS –
PARK VISTA DRAINAGE IMPROVEMENTS
SPECIAL PROVISIONS**

The Project Specific Special Provisions amend or supplement the General Provisions of the Construction Contract and other provisions of the Contract Documents as indicated below. All Provisions, which are not so amended or supplemented, remain in full force and effect.

C.1 Standard Specifications

The following are the Standard Specifications which 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.

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

C.1.1 CITY OF COLORADO SPRINGS

The “City of Colorado Springs Engineering Division Standard Specifications”, 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. This document is referenced as the “City Standard Specifications”.

Copies are available from the City of Colorado Springs, Office Services Division, Suite L01, 30 South Nevada Avenue, Colorado Springs, during regular business hours or at the following web address: <https://coloradosprings.gov/public-works/page/standard-specifications-manual>

The “City of Colorado Springs Drainage Criteria Manual, Volume II”, May 2014, 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. This document is referenced as the “City Drainage Criteria Manual”.

Copies are available from the City of Colorado Springs, Office Services Division, Suite L01, 30 South Nevada Avenue, Colorado Springs, during regular business hours or at the following web address: <https://coloradosprings.gov/public-works/page/reference-materials>

The ***Pikes Peak Region Asphalt Paving Specifications*** dated March 28, 2022 is herein incorporated by reference.

The ***City of Colorado Springs Signage and Pavement Markings Guidelines Supplement to the Manual on Uniform Traffic Control Devices*** revised May 21, 2018 is herein incorporated by reference.

Per Section 9.0 of the City Drainage Criteria Manual, the “Construction BMP Fact Sheets” from the Mile High Flood District Manual, Volume 3 are applicable. These Fact Sheets can be downloaded at the following web address: <http://mfhd.org/volume-three>

The “City of Colorado Springs Traffic Controls for Street Construction, Utility Work, and Maintenance Operations”, 10/27/2009 Edition, 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 are available from the City of Colorado Springs, Office Services Division, Suite L01, 30 South Nevada Avenue, Colorado Springs, during regular business hours.

C.1.2 Mile High Flood District

The Standard Specifications for “Mile High Flood District”, current edition/revisions 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. Specifications can be obtained at the following web address: <https://mhfd.org/specifications>

C.1.3 COLORADO DEPARTMENT OF TRANSPORTATION SPECIFICATIONS

The Standard specifications from the “Colorado Department of Transportation Standard Specifications for Road and Bridge Construction”, 2023 shall apply to this project. 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 or at the following web address:

<https://www.codot.gov/business/designsupport/cdot-construction-specifications/2017-construction-standard-specs/2017-specs-book>

The CDOT approved products list can be found at the following web address:

<https://apps.coloradodot.info/apl/aplsearch.cfm>

C.1.4 COLORADO SPRINGS UTILITIES

The Standard Specifications for water line construction and protection shall be the “Colorado Springs Utilities Water Line Extension and Service Standards”, revised 2023, except as modified hereinafter, which are incorporated in the contract documents by reference as though embodied herein in their entirety.

The Standard Specifications for lighting installation, electrical distribution and electrical transmission line construction and protection shall be the **Colorado Springs Utilities Electric Line Extension and Service Standards** revised 2018.

The Standard Specifications for wastewater line construction and protection shall be the **Colorado Springs Utilities Wastewater Line Extension and Service Standards** revised 2023.

Copies are available from the Colorado Springs Utilities’ Development Services, 111 S. Cascade, Suite 105, Colorado Springs, CO 80903, during regular business hours, or at the following web address:

<https://www.csu.org/Pages/standards-bulletins.aspx>

C.2 PROJECT SPECIFIC SPECIAL CONDITIONS

C.2.1 GENERAL

Work to be completed under this contract consists of furnishing all labor, materials, equipment, accessories, and performing all operations to complete the project work in accordance with the Drawings and Specifications.

All work shall be completed in accordance with the *City of Colorado Springs City Engineering Division General Provisions and Standard Specifications*, (revised March 2005,) referred to hereinafter as **Standard Specifications**, except as modified in these **Special Conditions** and the **Project Special Technical Specifications** contained in Schedule F of this document.

The Contractor shall visit the jobsite to carefully examine the proposed work. The Contractor shall also thoroughly review the Drawings and Specifications. The Contractor shall satisfy themselves as to the character, quality, and quantities of work to be performed, materials to be furnished, and as to the requirements of these Specifications.

C.3 PROJECT DESCRIPTION

C.3.1 GENERAL

The project consists of the construction of sculpted concrete drop structures, construction of structural retaining walls, roadway demolition and construction of cul-de-sacs, sanitary sewer and waterline relocation, installation of concrete box culverts, installation of channel bank protection, excavation and grading of overbank areas, planting and/or seeding channel banks and restoration of areas disturbed during construction along Upper Templeton Gap Floodway. The upstream project limit along the mainstem of Upper Templeton Gap Floodway is just east of Hopeful Drive and extends downstream to the west ending just upstream of the culvert where Upper Templeton Gap crosses under North Academy Boulevard. The total length along the mainstem is approximately 2,600 linear feet of stream work. Work is also proposed along the South Tributary of Upper Templeton gap Floodway for approximately 450 linear feet. The upstream extent of work on the S. Tributary is where drainage enters the tributary from a curb cut off Hopeful Dr to approximately 100 ft downstream of where the S. Tributary goes underneath Siferd Blvd. Roadway work will include permanent closure of the Siferd Blvd and Date St intersection and construction of three cul-de-sacs at each leg of the existing intersection, as well as work on Hopeful Dr and Siferd Blvd, as indicated on the plans. The work is being completed to mitigate channel degradation, protect existing utilities, reduce flood risk to adjacent properties, and close an intersection with high flooding risk within the reach.

C.3.2 CONTROL OF WORK

In case of any discrepancies in any of the Drawings, Specifications, Special Conditions, and Technical Specifications, the order of precedence is as follows:

- a) Project Specific Special Conditions
- b) Project Special Technical Specifications to include Mile High Flood District Specifications
- c) Drawings (Plans)
 - i. General Drawings
 - ii. Field Markings and Construction Oversight (Figure dimensions will govern over scaled dimensions on all Plans)
- d) General Provisions
- e) City of Colorado Springs Engineering Division Standard Specifications
- f) Colorado Springs Utilities Specifications
- g) Digital drawing files, if provided to the Contractor.

C.3.3 OWNER

The City of Colorado Springs (hereinafter referred to as Owner) shall administer this project including the finalization of any change orders, pay estimates and payments of such, acceptance of work, and other matters as stipulated in these Contract Documents.

C.3.3 ENGINEER

Engineer refers to the City Engineer of Colorado Springs or designated representative.

C.3.4 DRAWINGS

The drawings for this project are separate from the Contract Documents book and are entitled "Park Vista Drainage Improvements – 100% Draft For Bid Design Plans" (hereinafter referred to as the Construction Plans or the Plans).

C.3.5 CONSTRUCTION LIMITS

The Contractor shall limit construction activities to the "Work Limits" as shown in the Construction Plans and details and as described in these Special Provisions. Even within the designated limits of construction

there are existing native trees, shrubs and grasses that are desirable to maintain. To the full extent practical, the Contractor shall perform the work in a manner that minimizes damage to the existing vegetation. Any disturbance outside of the Limit of Construction, as shown on the approved Plans shall be restored by the Contractor at their own expense to a condition equal, or better than the existing conditions before such damage occurred. The additional areas of disturbance outside of the original limits of construction must be reviewed and accepted to the satisfaction of the Owner. The vegetation success within these additional areas fall within the warranty and maintenance period described in this document and the technical specifications.

C.3.6 INSPECTION

At all times, representatives of the Owner or Owner's Representative and representatives of other agencies affected by the construction work, and the Owner or Owner's Representative shall have the right to enter and inspect any and all parts of the work for compliance with the Plans and Specifications.

The Owner or Owner's Representative shall decide any and all questions that may arise as to the quality and acceptability of the materials furnished, the work performed, the manner of performance, and the progress of the work. He shall decide all questions that may arise as to the acceptable fulfillment of the contract. The decision of the Owner or Owner's Representative shall be final.

The Contractor shall give inspection personnel a minimum of forty-eight (48) hours notice prior to needing inspection.

C.3.7 MATERIAL TESTING

The Contractor shall provide all materials testing for the project, which shall be considered incidental to the work. Testing shall be as specified in the City General Provisions Section 108.22 and the Project Special Technical Specifications. The Owner will provide Quality Assurance review of all testing and reserves the right to reject any work completed by the Contractor based on failing tests from either the Quality Assurance or Quality Control provider. All materials tests results shall be provided to the Owner and Engineer on a weekly basis, with immediate notification of any failing tests. A final report documenting all tests completed, locations, and results shall be provided to the Owner upon project completion. All material testing is considered to be incidental to the Project.

Testing shall be conducted at the following frequencies and timing to allow adequate review time for the Owner and Engineer. Material testing for the proposed retaining walls, culverts, roadway structures shall conform to CDOT standards, or as otherwise specified. The following shall supersede any conflicts in the remainder of these specifications for channel work:

1. Channel Field Compaction Testing requirements:
 - a. every 1,000 cubic yards of placed fill material.
 - b. every sculpted concrete drop structure (2 testing locations)
 - 1 within the stilling basin
 - 1 within the structure footprint, outside the stilling basin
2. Channel Laboratory Moisture/Density Curve Testing (Modified Proctor) requirements:
 - a. every change in material type
 - b. every 10,000 cubic yards of material
3. Channel Material Classification Testing (gradation, Atterberg limits) requirements:
 - a. every change in material type
 - b. every 10,000 cubic yards of material.
 - c. every 10,000 cu yds of borrow/stockpiled material.
 - d. photograph of each material tested.
 - e. GPS coordinates where each material was collected.

4. Channel Concrete Testing requirements:
 - a. Minimum of 2 samples for compressive strength testing per drop structure, or one per 50 CY of concrete, whichever is greater.
 - b. Compressive test results for each sample shall be provided to the Owner for 7, 28, and 56-day breaks.
 - c. Compressive strength, slump and air-content concrete tests shall be as specified for Structural Concrete in Section 03 31 00 of the Mile High Flood District Specifications.

5. Native Topsoil Testing requirements:
 - a. per the requirements of Section 970 – Topsoil as modified in the Technical Specifications and Construction Plans.
 - b. Testing shall be done with a minimum of 2 months of lead time before the start of revegetation, after site rough grading has been completed.
 - c. For deficient topsoil, test results will be used to develop a recommended application rate of compost amendment and/or other soil conditioner necessary for native topsoil to meet the required chemical characteristics.

6. Soil Preparation Decompaction:
 - a. Engineer to approve decompaction per the technical specification requirements.

C.3.8 EXISTING UTILITIES

Underground utility locating or utility potholing was performed in the design of this project, see the Plans for approximate locations of utilities. The Contractor shall field verify the existence and horizontal and vertical location of all existing utilities which might affect the work and shall notify the Owner or Owner's Representative of any utilities not shown on the Construction Plans. The utilities shown on the Construction Plans are noted for informational purposes only and are believed to be correct. However, additional utilities may be present in the area. The Contractor must take sole responsibility for damage to any utility line encountered whether or not shown on the Plans and whether or not actually located in the field as shown on the Plans. The Contractor shall notify the utility companies for field locations prior to the start of construction. This section is supplemental to the City General Provisions, Section 108.09.

The Contractor shall perform potholes to verify horizontal and vertical location of any potential utility conflicts with approval of the engineer. The contractor will be paid per each pothole completed. The Contractor shall notify the Owner immediately of any utility discrepancies or conflicts.

The Contractor shall inform the Owner or Owner's Representative of existing utilities, not previously designated as relocated, that may need to be relocated. The Contractor shall be responsible for contacting, coordinating, and requesting relocations from affected utility owners, and scheduling any relocation in his Work Sequence Plan to meet the Contract Time of Performance.

Contract time will not be extended to account for repair of utilities that are damaged by the Contractor due to their negligence.

The Contractor will be required to contact all utility owners a minimum of three business days prior to beginning excavation and/or grading.

Full compensation for compliance and cooperation, as required by this section, shall be considered to be included in the prices bid for items included on the contract bid schedule and no additional compensation will be provided.

C.3.9 FEES AND PERMITS

Except as noted below, the Contractor, prior to commencing any work, shall secure at their own expense (including fees) all permits required for the performance of the work. Full compensation for compliance and cooperation, as required by this section for all permits except grading, erosion and sediment control, shall

be included in the prices bid for mobilization included on the contract bid schedule and no additional compensation will be provided. Grading, erosion and sediment control permitting shall be included in the price bid for Erosion and Sediment Control included on the contract bid schedule and no additional compensation will be provided.

The Contractor shall obtain at a minimum a,

- a) Traffic Control/Access Permit (City),
- b) An approval of a City CSWMP and City GEC Permit,
- c) El Paso County Air Quality Permit,
- d) A Construction Dewatering Permit (Colorado Department of Public Health and Environment),
- e) A CDPS Stormwater Discharge Permit (CDPHE),
- f) A Site Specific Safety Plan (CSU), and
- g) The Contractor shall comply with all requirements of the permits.
- h) A copy of the CDPHE Authorization Letter

The Contractor shall submit required permits to the Owner for documentation at or prior to the preconstruction meeting. The Contractor shall also submit a traffic control plan at the preconstruction meeting for approval by the Owner. The Contractor shall obtain any additional permits required for the construction of the project. The Contractor shall comply with all conditions of all the required permits.

C.3.10 WASTE MATERIALS

The Contractor shall clean up any debris created by their construction activities and shall dispose of the same in suitable trash containers on a daily basis. All debris shall be disposed of off-site at a disposal site approved by the Owner. Should the Contractor fail to maintain the construction area in a suitable manner after receiving writing notice from the City, the Owner will have the right to contract with a third party and withhold any amounts incurred from the Contractor's payment.

C.3.11 OPERATIONS WITH OTHERS

The Owner reserves the right to have other work performed by other contractors and to permit the public utility companies and others to do work adjacent to or within the site. The Contractor shall conduct their operations and shall cooperate with the other parties to minimize interference with this other work.

C.3.12 CONSTRUCTION STAGING AND ACCESS

Staging areas shall be limited to those shown in the Plans and the Contractor shall restore staging areas at construction completion. Access to project areas shall be limited to those shown in the Plans and described in these Special Provisions. The Contractor shall be responsible for: establishing and maintaining access routes during construction; limiting disturbances from vehicles and equipment to the width and length of the access route; and restoring temporary access routes to match pre-project conditions at construction completion.

The Contractor shall be responsible for in-kind replacement of any temporarily removed fences or signage.

All areas affected by construction shall be restored to match pre-project site conditions at construction completion, except for public roadways that are damaged as a result of legal use of roadways for construction activity.

The Contractor shall submit a Access Route Plan for all material and equipment deliveries and mobilizations. The Access Route Plan shall designate a single direct path to and from the project site for all material and equipment deliveries. The Access Route Plan shall be submitted for approval to the Engineer. There shall not be any deliveries or mobilizations before the Access Route Plan is reviewed and accepted by the Engineer.

The Contractor shall comply with all legal load restrictions in the hauling of equipment or materials on public roads beyond the limits of the project. A special permit will not relieve the Contractor of liability for damage resulting from the moving of equipment or material

C.3.13 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 notice shall be provided to each business or residence 30 minutes prior to the actual access drive partial closure. This supersedes City Standard Specification 805.08.

C.3.14 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 the draft letter and contact list to the City's Public Relations group before any contact is made with adjacent landowners. The Public Relations group shall provide comments and recommended changes before approving the letter. The Contractor shall attempt to contact each landowner or business to distribute the letter and will provide a written update to the Owner and Engineer with any information or confrontations experienced during the letter distribution.

C.3.15 SANITARY FACILITIES

The Contractor shall provide suitable temporary sanitary restroom facilities for use by the construction personnel. Wastes collected in the temporary facilities shall be removed and disposed of in a timely and satisfactory manner, as required to maintain the facilities in a sanitary usable condition. The Contractor shall maintain the facilities so that any offensive odor is controlled.

Full compensation for compliance and cooperation, as required by this section, shall be included in the prices bid for items included on the contract bid schedule and no additional compensation will be provided.

C.3.16 CONTRACTOR'S AND OWNER'S REPRESENTATIVES

The Contractor shall have on the job at all times as their agent, a competent superintendent capable of reading and thoroughly understanding the Plans and Specifications and being thoroughly experienced in the type of work being performed. The Owner will have a representative on the job site periodically to observe work for conformance with the Plans and Specifications and clarify questions the Contractor has relative to the job. The Contractor shall provide accurate records of any field changes made during construction.

C.3.17 DUST, EROSION, AND NOISE CONTROL

The Contractor shall be responsible to install sufficient temporary erosion control facilities to minimize erosion in areas impacted by access, staging, and construction and washouts that may occur due to the lack of proper erosion control facilities.

The Contractor shall use measures to prevent and control dust and mud within the area affected by the project in accordance with applicable permits. No additional compensation will be paid to the Contractor for general dust control. Vehicle-tracking control mats will be required at the access points to the public and private paved roadways. Removal of vehicle-tracking mats will be accomplished prior to re-vegetation. The Contractor shall clean off any soil, dirt, or debris tracked onto any adjacent streets. When notified by the Owner that the adjacent streets require cleaning, the Contractor shall clean the streets within 2 hours

of such notification, or the Owner shall arrange to have the streets cleaned and shall deduct the cost of such cleaning from the Contractor's payments.

All work and materials associated with installation and maintenance of temporary erosion control facilities until permanent stabilization is achieved will be paid for in the lump sum price bid for temporary erosion and sediment control.

Construction noise shall be limited as required by the City Code and Charter, Chapter 9 – Public Offenses, Article 8.

C.3.18 TRAFFIC CONTROL AND PEDESTRIAN BARRICADES

The Contractor shall furnish all necessary flag persons; erect and maintain warning lights, advance warning signs, detour signs, barricades, road closure, temporary fence, and sufficient safeguards around all excavations, embankments, obstructions; and any other work for this project for the protection of all work being performed and for the safety of the public and pedestrian traffic, as well as bicycles and motor vehicles.

The Contractor shall provide adequate temporary construction fencing around active work zones and access routes when hazards to pedestrian traffic exist. The contractor shall use orange blaze fencing, rope and posts, and/or chain link fence to mark out the limits of disturbance near private property to prevent pedestrians from entering the active construction site and to prevent encroachment of Contractor's equipment or personnel onto private property.

The Contractor shall provide proper warning signs on existing trails, driveways, and roadways that cross or are a part of temporary access routes, staging areas, or work zones.

All signs and barricades shall conform to the Manual of Uniform Traffic Control Devices and meet the requirements of General Provision 105.07 and Section 800 of the Standard Specifications.

The Contractor shall submit three (3) copies of a Traffic Control Plan and accepted permit, acceptable to the Owner and the City, for review at or before the Preconstruction Conference. This plan must provide pedestrian traffic control and traffic control at all vehicular access points, and when loading and unloading equipment and material in public street right-of-ways.

C.3.19 WATER CONTROL

Until the Owner issues final written acceptance of the project (Final Acceptance), the Contractor shall take every precaution against damage to any part of the project including the adjacent land, vegetation, utilities, paving and structures from any cause, including all surface and subsurface water, whether arising from the execution of work or any other cause. The Contractor shall rebuild, repair, restore, replant and make good all damages to any portion of the work due to causes beyond the control of and without the fault of the negligence of the Contractor, including but not restricted to high water, floods, or acts of God, of the public enemy, or of governmental authorities.

The Contractor shall be responsible for the project and shall take such precautions as may be necessary to construct the project in a dry condition and provide for drainage, dewatering, and control of all surface and subsurface water. The term water shall be interpreted as including water in all its forms including, but not limited to, liquid water, snow, and ice. The Contractor shall erect any necessary temporary structures or other facilities at their expense to control surface water and groundwater. The Contractor is advised they are working in an ephemeral drainage course subject without baseflow, but subject to potential flash flooding and intermittent flow of significant magnitude. As such, proper management and control of water through the project area will be required to avoid localized flooding, damage to the work and adjacent facilities and properties and/or extensive soil erosion. At or prior to the Preconstruction Conference and prior to beginning any work, the Contractor shall submit three (3) copies of a plan for Water Control and Dewatering to the Owner for review. The Owner, at his option, may require the Contractor to update the

Water Control Plan as conditions warrant. The Contractor shall acquire a Construction Dewatering Permit from the Colorado Department of Public Health and Environment.

The Contractor shall carefully evaluate and plan the work and develop a water control plan that is compatible with the work plan and minimizes risks to adjacent properties, facilities and completed and in-progress work.

The Contractor, at their expense, shall furnish all necessary equipment and materials required to control the surface and subsurface water in all the areas from start of work through the completion of the total project work. The Contractor shall perform all work associated with "Water Control and Dewatering" in accordance with the Section 920 "Water Control and Dewatering" included in the Project Special Technical Specifications.

C.3.20 PROGRESS

If completion of any part of the work or the delivery of materials is behind the approved schedule, the Contractor must submit an updated schedule acceptable to the Owner. The Owner shall have the right to withhold progress payments for the work if the Contractor fails to submit an updated schedule.

C.3.21 PRE-CONSTRUCTION CONFERENCE RESPONSIBILITIES

The Contractor will attend a pre-construction meeting before beginning construction. The purpose of the meeting will be to discuss project issues, scheduling, phasing, environmental concerns, water control, private property issues, pedestrian issues, stormwater clean water act, safety, etc., the Contractor's designated Superintendent or Supervisor assigned to the project shall attend this meeting. The Contractor shall, at a minimum, provide the following materials at or prior to the Pre-Construction Conference:

- a) Traffic Control and Pedestrian Safety Plan
- b) Access Route Plan (see section C 3.12)
- c) Water Control and Dewatering Plan
- d) Construction Dewatering Permit
- e) CDPS Stormwater Discharge Permit
- f) Stormwater Management Plan (if revisions are requested from plan)
- g) Storm Water Pollution Prevention Plan
- h) Construction Schedule and Manpower Report
- i) Detailed Construction Method and Phasing Plan for Construction
- j) Utility Owners Pre-Construction Meeting (See General Notes)

The Plans are to be reviewed by the Owner prior to construction. All issues are to be resolved prior to beginning construction.

C.3.22 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 and/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.

C.3.23 SOIL CONDITIONS

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

The Contractor shall perform whatever exploratory excavations and tests they deem 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. If required, additional imported material shall be a well graded non-expansive inorganic soil or as herein after specified.

C.3.24 SHOP DRAWINGS

Contractor shall submit all required Shop Drawings and Product Submittals (digital in PDF format or 3 hard copies) to the Owner or Owner's Representative for review and approval. These include, at a minimum, the following:

- a) Test results for any imported compost, soil amendments, riprap, aggregate bedding, concrete, and boulders. If soil testing taken during construction requires modifications to the soil amendment plan, proposed soil amendment or compost shall be submitted for initial review 2 months before any soil preparation work begins and may take up to 10 business days for Owner to respond.
- b) Geotextiles
- c) Seed, mulch, erosion control blanket
- d) Sanitary Sewer Manhole, Flared End Section, RCP pipe drawings for storm pipe extension
- e) Access gate, wood privacy fence, chainlink fence, and pedestrian railing
- f) Owner shall respond to any Shop Drawings within 5 business days of receipt, unless otherwise previously noted.

C.3.25 COORDINATION WITH PRIVATE PROPERTY OWNERS

The Contractor is not to enter private property, outside of the construction easements as shown on the Plans unless written access permission from the owner of the property is obtained by the Contractor and approved by the Owner. The Contractor shall establish a physical barrier (e.g. rope and posts, or temporary chainlink fence) to demarcate the extent of all construction easements in the field. All damages to private property shall be immediately repaired to as good or better conditions at no additional cost to the project. The Contractor will notify the Owner immediately if damages occur to private property.

C.3.26 MOBILIZATION

The Bid Schedule has an item for mobilization, which may include such items as administration, bonding, and insurance. Mobilization shall be paid as Bid Item No. 1 Mobilization and Demobilization.

C.3.27 DISPOSAL SITE

The Contractor is responsible for the removal of all debris, unsuitable material, asphalt, concrete, bushes, portions of trees not used in the work, stumps, remains from clearing and grubbing, and all other materials not used for the construction of the improvements. Disposal of unsuitable materials shall be measured and paid by the unit price bid for each applicable item on the bid schedule. The Contractor shall designate in writing a disposal site acceptable to the Owner. Further, the Contractor shall consider the following for hauling suitable or disposing of unsuitable materials:

Access to the project beyond the immediate confines of the work area shall be over suitable roadways without violation of any City, County, State, or Federal restrictions for vehicle and truck weights or any other limitation on movement of heavy equipment hauling materials to and from the site.

Violation costs, including fines and repairs to either public or private roadways or appurtenance structures, above or below ground level, shall be at the Contractor's expense.

Unless otherwise presented in the Bid Schedule, the Contractor's cost for loading, hauling, daily cleaning of streets and trails, the disposal of material that must be removed from the site, together with the construction, maintaining and altering of haul roads, dump fees and permits, shall not be paid for separately.

C.3.28 EXCAVATION AND REPLACEMENT OF UNSUITABLE MATERIAL

Excavation and Replacement of Unsuitable Material is defined in the Technical Specifications. The Contractor shall not complete any excavation and replacement of unsuitable material without prior written approval from the Owner. Excavation and replacement of unsuitable material shall not be used in lieu of proper dewatering.

C.3.29 WORK HOURS

Normal work hours are 7:30 AM TO 5:30 PM Monday through Friday. Work outside normal hours may be allowed but must be approved in advance in writing by the owner.

C.3.30 ARCHAEOLOGICAL AND HISTORICAL DISCOVERIES

The Contractor is required to inform the Owner of any evidence which might suggest to a lay person that archaeological or historic materials may be present in the work area. Upon making such a discovery, the Contractor shall do whatever is necessary to avoid disturbing the work area. This could require that the Contractor's activities be redirected or stopped until the Owner or Engineer determines how to proceed.

C.3.31 CONSTRUCTION DOCUMENTATION

A. Submittals

- a) The contractor shall provide a submittal register in outline form in MS Excel format or similar based on the Bid Schedule at the preconstruction meeting. At a minimum, elements of the list will include:
 1. Anticipated product submittals
 2. Identified long lead time items
 3. Permits
 4. Phasing plans
 5. Traffic control plans
- b) All revegetation submittals shall be submitted for initial review 2 months before any revegetation work begins.

B. Photographs

- a) Construction photographs will be required illustrating pre-construction, construction, and post-construction conditions.
- b) Digital photographs shall be date stamped.
- c) The pre-construction photographs shall be delivered to and approved by the Owner or Owner's Representative, prior to the beginning of construction.
- d) Include progress photographs with each pay request. The photos will be a requirement for payment.
- e) Contractor will provide a time-lapse camera. Contractor shall install a mounting pole in a mutually accepted location, install camera, and coordinate access to the camera during the period of construction. Any cost associated with this item shall be considered incidental to Mobilization.
- f) Contractor shall procure and provide to the City an oblique overhead drone video flying the project corridor of Park Vista Drainage Improvements showing before and after site conditions along the entire project reach, as well as construction progress videos. The drone video shall be of sufficient quality to create media for the City demonstrating before and after footage to the community. The drone video shall not be an orthorectified aerial image. The Contractor is required to obtain the necessary drone approvals including FAA or other air space clearance. All drone flights shall be consistent with the same route/path, elevation, and speed to provide comparison footage throughout the project between time points.
- g) Any cost associated with this item shall be considered incidental to Mobilization.

C. Red-line Drawings

The Contractor shall maintain a red-line set of drawings indicating field changes to the design, existing facilities not shown, pertinent construction data, etc. The Contractor shall submit a current set of red-line plans to the Owner with each pay estimate. The Contractor shall submit a complete set of red-line plans to the Owner at the completion of the project. The Contractor will be responsible for submitting incremental survey data information, including elevations of key structure points, for structure acceptance throughout the duration of the project. The engineer will be responsible for the formal as-built survey at the completion of the project.

C.3.32 SPILL KIT

The Contractor shall supply and maintain a spill kit on-site. The spill kit shall contain any and all necessary devices to be used in the event of a spill on-site during construction activities. The Contractor shall coordinate with the Owner's stormwater inspector regarding the site-specific contents of the spill kit. The spill kit shall remain on-site and be available at all times for the Contractor's crew. A meeting shall be set up by the Contractor's Stormwater Supervisor prior to any construction activities to clarify the uses and implementation of the spill kit.

The spill kit will not be paid for separately but will be considered incidental to the Bid Item for Erosion and Sediment Control.

C.3.33 CONSTRUCTION METHOD QUALITY CONTROL AND PHASING PLAN

The Contractor shall submit a construction method and phasing plan detailing the methods and sequence to be utilized in construction of the proposed facilities. The plan is to include the following items:

- a) Mobilization
- b) Dewatering plan to include control and routing of nuisance flooding, flood flows, and groundwater,
- c) Traffic Control as it relates to work phasing,
- d) Establishment, maintenance, and restoration of access routes,
- e) Roadway demolition and construction,
- f) Utility relocation and protection,
- g) Excavation for and construction of retaining wall,
- h) Installation of concrete box culverts,
- i) Slope shaping and channel grading,

- j) Channel bank armoring and stabilization,
- k) Construction of sculpted concrete drop structures
- l) Construction of stormwater outfall modifications
- m) Seeding, and planting
- n) Materials testing requirements (in excel format outlined by Bid Schedule)
- o) Overall Project Phasing

The Owner is to review the construction method quality control and phasing plan and have all questions and issues addressed before construction can proceed. All costs associated with preparation and potential revisions to the method and phasing plan will be considered incidental to the price bid for associated items and no separate payment will be provided.

C.3.34 REQUESTS FOR INFORMATION (RFI)

“Requests for Information” (RFI) sheets shall be completed by the Contractor if additional information of clarification is required. The RFI shall be submitted to the Owner for processing. Owner shall respond to any RFIs within 5 business days of receipt. Any changes to the Plans, specifications, and construction requirements are to be made in writing. No changes will be permitted based on verbal agreements.

C.3.35 CONSTRUCTION COORDINATION MEETINGS

The Contractor will conduct weekly construction progress meetings with the attendance of all pertinent project related personnel. The Contractor shall coordinate with the Owner as to the location where the meetings are to be held. The Contractor shall create the meeting agenda, 3-week look ahead project schedule, and distribute meeting minutes within 48 hours of meetings.

C.3.36 CONSTRUCTION STAKING

The Contractor shall be responsible for providing grade and horizontal control for the project elements. At the Owner or Engineer’s request, the Contractor shall survey grades and elevations to verify design during construction. The Contractor shall place stakes with flags at all property corners where the project area is adjacent to parcels not owned by the City of Colorado Springs, as of the date of notice to proceed and at 250-foot intervals along the project limit boundary to delineate the work limits. The Contractor shall protect all existing control points, property corners and monuments. The Contractor shall be responsible for replacing any damaged or destroyed monument, property corner or control point.

Prior to project completion, the contractor shall be responsible for the replacement of any property monumentation disturbed or removed by construction operations. This work shall be performed by a land surveyor licensed in the State of Colorado. Property corners which fall within new concrete flatwork shall be durable and set flush. This shall be considered incidental to the project.

The Contractor shall provide interim survey data of installed sheet pile, structure subgrade, sculpted concrete structures, stormwater outfall extensions (manholes rim, pipe inverts, FES inverts), roadway structures, culverts, retaining walls, and buried riprap, as constructed. Additionally, the contractor is responsible for providing data topographic (LiDAR or ground), provided by a Professional Licensed Surveyor through a Third-Party Survey Company.

Any cost associated with providing surveying and survey control is to be included in the Construction Staking bid item.

C.3.37 CLEAN UP AND REMOVAL OF SEDIMENT DEPOSITS

The Contractor shall implement stabilization measures within the project area to control erosion to the extent practical. If sediment or other material from the site migrates downstream of the project area or within the reach during construction, it shall be removed and disposed of by the Contractor without any additional compensation. If erosion control materials from the site migrates downstream of the project area or within the reach during construction, it shall be removed and replaced by the Contractor without any additional

compensation. The Contractor is advised to document the existing conditions in the channel and to provide a copy of the documentation to the Owner prior to beginning construction.

C.3.38 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, survey data 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.

Substantial completion for revegetation work shall be considered separate and will covered under Subsection 900.08 and 900.09 as described in the Park Vista Technical Specifications Schedule F.

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.

C.3.39 CUT AND FILL EARTHWORK CALCULATIONS

Earthwork calculations have been completed for the site that account for raw earthwork from existing to finished grade, removing material that will be displaced by proposed riprap, concrete, and soil amendment. Below are the calculations completed to determine the earthwork quantities. Payment for Earthwork – Onsite Excavation and Fill On-site will be paid on the neat line quantity of fill material placed to finished grade minus subgrade riprap, concrete, and soil amendment. Earthwork – Excavation and Spoil On-site will be paid as neat line quantity of excess material to be placed on site outside of the proposed grading limits. Earthwork – Excavation and Export will be paid as neat line quantity of excess material exported offsite to an approved spoil site.

Raw Surface Quantities (Channel Mainstem, South Trib Improvements, and all Roadway Improvements)		
Raw Cut	26,829	CY
Raw Fill	5,370	CY
Total Concrete Volume within Channel		
Total Volume	1,490	CY
Material in Cut	1,192	CY
Material in Fill	298	CY
Total Riprap Volume		
Total Volume	6,888	CY
Material in Cut	5,511	CY
Material in Fill	1,377	CY
Soil Volume for Soil Riprap	1,987	CY
Soil Conditioner Volume		
Soil Conditioner Volume	619	CY
Final Earthwork Volumes		
<u>Total Cut</u> (Raw Cut + Concrete & Riprap material in cut)	33,600	CY
<u>Total Fill</u> (Raw Fill + Soil Volume for Soil Riprap – Concrete & Riprap material in fill – Soil Conditioner Volume)	5,063	CY
<u>Material Expected to be needed for Fill</u> (Total Fill * 1.15 ; assuming 15% shrinkage)	5,822	CY
<u>Excess Cut</u> (Total Cut – Material Expected to be needed for Fill)	27,777	CY
<u>Excess Cut to be Spoiled Onsite</u> (See extent on DR01)	9,916	CY
<u>Excess Cut to be Exported</u>	17,861	CY

SCHEDULE D – SCOPE OF WORK

The Park Vista Drainage Improvements project generally consists of the removal of a “Tee” intersection in the bottom of Templeton Gap drainage channel, channel improvements including earthwork, riprap and sculpted concrete drop structures, cast in place concrete bridges/culverts, utility relocations, street improvements, and revegetation. The project will remove an existing dangerous intersection at the bottom of Templeton Gap and replace the intersection with 3 new cul-de-sacs.

Additionally, approximately 3,000 LF of Templeton Gap channel will be regraded adding grade control and bank stabilization and 2 new cast in place bridges/culverts. The work requires utility relocations including existing sanitary sewer and water mains.

SCHEDULE E – MEASUREMENT AND PAYMENT

FOLLOWS THIS PAGE

SCHEDULE E

MEASUREMENT AND PAYMENT

Park Vista Drainage Improvements

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MEASUREMENT OF PAY QUANTITIES

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 items as listed in the bid proposal 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.

Any items of WORK which are called out in the DRAWINGS and/or the SPECIFICATIONS and do not have a specific line item in the bid proposal but which are necessary to complete the WORK in accordance with the requirements of good and standard practice, such as sub-grade preparation and form WORK are to be considered as incidental to the construction of the project and the CONTRACTOR'S cost for such WORK shall be included in the bid price for the related item of WORK.

The CONTRACTOR shall accomplish all incidental WORK essential to the completion of the project, including cleanup and disposal of waste or surplus material without additional cost to the CITY (See Subsection 101.01 of the General Provisions). The cleanup and disposal of waste or surplus material shall be performed during construction or as soon after as is reasonably possible to better maintain the safety and aesthetics of the construction area.

The quantities listed in the bid schedule are estimated quantities and are listed only for convenience in comparing bids. Unless otherwise noted, final payment will be made for the actual quantities constructed or installed at the contracted unit prices, be they more or less than the listed quantities, said quantities being measured as specified.

All improvement WORK shall be done in accordance with the most recent edition of the "CITY of Colorado Springs Engineering Divisions Standard SPECIFICATIONS" and all published revisions and addenda incorporated therein, except as modified hereinafter, which are incorporated in the Contract Documents by reference as though embodied herein their entirety.

The following describes the method of measurement and payment for all the Bid Items in greater detail than shown on the Form of Bid. This section is intended to be used in conjunction with the DRAWINGS and SPECIFICATIONS to assist in defining the intent and scope of WORK included in the Bid Item. Measurement and payment for items listed in the Special Provisions shall supersede the Measurement and Payment listed in the "CITY of Colorado Spring ENGINEERING Divisions Standard SPECIFICATIONS." Refer to the SPECIFICATIONS for further information. Units of measure shown on the Bid Schedule shall be as follows, unless specified otherwise.

Pay Item	Unit	Method of Measurement
Acre	AC	Plan quantity (unless otherwise noted) of area using mean length and width or radius or calculated area within a boundary
Cubic Yard	CY	Plan quantity (unless otherwise noted) of volume by using truck counts or by comparing pre-construction and proposed or post-construction topographic data.
Each	EA	Plan quantity (unless otherwise noted)
Linear Foot	LF	Plan quantity (unless otherwise noted) to the nearest whole foot or calculated from stationing shown on the Construction Design Plan.
Vertical Foot	VF	Plan quantity (unless otherwise noted) to the nearest whole foot along the vertical plane, perpendicular to the ground or paved surface.
Lump Sum	LS	Unit is one; no measurement will be made.

Pay Item	Unit	Method of Measurement
Square Foot	SF	Plan quantity (unless otherwise noted) of area using mean length and width or radius or calculated area within a boundary.
Square Yard	SY	Plan quantity (unless otherwise noted) of area using mean length and width or radius or calculated area within a boundary.
Pound	LB	Plan quantity (unless otherwise noted) of mass by using tickets of delivery.
Ton	TN	Plan quantity (unless otherwise noted) of mass by using tickets of delivery.

1. Mobilization and Demobilization

(LS)

DESCRIPTION

This WORK consists of preparatory WORK and operations including, but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site; for the establishment of all field offices, buildings, and other facilities necessary for WORK on the project; for all other WORK and operations that must be performed, or costs incurred before beginning the WORK on the other contract items; and for demobilization.

Mobilization includes temporary signage, temporary construction chain-link fencing (temporary construction fencing near the existing triple 9'X12' box culvert is excepted from this inclusion and will be paid out under Bid Item 126. Temporary Construction Fencing), all permits, preparation of various construction operation PLANS, project administration (including specifically documented project meetings for utility locates), coordination with utilities, and for premiums on bond and insurance for the WORK. Permits anticipated to be required include, but are not limited to:

Permit	Governing Agency	Responsible Party
CW-17 Authorization	Colorado Department of Public Health and Environment (CDPHE)	OWNER
Conditional Letter of Map Revision (CLOMR)	FEMA	OWNER
Construction COG080000	Colorado Department of Public Health and Environment (CDPHE)	CONTRACTOR
Stormwater Discharge COR400000	CDPHE	CONTRACTOR
Grading, Erosion Control Permit	CITY of Colorado Springs	CONTRACTOR
Traffic Control Permit	CITY of Colorado Springs	CONTRACTOR
Air Quality Construction Activity Permit	El Paso County	CONTRACTOR
Migratory Bird Treaty Act Survey	U.S. Fish and Wildlife Services	CONTRACTOR

Demobilization includes but it not limited to:

1. Restoration of public utilities
2. Placement of crimped straw mulch in areas not stabilized by other means.

Demobilization will not include restoration of roadways outside of the LOD. The contractor shall document the existing conditions of the roadway along their approved Access Route Plan before the project, note any existing defects in the roadway infrastructure, and provide their documentation to the CITY AND ENGINEER. The CITY and the CONTRACTOR shall come to an agreement about cost share for any roadway that is damaged as a result of the construction. The CONTRACTOR will not be held responsible for damage to public roadways because of legal use of roadways from construction activity.

MEASUREMENT

This Item will not be measured for payment; it will be a **lump sum**, acceptably performed. No separate measurement for payment will be made for any labor, equipment, and materials required for this item. The lump sum price will include all of the CONTRACTOR's costs.

PAYMENT

Payment will be based on the percentage of completed and accepted WORK. Amounts to be allowed for mobilization in the partial payment to be made under the Contract will be as follows:

1. When 5 percent of the original contract amount is earned, 20 percent of the amount bid for this item will be paid, not to exceed 2 percent of the original contract amount.
2. When 20 percent of the original contract amount is earned, 50 percent of the amount bid for this item, less previous payments, will be paid, not to exceed 5 percent of the original contract amount.
3. When 35 percent of the original contract amount is earned, 60 percent of the amount bid for this item, less all-previous payments, will be paid, not to exceed 6 percent of the original contract amount.
4. When 75 percent of the original contract amount is earned, the amount bid for this item, less all-previous payments, will be paid, not to exceed 10 percent of the original contract amount.
5. When 90 percent of the original contract amount is earned, the amount in excess of 10 percent of the original contract amount, less all previous payments, will be paid.

For the SPECIFICATIONS the term "original contract amount" as used above shall mean the amount of the award for the construction items on this contract not including the amount bid for mobilization. 5% of this item's total bid price will be withheld until Final Acceptance is given.

2. Construction Staking

(LS)

DESCRIPTION

This WORK consists of preparatory WORK and operations including, but not limited to, those necessary for providing land surveying and construction surveying services to maintain horizontal control and correct placement of all proposed improvements according to the Contract Documents and consistent with standard surveying practices. This WORK includes layout of proposed improvements, staking of limits of disturbance, easements extents, or other horizontal limits necessary for construction, and verification of the horizontal extents and vertical elevations of constructed improvements. This item does not include a formal as-built survey.

MEASUREMENT

This Item will not be measured for payment; it will be a **lump sum**, acceptably performed. No separate measurement for payment will be made for any labor, equipment, and materials required for this item. The lump sum price will include all of the CONTRACTOR's costs.

PAYMENT

Payment will be based on the percentage of completed and accepted WORK. Amounts to be allowed for mobilization in the partial payment to be made under the Contract will be as follows:

1. When 5 percent of the original contract amount is earned, 20 percent of the amount bid for this item will be paid, not to exceed 2 percent of the original contract amount.
2. When 20 percent of the original contract amount is earned, 50 percent of the amount bid for this item, less previous payments, will be paid, not to exceed 5 percent of the original contract amount.
3. When 35 percent of the original contract amount is earned, 60 percent of the amount bid for this item, less all-previous payments, will be paid, not to exceed 6 percent of the original contract amount.
4. When 75 percent of the original contract amount is earned, the amount bid for this item, less all-previous payments, will be paid, not to exceed 10 percent of the original contract amount.
5. When 90 percent of the original contract amount is earned, the amount in excess of 10 percent of the original contract amount, less all previous payments, will be paid.

For the SPECIFICATIONS the term "original contract amount" as used above shall mean the amount of the award for the construction items on this contract not including the amount bid for mobilization. 5% of this item's total bid price will be withheld until Final Acceptance is given.

3. Traffic Control

(LS)

DESCRIPTION

This WORK consists of furnishing, installing, moving, maintaining and removing temporary traffic signs, advance warning arrow panels, flashing beacon (portable), barricades, channelizing devices, delineators, temporary traffic signals, masking and unmasking existing signs in construction zones, and concrete barriers as required by the Manual on Uniform Traffic Control Devices for Streets and Highways and the Colorado Supplement hereto, in accordance with the PLANS and these SPECIFICATIONS and the requirements of the governing agency, whichever is more stringent. Moving will include devices removed from the project and later returned to use.

This WORK also includes traffic control management and flagging operations, as necessary. Preparing, implementing, adjusting as necessary, and maintaining an approved vehicular Traffic Control Plan (TCP), obtaining any required permits, and providing all related and necessary labor, equipment, and materials to carry out the TCP. The TCP shall include temporary closure signage for, but not limited, to the following areas:

1. Temporary closure of Date St and Siferd Blvd intersection and adjacent business access requirements until the permanent cul-de-sac infrastructure has been constructed.
2. Temporary closure of Hopeful Dr. for demolition of the existing bridge and construction of the proposed culverts.
3. Temporary closure of Siferd Blvd and Lotus Street for the removal of the existing dual 36" CMP's and the construction of the proposed box culvert.

This WORK will include all other traffic control management as necessary for the CONTRACTOR to complete all WORK. Additional closures may be needed as construction progresses. The length of time for these closures and access requirements is dependent on the CONTRACTOR's Means and Methods of construction.

MEASUREMENT

This Item will not be measured for payment; it will be a **lump sum**, acceptably performed. No separate measurement for payment will be made for any labor, equipment, and materials required for this item. The lump sum price will include all of CONTRACTOR's costs.

PAYMENT

Progress payments will be made based on the percent of WORK complete times the lump sum unit price for this item. 5% of this item's total bid price will be withheld until Final Acceptance is given.

4. Water Control and Dewatering

(LS)

DESCRIPTION

This WORK consists of implementing measures to control all forms of water, including surface water and ground water, as defined in the SPECIFICATIONS; providing temporary power, if necessary; evaluating, designing, permitting, constructing, maintaining, and monitoring dewatering measures; and providing all other related and necessary labor, equipment, and materials to complete the WORK.

The CONTRACTOR will not receive additional compensation, or time extensions, for any disruption of WORK or loss of time caused by any actions brought against the CONTRACTOR for failure to comply with good engineering, hydrologic and pollution control practices.

If a spill occurs as a direct result of the CONTRACTOR'S actions or negligence, the cleanup of such spill shall be performed by the CONTRACTOR at the CONTRACTOR'S expense.

MEASUREMENT

This Item will not be measured for payment; it will be a **lump sum**, acceptably performed. No separate measurement for payment will be made for any labor, equipment, and materials required for this item. The lump sum price will include all of the CONTRACTOR'S costs.

PAYMENT

Progress payments will be made based on the percent of WORK complete times the lump sum unit price for this item. 5% of this item's total bid price will be withheld until Final Acceptance is given.

5. Erosion and Sediment Control

(LS)

DESCRIPTION

This WORK consists of implementing measures to control sediment and erosion and to maintain compliance with erosion and sediment control regulations; evaluating, designing, permitting, constructing, maintaining, and monitoring measures; and providing all other related and necessary labor, equipment, and materials to complete the WORK.

Additionally, this Bid item includes installation of silt fence, inlet protections, check dams, concrete washouts and other required erosion and sediment control measures required under the CITY Stormwater Management Plan (CSWMP), Grading Erosion Control (GEC) plan, and all other required stormwater control permits, or required revisions therein, during all phases of construction. Additional BMPs requested by the CITY inspector will be considered incidental to those shown on the approved PLANS.

It shall include the furnishing of all labor, materials, tools, and appurtenances necessary to complete the WORK as specified, shown or directed.

MEASUREMENT

This Item will not be measured for payment; it will be a **lump sum**, acceptably performed. No separate measurement for payment will be made for any labor, equipment, and materials required for this item. The lump sum price will include all of CONTRACTOR's costs.

PAYMENT

Progress payments will be made based on the percent of WORK complete times the lump sum unit price for this item. 5% of this item's total bid price will be withheld until Final Acceptance is given.

6. Clearing and Grubbing (Includes Tree Felling)

(AC)

DESCRIPTION

This WORK consists of clearing, grubbing, removing, felling and disposing of trees, vegetation within the limits of the project area, including all areas necessary for construction access, staging, and stockpiling. The CONTRACTOR shall strip and stockpile native topsoil identified by the ENGINEER. Testing of native topsoil as defined in the Schedule C - Special Conditions shall be considered incidental to clearing and grubbing. This WORK shall include spreading of stockpiled topsoil before revegetation begins. Vegetation and objects designated to remain shall be preserved free from injury or defacement. In addition, all export and disposal resulting from the WORK shall be considered incidental.

MEASUREMENT

Measurement for payment for this item will be the planned acres of clearing and grubbing of non-improved surfaces in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

7. Removal and Disposal of Trash and Homeless Debris (CY)

DESCRIPTION

This WORK consists of excavation, removal, hauling, and disposal of trash and homeless debris. It includes:

1. **Colorado Springs Homeless Outreach Team (COS HOT) are responsible for the removal of active homeless individuals that are living within the project limits.** The CONTRACTOR shall coordinate with COS HOT for the initial removal of the active homeless in the area and if individuals relocate back into the project site during the the construction timeframe.
2. The CONTRACTOR is responsible for the excavation, removal, hauling, and disposal of onsite trash and homeless debris within the LOD and upstream of the existing triple 9' x 12' box culvert on the downstream end of the project. All demolished materials shall be disposed of at an approved facility that accepts construction waste materials. Providing all other related and necessary labor, equipment, and materials required to complete the WORK.

MEASUREMENT

Measurement for payment for this item will be the *actual* number of **cubic yards** of material shown on the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

8. Removal and Disposal of Intact Concrete Material (Sidewalk and Concrete Driveways) (SY)

DESCRIPTION

This WORK consists of excavation, removal, hauling, and disposal of the existing concrete sidewalks and driveways identified on the demolition plan. It includes:

1. Excavation, cutting, removal, hauling, and disposal of existing intact concrete sidewalks and driveways.
2. All demolished materials shall be disposed of at an approved facility that accepts construction waste materials.
3. Providing all other related and necessary labor, equipment, and materials required to complete the WORK.

MEASUREMENT

Measurement for payment for this item will be the *planned* number of **square yards** of material shown on the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

9. Removal and Disposal of Grouted Riprap (CY)

DESCRIPTION

This WORK consists of excavation, removal, hauling, and disposal of the existing grouted riprap, identified on the demolition plan. It includes:

1. Excavation, cutting, removal, hauling, and disposal of existing grouted riprap
2. All demolished materials shall be disposed of at an approved facility that accepts construction waste materials.
3. Providing all other related and necessary labor, equipment, and materials required to complete the WORK.

MEASUREMENT

Measurement for payment for this item will be the actual number of **cubic yards** of material shown on the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The ENGINEER and CONTRACTOR shall come to a consensus on average number of CY per load before removal begins. The CONTRACTOR shall track loads removed from the site for payment and provide load tickets to the ENGINEER for approval.

PAYMENT

Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

10. Removal and Disposal of Broken Concrete Debris within Channel Grading Limits (CY)

DESCRIPTION

This WORK consists of excavation, removal, hauling, and disposal of the existing broken concrete pieces within the channel grading limits. It includes:

1. Excavation, cutting, sorting, removal, hauling, and disposal of existing broken concrete pieces with the channel grading limits.
2. All demolished materials shall be disposed of at an approved facility that accepts construction waste materials.
3. Providing all other related and necessary labor, equipment, and materials required to complete the WORK.

Measurement

Measurement for payment for this item will be the *actual* number of **cubic yards** of material removed by the CONTRACTOR. The ENGINEER and CONTRACTOR shall come to a consensus on average number of CY per load before removal begins. The CONTRACTOR shall track loads removed from the site for payment and provide load tickets to the ENGINEER for approval.

Payment

Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

11. Removal and Disposal of Asphalt Roadway Material (SY)

DESCRIPTION

This WORK consists of saw-cutting, excavating, removing, hauling, and disposing of the existing asphalt roadway identified to be removed on the demolition plan. It includes:

1. Saw cutting through existing depth of all features of the asphalt material, complying with the DRAWINGS and SPECIFICATIONS as measured along the front face of sections adjacent to curb and across sections of existing asphalt. Sawcut Asphalt shall be in accordance with Section 200 of the CITY Standard SPECIFICATIONS. See the geotechnical report for asphalt depths.
2. Removal, hauling, and disposal of existing asphalt roadway.
3. All demolished materials shall be disposed of at an approved facility that accepts construction waste materials.
4. Providing all other related and necessary labor, equipment, and materials required to complete the WORK.

MEASUREMENT

Measurement for payment for this item will be the *planned* number of **square yards** of material shown on the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

The accepted quantities will be paid for at the Contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

12. Removal and Disposal of Curb and Gutter

(LF)

DESCRIPTION

This WORK consists of cutting, excavation, removing, hauling, and disposing of the existing curb and gutter identified to be removed on the demolition plan. It includes:

1. Cutting, removal, hauling, and disposal of existing curb and gutter.
2. All demolished materials shall be disposed of at an approved facility that accepts construction waste materials.
3. Providing all other related and necessary labor, equipment, and materials required to complete the WORK.

MEASUREMENT

Measurement for payment for this item will be the *actual* number of **linear feet** of curb and gutter removed as shown on the DRAWINGS or as otherwise directed by the ENGINEER.

PAYMENT

The accepted quantities will be paid for at the Contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

13. Removal and Disposal of Dual 36" CMP Culverts (LS)

DESCRIPTION

This WORK consists of excavation, removing, hauling, and disposing of the existing 36 Inch CMP (Corrugated Metal Pipe) identified to be removed on the demolition plan. It includes:

1. Excavation, removal, hauling, and disposal of the existing dual 36 Inch CMP culverts.
2. All demolished materials shall be disposed of at an approved facility that accepts construction waste materials.
3. Providing all other related and necessary labor, equipment, and materials required to complete the WORK.

MEASUREMENT

This Item will not be measured for payment; it will be a **lump sum**, acceptably performed. No separate measurement for payment will be made for any labor, equipment, and materials required for this item. The lump sum price will include all of the CONTRACTOR's costs.

PAYMENT

Progress payments will be made based on the percentage of WORK complete times the lump sum unit price for this item. 5% of this item's total bid price will be withheld until Final Acceptance is given.

14. Removal and Disposal of Existing Non-Utility Infrastructure (Bollards, Fence, Roadway Signs, and Gates) - Mainstem and S. Tributary (LS)

DESCRIPTION

This WORK consists of excavation, removal, hauling, and disposal of miscellaneous debris identified to be removed on the demolition plan. It includes:

1. Cutting, removal, hauling, and disposal of the existing Bollards, Fence (chain-link and wooden), and Gates. Removal of gates shall include subsurface concrete and posts.
2. All demolished materials shall be disposed of at an approved facility that accepts construction waste materials.
3. Providing all other related and necessary labor, equipment, and materials required to complete the WORK.

MEASUREMENT

This Item will not be measured for payment; it will be a **lump sum**, acceptably performed. No separate measurement for payment will be made for any labor, equipment, and materials required for this item. The lump sum price will include all of CONTRACTOR's costs.

PAYMENT

Progress payments will be made based on the percent of WORK complete times the lump sum unit price for this item. 5% of this item's total bid price will be withheld until Final Acceptance is given.

15. Earthwork – Excavate and Fill Onsite

(CY)

DESCRIPTION

This WORK consists of excavating, transporting, stockpiling with BMPs, and hauling excavated material to fill areas within PROJECT. Suitable fill material shall be agreed upon by the ENGINEER and CONTRACTOR per Standards of the SPECIFICATIONS. It includes:

1. Excavating, transporting, stockpiling with BMPs, and hauling excavated material to fill areas within PROJECT.
2. Placing, reworking, and compacting fill material in place.
3. Cross hauling material.
4. Moistening, drying, and reconditioning material, as necessary, to meet moisture-density requirements.
5. Surface roughening and terracing BMPs as shown on the DRAWINGS.
6. Removing and hauling deleterious materials.
7. Pulverization and gradation necessary to create suitable fill material from excavated bedrock.
8. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

Measurement for payment for this item will be the *actual* number of **cubic yards** of placed FILL and will be measured once for payment at a time, place and condition as agreed to in advance. Existing conditions will exclude the volume of all debris removed (See Items 9 and 10). Cut is incidental to Fill, no shrinkage or swell will be accounted for.

CONTRACTOR shall WORK with ENGINEER to validate the quantities and methods used to calculate the quantities prior to excavation activities taking place. The calculated quantity shall be a comparison of the finished grade at the completion of construction activities to the existing conditions base topography shown in the PLANS, less the volume of all constructed structures, riprap in fill conditions, the soil in soil-filled/ void-filled riprap, and soil amendment. CONTRACTOR and ENGINEER shall come to consensus regarding any discrepancies between the actual site conditions and the base topography prior to excavation activities taking place. Additional or updated topography, if required, shall be collected by the CONTRACTOR through a third- party Professional Licensed Surveyor. The topography shall be reviewed and accepted by the ENGINEER prior to excavation activities taking place.

PAYMENT

Accepted Quantities will be paid for at the percent of WORK complete times the unit price for this item. Each request for payment shall include updated topography within the project limits captured by the CONTRACTOR through a third-party Professional Licensed Surveyor. CONTRACTOR and ENGINEER shall come to consensus of the volume comparison at the time of the payment application. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

16. Earthwork – Excavate and Spoil Onsite

(CY)

DESCRIPTION

This WORK consists of excavating, transporting, stockpiling with BMPs, and hauling excavated material to spoils area identified on DR01 limits of spoils area and final grading layout shall be determined in the field by the ENGINEER/CITY and agreed upon with the CONTRACTOR. Suitable fill material shall be agreed upon by the ENGINEER and CONTRACTOR per Standards of the SPECIFICATIONS. It includes:

1. Excavating, transporting, stockpiling with BMPs, and hauling excavated material to spoils fill areas within PROJECT.
2. Placing, reworking, and compacting fill material in place.
3. Cross hauling material.
4. Moistening, drying, and reconditioning material, as necessary, to meet moisture-density requirements.
5. Surface roughening and terracing BMPs as shown on the DRAWINGS.
6. Removing and hauling deleterious materials.
7. Pulverization and gradation necessary to create suitable fill material from excavated bedrock.
8. Providing all other related and necessary labor, equipment, and materials to complete the WORK.

MEASUREMENT

Measurement for payment for this item will be the actual number of **cubic yards** of placed FILL and will be measured once for payment at a time, place and condition as agreed to in advance. (See Items 9 and 10). Cut is incidental to Fill, no shrinkage or swell will be accounted for.

CONTRACTOR shall WORK with ENGINEER to validate the quantities and methods used to calculate the quantities prior to excavation activities taking place. The calculated quantity shall be a comparison of the pre-project existing grade and finished grade at the completion of construction activities, as decided by the CONTRACTOR and ENGINEER, within the area shown on the design PLANS. CONTRACTOR and ENGINEER shall come to consensus regarding any discrepancies between the actual site conditions and the base topography prior to excavation activities taking place. Additional or updated topography, if required, shall be collected by the CONTRACTOR through a third- party Professional Licensed Surveyor. The topography shall be reviewed and accepted by the ENGINEER prior to excavation activities taking place. The quantity is based on the neat lines shown on the DRAWINGS.

PAYMENT

Accepted Quantities will be paid for at the percent of WORK complete times the unit price for this item. Each request for payment shall include updated topography within the project limits captured by the CONTRACTOR through a third-party Professional Licensed Surveyor. CONTRACTOR and ENGINEER shall come to consensus of the volume comparison at the time of the payment application. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

17. Earthwork – Excavation and Export

(CY)

DESCRIPTION

This WORK consists of excavating and exporting excess material. It includes:

1. Excavating, transporting, stockpiling with BMPs, and exporting excavated material to an approved offsite disposal area
2. Ensuring the offsite disposal area meets all local, state, and federal permitting requirements required to received material.
3. Cross-hauling material
4. Removing and hauling deleterious materials
5. Providing all other related and necessary labor, equipment, and materials to complete the WORK.

MEASUREMENT

Measurement for payment for this item will be the actual volume of **cubic yards**. When excess material onsite, as determined by the ENGINEER, is required to be exported, this item will be measured by the number of cubic yards approved to be exported from the site.

CONTRACTOR shall WORK with ENGINEER to validate the quantities and methods used to calculate the quantities in determination of the volume of material required for export from the site. The CONTRACTOR shall only export the volume of material to the site as approved by the ENGINEER. Any expense associated with excess exported material shall be the responsibility of the CONTRACTOR.

PAYMENT

Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

18. Sculpted Colored Concrete Drop Structure

(SY)

DESCRIPTION

This WORK consists of installing sculpted colored concrete drop structures and colored concrete stilling basins. It includes:

1. Preparing and stabilizing subgrade including excavating, backfilling, and compacting to specified densities confirmed by independent testing.
2. Placing base course and bedding as shown on the DRAWINGS.
3. Furnishing and placing reinforcing steel.
4. Furnishing and installing weep drains.
5. Furnishing, forming, placing colored concrete, and creating featured elements (logs, flow splitters, boulders, etc.) and fibermesh as shown on the DRAWINGS.
6. Finishing applications applied to the concrete including shaping, stamping, troweling, cutting, texturing, and sealing.
7. Furnishing and applying curing compounds.

MEASUREMENT

Measurement for payment for this item will be the planned number of **square yards** of concrete shown on the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

The accepted quantities will be paid for at the Contract unit price for this Item.

The CONTRACTOR shall provide survey data shots of sculpted concrete drop structures, captured by the CONTRACTORS equipment GPS system. The survey data shots shall include cross-sectional elevations at the crest, toe, stilling basin, and end sill on the structure. The survey data shots shall be submitted in CAD (.dwg format) with each payment application.

Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

19. Concrete Lined Channel – South Tributary

(SY)

DESCRIPTION

This WORK consists of installing concrete lined channel within the limits of the South Tributary of the project. It includes:

1. Preparing and stabilizing subgrade including excavating, backfilling, and compacting to specified densities confirmed by independent testing.
2. Placing base course and bedding as shown on the DRAWINGS.
3. Furnishing and placing reinforcing steel.
4. Furnishing and installing weep drains.
5. Furnishing, forming, placing colored concrete, and fibermesh as shown on the DRAWINGS.
6. Finishing applications applied to the concrete including shaping, stamping, troweling, cutting, texturing, and sealing.
7. Furnishing and applying curing compounds.

MEASUREMENT

Measurement for payment for this item will be the *planned* number of **square yards** of concrete shown on the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

The accepted quantities will be paid for at the Contract unit price for this Item. The CONTRACTOR shall provide survey data shots of concrete lined channel submitted in CAD (.dwg format) with each payment application. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

20. Concrete Edge and Cutoff Wall

(CY)

DESCRIPTION

This WORK consists of installing concrete edge and cutoff walls (included in Drop Structures 8-10). It includes:

1. Preparing and stabilizing subgrade including excavating, backfilling, and compacting.
2. Placing base course and bedding as shown on the DRAWINGS.
3. Furnishing and placing reinforcing steel.
4. Furnishing, forming, and placing concrete and fibermesh as shown on the DRAWINGS.
5. Finishing applications applied to the concrete including shaping, troweling, cutting, or texturing.
6. Furnishing and applying curing compounds.

MEASUREMENT

Measurement for payment for this item will be the planned number of **cubic yards** of concrete shown on the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

The accepted quantities will be paid for at the Contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

21. Sheet Pile (PZ 22 Section) – Cutoff and Edge Wall (SF)

DESCRIPTION

This WORK consists of installing sheet pile (PZ 22 Section) as part of Sculpted Drop Structures. It includes:

1. Transporting materials to the project site.
2. Equipment necessary to drive the sheet pile into position and depth per the DRAWINGS.
3. Equipment and labor involved with cutting of the installed pile to match construction DRAWINGS.
4. Providing all other related and necessary labor, equipment, and ancillary materials to complete the WORK including, but not limited to, cutting lift holes, or welding sheet pile.

MEASUREMENT

Measurement for payment for this item will be the *planned* number of **square feet** of all sheet pile shown on the DRAWINGS and SPECIFICATIONS, or as otherwise directed by the ENGINEER.

PAYMENT

The accepted quantities will be paid for at the Contract unit price for this Item. The CONTRACTOR shall provide survey data shots of installed sheet pile, captured by the CONTRACTORS equipment GPS system. Survey data shots shall be submitted in CAD (.dwg format) and shall also refusal depths with each payment application. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. Payment includes any necessary fees for special handling or disposal of excess sheet pile. 5% of this item's total bid price will be withheld until Final Acceptance is given.

22. Type M Soil Riprap	(CY)
23. Type H Soil Riprap	(CY)
24. Type VH Soil Riprap	(CY)

DESCRIPTION

This WORK consists of installing Type M / H / VH Soil Riprap (a mixture of Type M / H / VH and soil as described in the SPECIFICATIONS) It includes:

1. Preparing and stabilizing subgrade including excavating, backfilling, and compacting to specified densities confirmed by testing.
2. Removing and disposing excavated material and debris
3. Furnishing, transporting, and stockpiling all riprap
4. Mixing (as described in technical SPECIFICATIONS), placing, consolidating, confirming all voids are filled, and verifying final surface elevations and shape as shown on the DRAWINGS
5. Providing all other related and necessary labor, equipment, and materials to complete the WORK
6. At the approval of the ENGINEER, the CONTRACTOR may reuse existing salvaged riprap onsite, including riprap and small boulders from the existing stacked boulder wall. 50% of the volume of riprap reused shall be deducted from the total volume of riprap it is replacing in the planned quantity for payment. The replacement quantity shall be agreed upon between the ENGINEER/ CONTRACTOR prior to the reuse.

MEASUREMENT

Measurement for payment for this item will be by the *planned* number of **cubic yards** of riprap placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

The accepted quantities will be paid for at the Contract unit price for this Item. The CONTRACTOR shall provide survey data shots of the riprap captured by the CONTRACTOR'S equipment GPS systems. The survey data shots should show the horizontal limits and vertical extents, including the bottom of the excavated area before the riprap is placed and the top of the completed soil riprap with each payment application. Additionally, the CONTRACTOR shall provide load tickets for the material delivered and pictures of the installed soil riprap (before burial) for review and approval by the ENGINEER. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

25. Type M Void Filled Riprap	(CY)
26. Type H Void Filled Riprap	(CY)
27. Type VH Void Filled Riprap	(CY)

DESCRIPTION

This WORK consists of installing Type M / H / VH Void Filled Riprap (a mixture of Type M / H / VH, 7-inch Minus Surge Rock, VTC Rock, 4-inch Minus Pit Run Rock, and Type II bedding as described in the SPECIFICATIONS) It includes:

1. Preparing and stabilizing subgrade including excavating, backfilling, and compacting to specified densities confirmed by testing.
2. Removing and disposing excavated material and debris
3. Furnishing, transporting, mixing, and placing all riprap and material for filling voids
4. Mixing (as described the SPECIFICATIONS), placing, consolidating, confirming all voids are filled, and verifying final surface elevations and shape as shown on the DRAWINGS
5. Providing all other related and necessary labor, equipment, and materials to complete the WORK
6. At the approval of the ENGINEER, the CONTRACTOR may reuse existing salvaged riprap onsite, including riprap and small boulders from the existing stacked boulder wall. 50% of the volume of riprap reused shall be deducted from the total volume of riprap it is replacing in the planned quantity for payment. The replacement quantity shall be agreed upon between the ENGINEER/ CONTRACTOR prior to the reuse.

MEASUREMENT

Measurement for payment for this item will be by the *planned* number of **cubic yards** of riprap placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

The accepted quantities will be paid for at the Contract unit price for this Item. The CONTRACTOR shall provide survey data shots of the riprap captured by the CONTRACTOR'S equipment GPS systems. The survey data shots should show the horizontal limits and vertical extents, including the bottom of the excavated area before the riprap is placed and the top of the completed void filled riprap with each payment application. Additionally, the CONTRACTOR shall provide load tickets for the material delivered and pictures of the installed soil riprap (before burial) for review and approval by the ENGINEER. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

28. 18 Inch Reinforced Concrete Pipe (RCP)

(LF)

DESCRIPTION

This WORK consists of installing 18 Inch Reinforced Concrete Pipe. The 18 Inch Reinforced Concrete Pipe (Complete in Place) shall be in accordance with Section 630 of the CITY of Colorado Springs Standard SPECIFICATIONS Manual. It includes:

1. Furnishing 18 Inch RCP
2. Preparing and stabilizing subgrade including excavating, backfilling, and compacting to specified densities confirmed by independent testing.
3. Trenching and placing bedding material
4. Placing and connecting pipe sections; including fittings and jointing material.
5. Connecting pipe to storm manhole; including bends and gaskets
6. Providing all other related and necessary labor, equipment, and materials required to complete the WORK.

MEASUREMENT

Measurement for payment for this item will be the actual number of **linear feet** of 18 Inch RCP installed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

Accepted quantities will be paid for at the contract unit price for this Item. The CONTRACTOR shall provide survey data shots of the RCP invert elevations submitted in CAD (.dwg format) with each payment application. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

29. 18 Inch Reinforced Concrete Pipe (RCP) Flared End Section (FES)

(EA)

DESCRIPTION

This WORK consists of installing an 18 Inch RCP Flared End Section to the 18 Inch RCP as shown on the CONTRACT DOCUMENTS. It includes:

1. Furnishing 18 Inch FES without Metal Grate
2. Preparing subgrade, trenching, and placing bedding material.
3. Installing joint fastener (CDOT Standard Plan NO. M-603-10) at 18 Inch RCP-FES joint(s).
4. Providing all other related and necessary labor, equipment, and materials required to complete the WORK.

MEASUREMENT

Measurement for payment for this item shall be by the actual number of **each** unit installed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

Accepted quantities will be paid for at the contract unit price for this Item. The CONTRACTOR shall provide survey data shots of the FES invert elevation submitted in CAD (.dwg format) with each payment application. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

30. 36 Inch Reinforced Concrete Pipe (RCP) Flared End Section (FES)

(EA)

DESCRIPTION

This WORK consists of installing a 36 Inch RCP Flared End Section to the 36 Inch RCP as shown on the CONTRACT DOCUMENTS. It includes:

1. Furnishing 36-inch FES without Metal Grate
2. Preparing subgrade, trenching, and placing bedding material.
3. Cutting 3' off existing 36" RCP pipe and disposal of pipe.
4. Installing joint fastener (CDOT Standard Plan NO. M-603-10) at 36 Inch RCP-FES joint(s).
5. Providing all other related and necessary labor, equipment, and materials required to complete the WORK.

MEASUREMENT

Measurement for payment for this item shall be by the actual number of **each** unit installed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

Accepted quantities will be paid for at the contract unit price for this Item. The CONTRACTOR shall provide survey data shots of the FES invert elevation submitted in CAD (.dwg format) with each payment application. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

31. Removal and Placement of Existing Boulders as Ornamental Boulders (EA)

DESCRIPTION

This WORK consists of the removal and placement of existing boulders as shown on the DRAWINGS to the project location to be placed as ornamental boulders. It includes:

1. Removing, hauling, placing, finishing, and stabilizing boulders
2. Providing all other related and necessary labor, equipment, and materials required to complete the WORK

MEASUREMENT

Measurement for payment for this item shall be by the *actual* number of **each** unit installed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

32. Erosion Control Fabric (Nedia KoirMat 700) with Straw Underlay (SY)

DESCRIPTION

This WORK consists of installing erosion control fabric (Nedia KoirWrap™ 700; or approved equal). It includes:

1. Furnishing, transporting, and handling fabric material, straw underlay, and wood stakes
2. Stockpiling and storing material
3. Excavating, backfilling, and compacting necessary for fabric placement
4. Staking of mats, including overlap and trenches
5. Cleanup
6. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

Measurement for payment for this item will be by the *planned* number of **square yards** of KoirWrap™ 700 (or approved equal) placed. Material buried in the anchor trenches or required lapping of the blanket in accordance with the DRAWINGS and SPECIFICATIONS is considered incidental. Wood staking will be included in this item and not measured separately. No additional payment will be made for areas disturbed outside of construction limits or areas within construction limits that are not identified on the DRAWINGS and SPECIFICATIONS to be disturbed, unless approved by the ENGINEER.

PAYMENT

5% of the total bid price will be withheld until the warranty requirements have been satisfactorily met. Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

33. Coconut Erosion Control Blanket (Nedia C400B™) (SY)

DESCRIPTION

This WORK consists of installing coconut erosion control blankets (Nedia C400B™; or approved equal). It includes:

1. Furnishing, transporting, and handling blanket material and wood stakes.
2. Stockpiling, storing, and transporting material.
3. Excavating, backfilling, and compacting necessary for fabric placement.
4. Staking of mats, including overlap and trenches.
5. Cleanup
6. Providing all other related and necessary labor, equipment, and materials to complete the WORK.

MEASUREMENT

Measurement for payment for this item will be the *planned* number of **square yards** of C400B erosion control blanket (or approved equal) placed. Material buried in the anchor trenches or required lapping of the blanket in accordance with the DRAWINGS and SPECIFICATIONS is considered incidental. Wood staking will be included in this item and not measured separately. No additional payment will be made for areas disturbed outside of construction limits or areas within construction limits that are not identified on the DRAWINGS and SPECIFICATIONS to be disturbed, unless approved by the ENGINEER.

PAYMENT

5% of the total bid price will be withheld until the warranty requirements have been satisfactorily met. Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

34. Straw Mulch (2,500 lbs. of Straw Mulch per 1 AC) (AC)

DESCRIPTION

This WORK consists of installing straw mulch. It includes:

1. Furnishing, transporting, and placing specified material.
2. Stockpiling and storing material
3. Cleanup
4. Providing all other related and necessary labor, equipment, and materials to complete the WORK.

MEASUREMENT

Measurement for payment for this item will be the *planned* number of **acres** of area seeded in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. For bidding purposes, the application rate is 2500 LBS of straw mulch per 1 AC. No additional payment will be made for areas disturbed outside of construction limits or areas within construction limits that are not identified on the DRAWINGS and SPECIFICATIONS to be disturbed, unless approved by the ENGINEER.

PAYMENT

5% of the total bid price will be withheld until the warranty requirements have been satisfactorily met. Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

35. Hydromulch

(SF)

DESCRIPTION

This WORK consists of installing hydromulch. It includes:

5. Furnishing, transporting, and placing specified material.
6. Stockpiling and storing material
7. Cleanup
8. Providing all other related and necessary labor, equipment, and materials to complete the WORK.

MEASUREMENT

Measurement for payment for this item will be the actual number of **square feet** of area in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. No additional payment will be made for areas disturbed outside of construction limits or areas within construction limits that are not identified on the DRAWINGS and SPECIFICATIONS to be disturbed, unless approved by the ENGINEER.

PAYMENT

5% of the total bid price will be withheld until the warranty requirements have been satisfactorily met. Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

36. Soil Amendment – Humate (250 lbs. of Humate per 1 AC) (LB)

DESCRIPTION

This WORK consists of acquiring, transporting, and stockpiling of soil amendment humate material. It includes:

1. Providing testing and documentation of humate composition
2. Spreading and tilling of humate into topsoil for Transitional and Upland seedbed areas. No humate is required for Channel seed mix areas.
3. Providing all other related and necessary labor, equipment, and materials required to complete the WORK

MEASUREMENT

Measurement for payment for this item will be the actual pounds of soil amendment - humate delivered and applied. The quantity to be paid will be based on the application rate recommended from the soil fertility test. For bidding purposes, the application rate is 250 lbs of humate per acre. No additional payment will be made for areas disturbed outside of construction limits or areas within construction limits that are not identified on the DRAWINGS and SPECIFICATIONS to be disturbed, unless approved by the ENGINEER.

PAYMENT

5% of the total bid price will be withheld until the warranty requirements have been satisfactorily met. Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

37. Soil Amendment – Compost (2 CY of Compost per 1000 SF) (CY)

DESCRIPTION

This WORK consists of acquiring, transporting, and stockpiling of soil amendment compost material. It includes:

1. Testing and documentation of compost composition
2. Spreading and tilling of compost into the topsoil for Transitional and Upland seedbed areas. No compost is required for Channel seed mix areas.
3. Protecting stockpiles from erosion
4. Controlling moisture levels
5. Providing all other related and necessary labor, equipment, and materials required to complete the WORK

MEASUREMENT

Measurement for payment for this item will be the *actual* number of **cubic yards** of soil amendment – compost acquired and delivered to the project and properly stockpiled. The quantity to be paid will be based on the application rate recommended from the soil fertility test. For bidding purposes, the application rate is 2.0 CY of compost per 1000 SF. No additional payment will be made for areas disturbed outside of construction limits or areas within construction limits that are not identified on the DRAWINGS and SPECIFICATIONS to be disturbed, unless approved by the ENGINEER.

PAYMENT

5% of the total bid price will be withheld until the warranty requirements have been satisfactorily met. Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

38. Seeding (Transitional Seed Mix)	(AC)
39. Seeding (Channel Seed Mix)	(AC)
40. Seeding (Upland Seed Mix)	(AC)

DESCRIPTION

This WORK consists of soil preparation and seeding, **excluding** Soil Amendment (**Bid Item 36 and 37**). It includes:

1. Ground preparation such as harrowing or tilling
2. Raking to remove clods and smooth the surface
3. Spreading seed
4. Cleanup
5. Providing all other related and necessary labor, equipment, and materials required to complete the WORK

MEASUREMENT

Measurement for payment for this item will be the *planned acres* of area seeded in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. No additional payment will be made for areas disturbed outside of construction limits or areas within construction limits that are not identified on the DRAWINGS and SPECIFICATIONS to be disturbed, unless approved by the ENGINEER.

PAYMENT

5% of the total bid price will be withheld until the warranty requirements have been satisfactorily met. Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

41. Sod

(SF)

DESCRIPTION

This WORK consists of replacing sod per impacted parcel identified on the Revegetation PLANS. It includes:

1. Restoring sod impacted on identified parcels
2. Ground preparation such as harrowing or tilling
3. Raking to remove clods and smooth the surface
4. Placing sod
5. Cleanup
6. Providing all other related and necessary labor, equipment, and materials required to complete the WORK

MEASUREMENT

Measurement for payment for this item will be the actual number of **square feet** of all sheet pile shown on the DRAWINGS and SPECIFICATIONS, or as otherwise directed by the ENGINEER.

PAYMENT

5% of the total bid price will be withheld until the warranty requirements have been satisfactorily met. Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

42. 3/4" Crushed Concrete

(SF)

DESCRIPTION

This WORK consists of replacing/installing 3/4" Crushed Concrete per impacted parcel identified on the Revegetation PLANS. It includes:

1. Restoring/Installing 3/4" Crushed Concrete on identified parcels
2. Procuring, transporting, handling of 3/4" Crushed Concrete.
3. Ground preparation such as harrowing or tilling
4. Raking to remove clods and smooth the surface
5. Placing and staking landscaping fabric.
6. Spreading crushed gravel
7. Cleanup
8. Providing all other related and necessary labor, equipment, and materials required to complete the WORK

MEASUREMENT

Measurement for payment for this item will be the *planned* number of **square feet** of all sheet pile shown on the DRAWINGS and SPECIFICATIONS, or as otherwise directed by the ENGINEER.

PAYMENT

Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

43. River Rock (2"-4" and 4"-6" sizes)

(SF)

DESCRIPTION

This WORK consists of replacing/installing River Rock per impacted parcel identified on the Revegetation PLANS. It includes:

1. Restoring/Installing River Rock on identified parcels
2. Ground preparation such as harrowing or tilling
3. Raking to remove clods and smooth the surface
4. Placing and staking landscaping fabric.
5. Cleanup
6. Providing all other related and necessary labor, equipment, and materials required to complete the WORK

MEASUREMENT

Measurement for payment for this item will be the *planned* number of **square feet** of all sheet pile shown on the DRAWINGS and SPECIFICATIONS, or as otherwise directed by the ENGINEER.

PAYMENT

5% of the total bid price will be withheld until the warranty requirements have been satisfactorily met. Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

44. Privacy Wooden Fence – 6'

(LF)

DESCRIPTION

This WORK includes, but is not limited to

1. Furnishing and installing all materials, including posts, rails, pickets, concrete, and nails/screws as shown on the DRAWINGS
2. Excavating, filling, and compacting
3. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The measurement for payment for this item will be the *actual* number of **linear feet** of fence removed and reset in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs.

PAYMENT

Payment will be based on units completed and accepted. 5% of this item's total bid price will be withheld until Final Acceptance is given.

- | | |
|---------------------------------|-------------|
| 45. Chainlink Fence – 4' | (LF) |
| 46. Chainlink Fence – 6' | (LF) |

DESCRIPTION

This WORK includes, but is not limited to

1. Furnishing and installing all materials, including posts, rails, chainlink fabric, concrete, and nails/ screws as shown on the DRAWINGS
2. Excavating, filling, and compacting
3. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The measurement for payment for this item will be the actual number of **linear feet** of fence removed and reset in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs.

PAYMENT

Payment will be based on units completed and accepted. 5% of this item's total bid price will be withheld until Final Acceptance is given.

47. Standard Railing

(LF)

DESCRIPTION

This WORK consists of installing pedestrian railing. It includes:

1. Transporting materials to the project site.
2. Equipment necessary to drive the sheet pile into position and depth per the DRAWINGS.
3. Equipment and labor involved with cutting of the installed pile to match construction DRAWINGS.
4. Providing all other related and necessary labor, equipment, and ancillary materials to complete the WORK including, but not limited to, providing anchor bolts, anchor bolt epoxy, installing anchor bolts, isolation kits, and welding.

MEASUREMENT

Measurement for payment for this item will be the *planned* number of **linear feet** of all railing shown on the DRAWINGS and SPECIFICATIONS, or as otherwise directed by the ENGINEER.

PAYMENT

The accepted quantities will be paid for at the Contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. Payment includes any necessary fees for special handling or disposal of excess sheet pile. 5% of this item's total bid price will be withheld until Final Acceptance is given.

48. 48" Pedestrian Railing

(LF)

DESCRIPTION

This WORK consists of installing the pedestrian/bike railing. It includes:

1. Transporting materials to the project site.
2. Equipment necessary to drive the sheet pile into position and depth per the DRAWINGS.
3. Equipment and labor involved with cutting of the installed pile to match construction DRAWINGS.
4. Providing all other related and necessary labor, equipment, and ancillary materials to complete the WORK including, but not limited to, providing anchor bolts, anchor bolt epoxy, installing anchor bolts, isolation kits, and welding.

MEASUREMENT

Measurement for payment for this item will be the *planned* number of **linear feet** of all railing shown on the DRAWINGS and SPECIFICATIONS, or as otherwise directed by the ENGINEER.

PAYMENT

The accepted quantities will be paid for at the Contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. Payment includes any necessary fees for special handling or disposal of excess sheet pile. 5% of this item's total bid price will be withheld until Final Acceptance is given.

49. 6' Pedestrian Gravel Trail (Natural Stone CDOT Class #4) (SY)

DESCRIPTION

This WORK includes, but is not limited to:

1. Furnishing and placing Natural Stone CDOT Class #4 to the required thickness and filter fabric
2. Forming and edging
3. Placing and staking landscaping fabric.
4. Furnishing and compacting all material required for a stable subbase
5. Furnishing and applying soil sterilant
6. Excavating, backfilling and compacting
7. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The measurement for payment for this item will be the *actual* number of **square yards** of CDOT Class #4 stone trail placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs.

PAYMENT

Payment will be based on units completed and accepted. 5% of this item's total bid price will be withheld until Final Acceptance is given.

50. 12' Maintenance Access Road (CDOT Class #4) (SY)

DESCRIPTION

This WORK includes, but is not limited to:

1. Furnishing and placing CDOT Class #4 to the required thickness and filter fabric
2. Forming and edging
3. Furnishing and compacting all material required for a stable subbase
4. Furnishing and applying soil sterilant
5. Excavating, backfilling and compacting
6. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The measurement for payment for this item will be the actual number of **square yards** of crusher fine trail placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs.

PAYMENT

Payment will be based on units completed and accepted. 5% of this item's total bid price will be withheld until Final Acceptance is given.

51. Pipe Bollards (S. Trib)

(EA)

DESCRIPTION

This WORK includes, but is not limited to:

1. Excavating and disposing of material
2. Backfilling and compacting
3. Furnishing, transporting, and placing bollard and hardware
4. Furnishing and placing concrete
5. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The measurement for payment for this item will be per **each** bollard placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs.

PAYMENT

Payment will be based on units completed and accepted. 5% of this item's total bid price will be withheld until Final Acceptance is given.

52. Sanitary Bypass Pumping – Mainstem and S. Trib (LS)

DESCRIPTION

This WORK consists of the temporary bypass pumping of the existing sanitary sewer line to be modified and or removed. This BID item includes, but is not limited to:

1. Bypass pumping live sewage in manhole and upstream sewer lines.
2. Replacing or repairing all damaged materials with new materials.
3. Furnishing, transporting, and installing all materials, fittings, and related items as shown on DRAWINGS

MEASUREMENT

The quantity Sanitary Sewer Bypass Pumping to be paid for shall be **lump sum**. Sanitary Sewer Bypass Pumping shall be in accordance with Colorado Springs Utilities Wastewater Line Extension & Service Standards, latest edition.

PAYMENT

Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for pumps, pipe connections, connections to existing manholes, all labor, excavation, equipment, traffic control, tools, and materials necessary to complete the work. Payment also includes full compensation for preparation, review, approval and implementation of a required pumping bypass plans. 5% of this item's total bid price will be withheld until Final Acceptance is given.

53. Removal of 8" Sanitary Pipe

(LF)

DESCRIPTION

This WORK consists of the removal of 8" sanitary pipe. This BID item includes, but is not limited to:

1. Removing, hauling, and disposing of structures and obstructions including, but not limited to, existing pipe, culverts, inlets, concrete, asphalt, and any structures and obstructions that interfere with the WORK
2. Backfilling and compacting after removal of structures and obstructions
3. Moisture conditioning of suitable backfill material
4. Restoring area, as required
5. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The quantity of Removal of 8" Sanitary Pipe to be paid for will be determined the planned number of **linear feet** of 8" Sanitary pipe and appurtenances removed and accepted by the Engineer as complying with the plans and specifications. Removal of Waterline shall be in accordance with the Colorado Springs Utilities Wastewater Line Extension and Service Standards, latest edition.

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 of Removal of 8" Sanitary Pipe shall include, but is not limited to, removal and off-site disposal of any pipe, fittings, and all other features of the pipe. Pipe, fittings, and meters shall be salvaged and delivered to Colorado Springs Utilities. Payment shall be full compensation for sawing, excavation, delivery of salvaged materials, subsequent backfill of materials removed, and replacement of concrete and asphalt pavement, curbs and sidewalks. 5% of this item's total bid price will be withheld until Final Acceptance is given.

54. Removal of Sanitary Manhole

(EA)

DESCRIPTION

This WORK consists of the removal of sanitary manholes. This BID item includes, but is not limited to:

1. Removing, hauling, and disposing of structures and obstructions including, but not limited to, existing pipe, culverts, inlets, concrete, asphalt, and any structures and obstructions that interfere with the WORK
2. Backfilling and compacting after removal of structures and obstructions
3. Moisture conditioning of suitable backfill material
4. Restoring area, as required
5. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The quantity of **each** Removal of Sanitary Manhole to be paid for will be determined by the planned number of sanitary manholes removed and accepted by the Engineer as complying with the plans and specifications. Removal of Sanitary Manhole shall be in accordance with the Colorado Springs Utilities Wastewater Line Extension and Service Standards, latest edition.

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 of removal of sanitary manhole shall include removal and off-site disposal of any foundations, reinforcing steel and all other features of the manhole. Payment shall be full compensation for sawing, excavation and subsequent backfill of materials removed. 5% of this item's total bid price will be withheld until Final Acceptance is given.

55. 12" PVC Sanitary Pipe (SDR 26)

(LF)

DESCRIPTION

This WORK consists of the installment of 12" PVC Sanitary Pipe. This BID item includes, but is not limited to:

1. Coordinating with property owners and utility companies
2. Locating, potholing and protecting service line and other utilities
3. Excavating, backfilling and compacting
4. Supporting trenches, shoring, or sloping trench walls back if shoring is not used
5. Furnishing and placing required pipe bedding and backfill materials
6. Removing and properly disposing all removed and excess materials
7. Tapping and/or connecting to pipes or structures
8. Furnishing, transporting, and installing all new pipe and fittings or items not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS
9. Providing and maintaining a temporary all-weather surface over trenches within City right-of-way until road reconstruction is complete; and removing and disposing all materials used for temporary all-weather surface
10. Flushing and testing as required by local governing agency
11. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The quantity of 12" PVC Sanitary Pipe (SDR 26) to be paid for will be determined by the planned of **linear feet** constructed, including bends, wyes, tees, and cleanouts accepted by the Engineer as complying with the plans and specifications. Sewer line construction shall be in accordance with Colorado Springs Utilities Wastewater Line Extension and Service Standards, latest edition.

PAYMENT

Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment shall include, but is not limited to, excavation, bedding, backfill, marking tape, tracer wire, joint lubricant, and off-site disposal of construction debris. Pipe bedding shall be per the requirements of the Colorado Springs Utilities Wastewater Line Extension and Service Standards, latest edition, including "special" bedding required by slope or depth. 5% of this item's total bid price will be withheld until Final Acceptance is given.

56. 5' Diameter Sanitary Manhole

(EA)

DESCRIPTION

This WORK consists of the installment of 5' Diameter Sanitary Manholes. This BID item includes, but is not limited to:

1. Furnishing, transporting, and installing all materials, including sheeting and/or bracing, bedding, concrete, reinforcing steel, precast bases, barrels, cones, and/or tops, grade rings, mortar, plastic joint sealant, grout, lining, manhole steps, ring and cover, watertight manhole frame and bolted lid where required and materials not otherwise provided elsewhere in the DRAWINGS and SPECIFICATIONS
2. Constructing and shaping the base invert, including all pipe
3. Constructing required stub-outs and connections, including pipe and plugs
4. Placing joint sealant between barrel sections
5. Furnishing, transporting, and installing concrete collars, including any steel reinforcement required
6. Furnishing, transporting, and placing flowfill material
7. Conducting interior waterproofing, as required
8. Excavating, backfilling, including furnishing, transporting, and placing material and compacting
9. Removing and disposing of debris, pipe, excess excavated materials, and damaged materials
10. Providing all other related work and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The quantity of **each** 5' Diameter Sanitary Manholes to be paid for will be determined the planned number of 5' Diameter Sanitary Manholes constructed and accepted by the Engineer as complying with the plans and specifications. 5' Diameter Sanitary Manhole shall be in accordance with the Colorado Springs Utilities Wastewater Line Extension and Service Standards, latest edition.

PAYMENT

Payment shall be made at the applicable contract unit price for Bid Item and shall include but is not limited to, excavation, bedding, backfill, temporary and permanent line connections, marking, equipment, tools, and materials necessary to complete the work. 5% of this item's total bid price will be withheld until Final Acceptance is given.

57. Modify Sanitary Manhole

(EA)

DESCRIPTION

This WORK consists of the modification of existing Sanitary Manholes. This BID item includes, but is not limited to:

1. Furnishing, transporting, and installing all materials, including sheeting and/or bracing, bedding, concrete, reinforcing steel, precast bases, barrels, cones, and/or tops, grade rings, mortar, plastic joint sealant, grout, lining, manhole steps, ring and cover, watertight manhole frame and bolted lid where required and materials not otherwise provided elsewhere in the DRAWINGS and SPECIFICATIONS
2. Constructing and shaping the base invert, including all pipe
3. Constructing required stub-outs and connections, including pipe and plugs
4. Placing joint sealant between barrel sections
5. Furnishing, transporting, and installing concrete collars, including any steel reinforcement required
6. Furnishing, transporting, and placing flowfill material
7. Conducting interior waterproofing, as required
8. Excavating, backfilling, including furnishing, transporting, and placing material and compacting
9. Removing and disposing of debris, pipe, excess excavated materials, and damaged materials
10. Providing all other related work and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The quantity of **each** Modified Manholes to be paid for will be determined by the planned number of Modified Manholes constructed and accepted by the Engineer as complying with the plans and specifications. Modified Manholes shall be in accordance with the Colorado Springs Utilities Wastewater Line Extension and Service Standards, latest edition.

PAYMENT

Payment shall be made at the applicable contract unit price for Bid Item and shall include but is not limited to the addition of grade rings and/or barrel sections and the removal of pavement, sidewalks, gutters, and curbs, excavation, backfill and their replacement in kind to match proposed grade, marking, equipment, tools, and materials and all other work necessary to complete the item. 5% of this item's total bid price will be withheld until Final Acceptance is given.

58. Removal of 8" Water Pipe

(LF)

DESCRIPTION

This WORK consists of the removal of 8" water pipe. This BID item includes, but is not limited to:

1. Removing, hauling, and disposing of structures and obstructions including, but not limited to, existing pipe, fittings, hydrants, culverts, inlets, concrete, asphalt, and any structures and obstructions that interfere with the WORK
2. Backfilling and compacting after removal of structures and obstructions
3. Moisture conditioning of suitable backfill material
4. Restoring area, as required
5. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The quantity of Removal of 8" Water Pipe to be paid for will be the planned number of **linear feet** of 8" Water pipe and appurtenances removed and accepted by the Engineer as complying with the plans and specifications. Removal of Waterline shall be in accordance with the Colorado Springs Utilities Water Line Extension and Service Standards, latest edition.

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 of Removal of 8" water pipe shall include, but is not limited to, removal and off-site disposal of any pipe, fittings, hydrants, valves, valve boxes, concrete reverse anchors, thrust blocks and all other features of the pipe. Pipe, fittings, meters, valve boxes and valves shall be salvaged and delivered to Springs Utilities. Payment shall be full compensation for sawing, excavation, delivery of salvaged materials, subsequent backfill of materials removed, and replacement of concrete and asphalt pavement, curbs and sidewalks. 5% of this item's total bid price will be withheld until Final Acceptance is given.

59. 8" PVC Water Pipe (AWWA C900)

(LF)

DESCRIPTION

This WORK consists of the installment of 8" PVC Water Pipe. This BID item includes, but is not limited to:

1. Coordinating with property owners and utility companies
2. Locating, potholing and protecting service line and other utilities
3. Excavating, backfilling and compacting
4. Supporting trenches, shoring, or sloping trench walls back if shoring is not used
5. Furnishing and placing required pipe bedding and backfill materials
6. Removing and properly disposing all removed and excess materials
7. Tapping and/or connecting to pipes or structures
8. Furnishing, transporting, and installing all new pipe, valves, valve boxes, couplings, bends, tees, concrete anchors & thrust blocks, and fittings or items not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS
9. Pressure testing and cleaning new pipe segments including furnishing, transporting and installing chlorination taps
10. Providing and maintaining a temporary all-weather surface over trenches within City right-of-way until road reconstruction is complete; and removing and disposing all materials used for temporary all-weather surface
11. Furnishing and installing cathodic protection and test stations as required per the DRAWINGS and SPECIFICATIONS
12. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The quantity of 8" PVC Water Pipe to be paid for will be determined by the planned number of **linear feet** constructed, including fittings, pipe restraints, and pipe adapters accepted by the Engineer as complying with the plans and specifications. Water line construction shall be in accordance with Colorado Springs Utilities Water Line Extension and Service Standards, latest edition.

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 of 8" PVC Water Pipe shall include, but is not limited to, excavation, bedding, backfill, temporary line connections, marking, tracer wire, disinfection, bacteria test and off-site disposal of construction debris. 5% of this item's total bid price will be withheld until Final Acceptance is given.

60. Fire Hydrant Assembly

(EA)

DESCRIPTION

This WORK consists of the installment of 4' Diameter Sanitary Manholes. This BID item includes, but is not limited to:

1. Locating and protecting all existing utilities in and along the pipe length
2. Excavating, backfilling and compacting
3. Supporting trenches, shoring, or laying slopes back if shoring is not used
4. Furnishing and compacting all materials required for a stable subbase, specific drainage material, structural backfill, and other backfill material, including imported backfill material if no suitable onsite material is available
5. Constructing the specific bedding, including the furnishing, placing, and compacting of sand, gravel, and rock
6. Removing and disposing excess excavated material and debris
7. Furnishing and installing new fire hydrant assembly including all pipe, risers and extensions, valves, valve boxes, tee connection to existing water line, concrete anchors and thrust blocks, and materials not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS
8. Providing and pouring concrete thrust blocks
9. Flushing and testing as shown on DRAWINGS
10. Backfilling, compacting, and testing of trench backfill as shown in the DRAWINGS and SPECIFICATIONS
11. Furnishing and installing cathodic protection and test stations as required per the DRAWINGS and SPECIFICATIONS
12. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The quantity of **each** Fire Hydrant Assembly to be paid for will be determined by the *planned* number of fire hydrant assemblies completed and accepted by the Engineer as complying with the plans and specifications. Fire hydrant assembly shall be in accordance with Colorado Springs Utilities Water Line Extension and Service Standards, latest edition.

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 of fire hydrant assembly shall include, but is not limited to, fire hydrant, hydrant riser extensions, line taps, piping, fittings, cathodic protection, hydrotesting, chlorination, bacteria test and off-site disposal of construction debris. 5% of this item's total bid price will be withheld until Final Acceptance is given.

61. Replace Valve Box

(EA)

DESCRIPTION

This WORK consists of the replacement of valve boxes. This BID item includes, but is not limited to:

1. Excavating backfilling and compacting
2. Cutting pipe and dismantling joints
3. Furnishing and installing water valve, valve stem, valve boxes, extensions, flexible coupling, joint restraints as indicated on the DRAWINGS.
4. Testing as called for on the DRAWINGS and SPECIFICATIONS or as required by the local jurisdictional agency
5. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The quantity of **each** Replace Valve Box to be paid for will be determined the *planned* number of Valve Boxes removed, replaced, and accepted by the Engineer as complying with the plans and specifications. Replacement of Valve Boxes shall be in accordance with the Colorado Springs Utilities Water Line Extension and Service Standards, latest edition.

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. Removed valve boxes shall be salvaged and delivered to Springs Utilities. Payment of Replace Valve Box shall include, but is not limited to, excavation, bedding, backfill, and offsite disposal of construction debris. 5% of this item's total bid price will be withheld until Final Acceptance is given.

62. Utility Encasement – Mainstem and S. Tributary (LS)

DESCRIPTION

This WORK consists of the encasement of installed utilities. This BID item includes, but is not limited to:

1. Furnishing, forming and placing concrete, including coloring and fiber-mesh as shown on DRAWINGS
2. Furnishing and applying the curing compounds
3. Furnishing and installing steel reinforcement as shown on DRAWINGS
4. Providing hot and cold protection
5. Furnishing and compacting all material required for a stable subbase, including bedding, if required
6. Backfilling and compacting adjacent to structure
7. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The quantity Utility Encasement to be paid for shall be **lump sum**. Utility Encasement shall be in accordance with Colorado Springs Utilities Wastewater Line Extension & Service Standards, latest edition.

PAYMENT

Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all materials such as concrete, forming and form removal, finishing and curing concrete, grading, compaction, all labor, excavation, equipment, traffic control, tools, and materials necessary to complete the work. 5% of this item's total bid price will be withheld until Final Acceptance is given.

63. Aggregate Base Course (Class 1) (8.5 inch)

(SY)

DESCRIPTION

This WORK consists of placement of placement and compaction of Aggregate Base Course (Class 1) to a depth of 8.5-inches.

MEASUREMENT

The quantity of Aggregate Base Course (Class 1) (8.5-inch) to be paid for will be determined by the measurement of the *planned* number of **square yards** of Aggregate Base Course (Class 1) installed to a depth of 8.5 inches and accepted by the ENGINEER as complying with the PLANS and SPECIFICATIONS. Aggregate Base Course (Class 1) (8.5 inch) shall be in accordance with Section 304 of the Colorado Department of Transportation Standard SPECIFICATIONS for Road and Bridge Construction.

PAYMENT

Payment shall be made at the applicable unit price for Bid Item and shall include full compensation for all shipping, labor, equipment, tools, placing, compacting and materials necessary to complete the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

64. Asphalt Concrete Pavement (Grading S) (2.5 inch) (SY)

DESCRIPTION

This WORK consists of constructing Asphalt Concrete Pavement (Grading S) to a depth of 2.5 inches.

MEASUREMENT

The quantity of Asphalt Concrete Pavement (Grading S) (2.5 inch) to be paid for will be determined by measurement of the *planned* number of **square yards** of material constructed to a depth of 2.5 inches and accepted by the ENGINEER as complying with the PLANS and SPECIFICATIONS.

Asphalt Concrete Pavement (Grading S) (2.5 inch) construction SPECIFICATIONS shall be in accordance with Section 400 of the CITY Standard SPECIFICATIONS and the Pike Peak Regional Pavement SPECIFICATIONS.

PAYMENT

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all materials, for preparation (including sub-base compaction and moisture treatment and control as identified on the construction PLANS), mixing, transportation, placing and compaction of these materials and for all labor, equipment, tools, and incidentals necessary to complete the WORK. Emulsified Asphalt (Slow-Setting) shall also be included with this item and shall be in accordance with Section 400 of the CITY Standard SPECIFICATIONS and the Pikes Peak Regional Pavement SPECIFICATIONS and shall include all items of WORK involved in the construction of Asphalt Concrete Pavement. 5% of this item's total bid price will be withheld until Final Acceptance is given.

65. Asphalt Concrete Pavement (Grading SX) (2 inch) (SY)

DESCRIPTION

This WORK consists of constructing Asphalt Concrete Pavement (Grading SX) to a depth of 2 inches.

MEASUREMENT

The quantity of Asphalt Concrete Pavement (Grading SX) (2 inch) to be paid for will be determined by measurement of the *planned* number of **square yards** of material constructed to a depth of 2 inches and accepted by the ENGINEER as complying with the PLANS and SPECIFICATIONS.

Asphalt Concrete Pavement (Grading SX) (2 inch) construction SPECIFICATIONS shall be in accordance with Section 400 of the CITY Standard SPECIFICATIONS and the Pike Peak Regional Pavement SPECIFICATIONS.

PAYMENT

Payment shall be made at the applicable contract unit price for Bid Item and shall include full compensation for all materials, for preparation (including sub-base compaction and moisture treatment and control as identified on the construction PLANS), mixing, transportation, placing and compaction of these materials and for all labor, equipment, tools, and incidentals necessary to complete the WORK. Emulsified Asphalt (Slow-Setting) shall also be included with this item and shall be in accordance with Section 400 of the CITY Standard SPECIFICATIONS and the Pikes Peak Regional Pavement SPECIFICATIONS and shall include all items of WORK involved in the construction of Asphalt Concrete Pavement. 5% of this item's total bid price will be withheld until Final Acceptance is given.

66. Concrete Driveway (Residential 6 inch)

(SY)

DESCRIPTION

This WORK consists of constructing Concrete Driveway (Residential 6 inch) to an in-place thickness of 6 inches.

MEASUREMENT

The quantity of Concrete Driveway (Residential 6 inch) to be paid for will be determined by measurement of the *planned* number of **square yards** constructed in place and accepted by the ENGINEER as complying with the PLANS and SPECIFICATIONS. Concrete Driveway (Residential 6 inch) shall be in accordance with Section 500 of the CITY standard SPECIFICATIONS.

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 (Residential 6 inch) shall include all materials such as concrete, forming and form removal, finishing and curing concrete, grading, compaction and all other items of WORK involved in construction of driveway. 5% of this item's total bid price will be withheld until Final Acceptance is given.

67. Concrete Driveway (Commercial 8 inch)

(SY)

DESCRIPTION

This WORK consists of constructing Concrete Driveway (Commercial 8 inch) to an in-place thickness of 8 inches.

MEASUREMENT

The quantity of Concrete Driveway (Commercial 8 inch) to be paid for will be determined by measurement of the *planned* number of **square yards** constructed in place and accepted by the ENGINEER as complying with the PLANS and SPECIFICATIONS. Concrete Driveway (Commercial 8 inch) shall be in accordance with Section 500 of the CITY Standard SPECIFICATIONS.

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 (Commercial 8 inch) shall include all materials such as concrete, forming and form removal, finishing and curing concrete, grading, compaction and all other items of WORK involved in construction of driveway. 5% of this item's total bid price will be withheld until Final Acceptance is given.

68. Curb and Gutter (Type 1, Type 2, Transition Type 1 to 2)(LF)

DESCRIPTION

This WORK consists of installing concrete curb and gutter along project roadways. It includes:

1. Preparing and stabilizing subgrade including excavating, backfilling, and compacting to specified densities confirmed by independent testing.
2. Constructing formwork
3. Placing, finishing, and curing concrete
4. Providing all other related and necessary labor, equipment, and materials required to complete the WORK.

MEASUREMENT

The quantity of curb and gutter (Type 1, Type 2, and Transition Type 1 to 2) to be paid for will be determined by measurement of the *planned* number of **linear feet** constructed and accepted by the ENGINEER as complying with the PLANS and SPECIFICATIONS. Curb and Gutter (Type 1, Type 2, and Transition Type 1 to 2) will be measured along 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. Curb and Gutter (Type 1, Type 2, and Transition Type 1 to 2) shall be in accordance with Section 500 of the CITY Standard SPECIFICATIONS.

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 Type 1, Type 2, and Transition Type 1 to 2 Curb and Gutter shall include all materials such as concrete, forming and form removal, finishing and curing of concrete, grading, compaction and all other items of WORK involved in construction of curb and gutter. 5% of this item's total bid price will be withheld until Final Acceptance is given.

69. Concrete Sidewalk (4 inch)

(SY)

DESCRIPTION

This WORK consists of 4-inch thick concrete sidewalk. It includes:

1. Preparing and stabilizing subgrade including excavating, backfilling, and compacting to specified densities confirmed by independent testing.
2. Constructing formwork
3. Placing, finishing, and curing concrete
4. Restoring of area
5. Providing all other related and necessary labor, equipment, and materials required to complete the WORK.

MEASUREMENT

The quantity of Concrete Sidewalk (4-inch) to be paid for will be determined by measurement of the planned number of **square yards** constructed in place 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 Standard SPECIFICATIONS. If Concrete Sidewalk (4-inch) does not meet ADA requirements, Concrete Sidewalk (4-inch) shall be replaced and corrected at CONTRACTOR's expense.

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 (4-inch) shall include all prepping, forming and form removal, purchase and placement of concrete, finishing and curing of concrete, grading, compaction and other items of WORK involved in construction of the Concrete Sidewalk (4-inch). 5% of this item's total bid price will be withheld until Final Acceptance is given.

70. Sign Panel

(SF)

DESCRIPTION

This WORK consists of the installation of Sign Panels.

MEASUREMENT

The quantity of sign panel to be paid for shall be measured by the *planned* number of **square feet** as designated on the PLANS and accepted by the ENGINEER as complying with the PLANS and SPECIFICATIONS. Sign Panel shall be in accordance with Section 800 of the CITY Standard SPECIFICATIONS and Section 630 of the CDOT Standard SPECIFICATIONS for Road and Bridge Construction.

PAYMENT

Payment shall be made at the applicable unit bid price for Bid Item and shall include full compensation for furnishing, erecting, cleaning and all labor, equipment, tools, and materials necessary to complete the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

71. Steel Sign Post

(EA)

DESCRIPTION

This WORK consists of furnishing and installing steel sign posts as identified on the PLANS.

MEASUREMENT

The quantity of Steel Sign Post to be paid for will be determined by **each** of the *planned* number of steel sign posts with new foundations completed and accepted by the ENGINEER as complying with the PLANS and SPECIFICATIONS. Steel Sign Post shall be in accordance with Section 800 of the CITY Standard SPECIFICATIONS and the CITY Traffic Engineering Signage and Pavement Markings Guidelines.

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 for installing Steel Sign Post. Payment shall be full compensation for excavation and subsequent backfill of materials removed. 5% of this item's total bid price will be withheld until Final Acceptance is given.

72. Type 1 – Roadside Delineator (Red)

(EA)

DESCRIPTION

This WORK consists of providing and installing roadside delineators.

MEASUREMENT

The quantity of roadside delineators to be paid for shall be measured by the *planned* number of **each** roadside delineators as designated on the PLANS and accepted by the ENGINEER as complying with the PLANS and SPECIFICATIONS. Roadside Delineator shall be in accordance with Section 612 of the CDOT Standard SPECIFICATIONS for Road and Bridge Construction and CDOT Standard Plan No. S-612-1.

PAYMENT

Payment shall be made at the applicable unit bid price for Bid Item and shall include full compensation for furnishing, erecting, cleaning and all labor, equipment, tools, and materials necessary to complete the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

73. Curb Opening

(LF)

DESCRIPTION

This WORK consists of installing an opening in concrete curb as identified on the project PLANS.

MEASUREMENT

The quantity of Curb Opening to be paid for will be determined by measurement of the planned number of **linear feet** constructed and accepted by the ENGINEER as complying with the PLANS and SPECIFICATIONS. Curb Opening will be measured along the flowline of the adjacent concrete gutter. Curb Opening shall be in accordance with Section 500 of the CITY Standard SPECIFICATIONS.

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 Opening shall include all materials such as concrete, forming and form removal, finishing and curing of concrete, grading, compaction and all other items of WORK involved in construction of curb and gutter. 5% of this item's total bid price will be withheld until Final Acceptance is given.

74. Chase Drain (w) Covered Channel

(LF)

DESCRIPTION

This WORK consists of installing an covered concrete chase drain as identified on the project PLANS.

MEASUREMENT

The quantity of curb Chase Drain (w) Covered Channel to be paid for will be determined by measurement of the *planned* number of **linear feet** constructed and accepted by the ENGINEER as complying with the PLANS and SPECIFICATIONS. Chase Drain (w) Covered Channel will be measured along the flow line of the channel. Chase Drain (w) Covered Channel shall be in accordance with Section 500 of the CITY Standard SPECIFICATIONS.

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 Chase Drain (w) Covered Channel shall include all materials such as steel, concrete, forming and form removal, finishing and curing of concrete, grading, compaction and all other items of WORK involved in construction of curb and gutter. 5% of this item's total bid price will be withheld until Final Acceptance is given.

75. Removal of Hopeful Drive Bridge

(LS)

DESCRIPTION

This WORK consists of excavating, demolishing, and removing the existing culvert, headwalls, railing, and wingwalls. This payment will include all stipulated structures and obstructions encountered within the structure limits.

Unless otherwise specified, structure excavation shall include all pumping, bailing, draining, and incidentals required for proper execution of the WORK.

MEASUREMENT

This Item will not be measured for payment; it will be a **lump sum**, acceptably performed. No separate measurement for payment will be made for any labor, equipment, and materials required for this item. The lump sum price will include all of CONTRACTOR's costs.

PAYMENT

Progress payments will be made based on the percent of WORK complete times the lump sum unit price for this item. 5% of this item's total bid price will be withheld until Final Acceptance is given.

76. CDOT Class D Concrete (Box Culvert and Headwall) – Hopeful Dr. Bridge (CY)
77. CDOT Class D Concrete (Downstream Wall – Special) – Hopeful Dr. Bridge (CY)
78. CDOT Class D Concrete (Upstream Wingwall Wall) – Hopeful Dr. Bridge (CY)
79. CDOT Class D Concrete (Upstream Apron) – Hopeful Dr. Bridge (CY)
80. CDOT Class D Concrete (Upstream Sheet Pile Cap) – Hopeful Dr. Bridge (CY)

DESCRIPTION

This WORK consists of the transportation, furnishing, and installation of all Hopeful Drive Structural Concrete. Additionally, the WORK consists of:

1. Preparing and stabilizing subgrade including excavating, backfilling, and compacting to specified densities confirmed by independent testing.
2. Constructing form WORK.
3. Placing, finishing, and curing concrete
4. Providing all other related and necessary labor, equipment, and materials required to complete the WORK.

MEASUREMENT

Measurement for payment for this item shall be by the *planned* number of **cubic yards** installed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

81. Rebar (Epoxy and Black Combined) – Hopeful Dr. Bridge

(LB)

DESCRIPTION

This WORK consists of transporting, furnishing, and placing reinforcing steel per the SPECIFICATIONS and in conformity with the DRAWINGS.

The weight of reinforcing steel for payment will not be measured but shall be the quantities designated in the CONTRACT; except, measurements will be made for revisions requested by the ENGINEER, or for an error of plus or minus 2 percent of the total weight shown on the DRAWINGS for each structure.

Prospective bidders shall verify the weight of reinforcing steel before submitting a proposal. An adjustment will not be made in the weight shown on the PLANS, other than for approved design changes or for an error as stipulated above, even though the actual weight may deviate from the plan weight. The computed weight of epoxy-coated reinforcing bars will be based on the nominal weight before application of the epoxy coating. Nominal weights for various bar sizes are shown below.

Bar Size	Weight Per Linear Foot (Pounds)
No. 3	0.376
No. 4	0.668
No. 5	1.043
No. 6	1.502
No. 7	2.044
No. 8	2.67
No. 9	3.40
No. 10	4.303
No. 11	5.313
No. 14	7.65
No. 18	13.6

MEASUREMENT

Measurement for payment for this item shall be by the planned number of **pounds** installed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

82. CDOT Class 1 Structure Backfill – Hopeful Dr. Bridge (CY)

DESCRIPTION

This WORK consists of the transporting, furnishing, and installing of the backfill of all material required for the construction of the Hopeful Drive Bridge. This WORK includes the necessary compaction, independent testing, and correction of compaction as necessary.

Compaction, water, and all other WORK necessary to complete the above items will not be measured and paid for separately but shall be included in the WORK.

When the CONTRACTOR substitutes Structure Backfill (Flow Fill) for Structure Backfill (Class 1) or (Class 2), there will be no adjustment in the price.

MEASUREMENT

Measurement for payment for this item shall be by the *planned* number of **cubic yards** installed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

83. 5' Deep PZ22 Sheet Pile on Upstream Apron of Hopeful Dr. Bridge (SF)

DESCRIPTION

This WORK consists of installing sheet pile (PZ 22 Section) as part of Hopeful Drive Box Culvert Upstream Apron. It includes:

1. Transporting materials to the project site.
2. Equipment necessary to drive the sheet pile into position and depth per the DRAWINGS.
3. Equipment and labor involved with cutting of the installed pile to match construction DRAWINGS.
4. Providing all other related and necessary labor, equipment, and ancillary materials to complete the WORK including, but not limited to, cutting lift holes, cutting weep holes, or welding sheet pile.

MEASUREMENT

Measurement for payment for this item will be the *planned* number of **square feet** of all sheet pile shown on the DRAWINGS and SPECIFICATIONS, or as otherwise directed by the ENGINEER.

PAYMENT

The accepted quantities will be paid for at the Contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. Payment includes any necessary fees for special handling or disposal of excess sheet pile. 5% of this item's total bid price will be withheld until Final Acceptance is given.

84. Aggregate Base Course (Class 1) (8.5 inch) (SY)

Description, Measurement and Payment shall conform to item 63.

85. Asphalt Concrete Pavement (Grading S) (2.5 inch) (SY)

Description, Measurement and Payment shall conform to item 64.

86. Asphalt Concrete Pavement (Grading SX) (2.0 inch) (SY)

Description, Measurement and Payment shall conform to item 65.

**87. Curb and Gutter (Type 1, Type 2, Transition Type 1 to 2)
(LF)**

Description, Measurement and Payment shall conform to item 68.

88. Concrete Sidewalk (4 inch) (SY)

Description, Measurement and Payment shall conform to item 69.

89. Chase Drain (w) Covered Channel (SF)

Description, Measurement and Payment shall conform to item 74.

90. Patterned Concrete (4 Inch)

(SY)

DESCRIPTION

This WORK consists of installing patterned concrete.

MEASUREMENT

The quantity of patterned concrete will to be paid for shall be measured by the planned area of **square yards** of patterned concrete as designated on the PLANS and accepted by the ENGINEER as complying with the PLANS and SPECIFICATIONS. Patterned Concrete shall be in accordance with Section 500 of the City of Colorado Springs Standard Specifications manual and City of Colorado Springs Standard Plan No. D-24.

PAYMENT

Payment shall be made at the applicable unit bid price for Bid Item and shall include full compensation for furnishing, erecting, cleaning and all labor, equipment, tools, and materials necessary to complete the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

91. 4'-6" Pedestrian Railing – Hopeful Drive Bridge (LF)

DESCRIPTION

This WORK consists of installing the pedestrian/bike railing on the headwalls and wingwalls for the Hopeful Drive Box Culvert. It includes:

1. Transporting materials to the project site.
2. Equipment necessary to drive the sheet pile into position and depth per the DRAWINGS.
3. Equipment and labor involved with cutting of the installed pile to match construction DRAWINGS.
4. Providing all other related and necessary labor, equipment, and ancillary materials to complete the WORK including, but not limited to, providing anchor bolts, anchor bolt epoxy, installing anchor bolts, isolation kits, and welding.

MEASUREMENT

Measurement for payment for this item will be the *planned* number of **linear feet** of all railing shown on the DRAWINGS and SPECIFICATIONS, or as otherwise directed by the ENGINEER.

PAYMENT

The accepted quantities will be paid for at the Contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. Payment includes any necessary fees for special handling or disposal of excess sheet pile. 5% of this item's total bid price will be withheld until Final Acceptance is given.

92. Membrane - Hopeful Drive Bridge

(SY)

DESCRIPTION

This WORK consists of furnishing and placing an approved waterproofing membrane and protective covering over a prepared concrete culvert top slab and 18" down walls or furnishing and placing an approved chemical concrete sealer (sealer) on the surface of a concrete bridge deck, approach slabs, and all adjacent sidewalk and curb, and other applications designated on the PLANS.

MEASUREMENT

Waterproofing membrane including protective covering, complete in place, will be measured by the *planned* number of **square yards** of culvert covered. Concrete sealer will be measured by the number of square yards of concrete surface covered, except material placed on drains will not be measured.

PAYMENT

The accepted quantities of waterproofing membrane including protective covering will be paid for at the contract unit price per square yard. 5% of this item's total bid price will be withheld until Final Acceptance is given.

93. Sanitary Bypass Pumping- Hopeful Dr. Bridge

(LS)

DESCRIPTION

This WORK consists of the temporary bypass pumping of the existing sanitary sewer line to be modified and or removed. This BID item includes, but is not limited to:

1. Bypass pumping live sewage in manhole and upstream sewer lines.
2. Replacing or repairing all damaged materials with new materials.
3. Furnishing, transporting, and installing all materials, fittings, and related items as shown on DRAWINGS

MEASUREMENT

The quantity Sanitary Sewer Bypass Pumping to be paid for shall be **lump sum**. Sanitary Sewer Bypass Pumping shall be in accordance with Colorado Springs Utilities Wastewater Line Extension & Service Standards, latest edition.

PAYMENT

Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for pumps, pipe connections, connections to existing manholes, all labor, excavation, equipment, traffic control, tools, and materials necessary to complete the work. Payment also includes full compensation for preparation, review, approval and implementation of a required pumping bypass plans. 5% of this item's total bid price will be withheld until Final Acceptance is given.

94. Removal of 8" Sanitary Pipe

(LF)

Description, Measurement and Payment shall conform to item 53.

95. Removal of Sanitary Manhole

(EA)

Description, Measurement and Payment shall conform to item 54.

96. 8" PVC Sanitary Pipe (SDR 35)

(LF)

DESCRIPTION

This WORK consists of the installment of 8" PVC Sanitary Pipe. This BID item includes, but is not limited to:

1. Coordinating with property owners and utility companies
2. Locating, potholing and protecting service line and other utilities
3. Excavating, backfilling and compacting
4. Supporting trenches, shoring, or sloping trench walls back if shoring is not used
5. Furnishing and placing required pipe bedding and backfill materials
6. Removing and properly disposing all removed and excess materials
7. Tapping and/or connecting to pipes or structures
8. Furnishing, transporting, and installing all new pipe and fittings or items not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS
9. Providing and maintaining a temporary all-weather surface over trenches within City right-of-way until road reconstruction is complete; and removing and disposing all materials used for temporary all-weather surface
10. Flushing and testing as required by local governing agency
11. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The quantity of 8" PVC Sanitary Pipe (SDR 35) to be paid for will be determined by the planned number of **linear feet** constructed, including bends, wyes, tees, and cleanouts accepted by the Engineer as complying with the plans and specifications. Sewer line construction shall be in accordance with Colorado Springs Utilities Wastewater Line Extension and Service Standards, latest edition.

PAYMENT

Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all labor, equipment, tools, and materials necessary to complete the work. Payment shall include, but is not limited to, excavation, bedding, backfill, marking tape, tracer wire, joint lubricant, and off-site disposal of construction debris. Pipe bedding shall be per the requirements of the Colorado Springs Utilities Wastewater Line Extension and Service Standards, latest edition, including "special" bedding required by slope or depth. 5% of this item's total bid price will be withheld until Final Acceptance is given.

97. 4' Diameter Sanitary Manhole

(EA)

DESCRIPTION

This WORK consists of the installment of 4' Diameter Sanitary Manholes. This BID item includes, but is not limited to:

1. Furnishing, transporting, and installing all materials, including sheeting and/or bracing, bedding, concrete, reinforcing steel, precast bases, barrels, cones, and/or tops, grade rings, mortar, plastic joint sealant, grout, lining, manhole steps, ring and cover, watertight manhole frame and bolted lid where required and materials not otherwise provided elsewhere in the DRAWINGS and SPECIFICATIONS
2. Constructing and shaping the base invert, including all pipe
3. Constructing required stub-outs and connections, including pipe and plugs
4. Placing joint sealant between barrel sections
5. Furnishing, transporting, and installing concrete collars, including any steel reinforcement required
6. Furnishing, transporting, and placing flowfill material
7. Conducting interior waterproofing, as required
8. Excavating, backfilling, including furnishing, transporting, and placing material and compacting
9. Removing and disposing of debris, pipe, excess excavated materials, and damaged materials
10. Providing all other related work and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The quantity of **each** 4' Diameter Sanitary Manholes to be paid for will be determined the planned number of 4' Diameter Sanitary Manholes constructed and accepted by the Engineer as complying with the plans and specifications. 4' Diameter Sanitary Manhole shall be in accordance with the Colorado Springs Utilities Wastewater Line Extension and Service Standards, latest edition.

PAYMENT

Payment shall be made at the applicable contract unit price for Bid Item and shall include but is not limited to, excavation, bedding, backfill, temporary and permanent line connections, marking, equipment, tools, and materials necessary to complete the work. 5% of this item's total bid price will be withheld until Final Acceptance is given.

98. 12" Steel Casing Pipe

(LF)

DESCRIPTION

This WORK consists of the installment of 12" steel casing pipe. This BID item includes, but is not limited to:

1. Locating and protecting all existing utilities in and along the pipe length
2. Furnishing, transporting, and installing all pipes, special fittings, jointing materials, restraint, fasteners, concrete thrust blocks, and materials not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS
3. Adjusting location of existing small utilities
4. Excavating, backfilling and compacting
5. Supporting trenches, shoring, laying slopes back if shoring is not used
6. Furnishing and compacting all materials required for a stable subbase, specific drainage material, structural backfill, and other backfill material, including imported backfill material if no suitable onsite material is available
7. Conducting exploratory excavation and potholing
8. Constructing the specific bedding, including the furnishing, placing, and compacting of sand, gravel, and rock
9. Removing and disposing excess excavated material and debris
10. Flushing and testing as required by local governing agency
11. Furnishing, transporting, and installing all pipes, special fittings, jointing materials, and materials not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS
12. Furnishing, transporting, and placing flowfill material
13. Furnishing and installing tracer wire, location tape, and pipeline markers in accordance with the DRAWINGS, SPECIFICATIONS, or local governing agency
14. Furnishing and installing cathodic protection and test stations as required per the DRAWINGS and SPECIFICATIONS
15. Protecting aboveground and underground utilities and service connections
16. Removing and disposing of debris, pipe, excess excavated materials, and damaged materials
17. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The quantity of 12" Steel Casing Pipes to be paid for will be determined by the *planned* number of **linear feet** of 12" Steel Casing Pipes completed and accepted by the Engineer as complying with the plans and specifications. 12" Steel Casing Pipes shall be in accordance with Colorado Springs Utilities Wastewater Line Extension and Service Standards, latest edition.

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 of 12" Steel Casing Pipe shall include, but is not limited to, excavation, bedding, backfill, piping, fittings, end caps, spacers, thrust blocks, supports, restraints, cathodic protection, hydrotesting, chlorination, bacteria test and offsite disposal of construction debris. 5% of this item's total bid price will be withheld until Final Acceptance is given.

99. Removal of 8" Water Pipe

(LF)

Description, Measurement and Payment shall conform to item 58.

100. 8" PVC Water Pipe (AWWA C900)

(LF)

Description, Measurement and Payment shall conform to item 59.

101. 16" Steel Casing Pipe

(LF)

DESCRIPTION

This WORK consists of the installment of 16" steel casing pipe. This BID item includes, but is not limited to:

1. Locating and protecting all existing utilities in and along the pipe length
2. Furnishing, transporting, and installing all pipes, special fittings, jointing materials, restraint, fasteners, concrete thrust blocks, and materials not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS
3. Adjusting location of existing small utilities
4. Excavating, backfilling and compacting
5. Supporting trenches, shoring, laying slopes back if shoring is not used
6. Furnishing and compacting all materials required for a stable subbase, specific drainage material, structural backfill, and other backfill material, including imported backfill material if no suitable onsite material is available
7. Conducting exploratory excavation and potholing
8. Constructing the specific bedding, including the furnishing, placing, and compacting of sand, gravel, and rock
9. Removing and disposing excess excavated material and debris
10. Flushing and testing as required by local governing agency
11. Furnishing, transporting, and installing all pipes, special fittings, jointing materials, and materials not otherwise provided for elsewhere in the DRAWINGS and SPECIFICATIONS
12. Furnishing, transporting, and placing flowfill material
13. Furnishing and installing tracer wire, location tape, and pipeline markers in accordance with the DRAWINGS, SPECIFICATIONS, or local governing agency
14. Furnishing and installing cathodic protection and test stations as required per the DRAWINGS and SPECIFICATIONS
15. Protecting aboveground and underground utilities and service connections
16. Removing and disposing of debris, pipe, excess excavated materials, and damaged materials
17. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The quantity of 16" Steel Casing Pipes to be paid for will be determined by the planned number of **linear feet** 16" Steel Casing Pipes completed and accepted by the Engineer as complying with the plans and specifications. 16" Steel Casing Pipes shall be in accordance with Colorado Springs Utilities Water Line Extension and Service Standards, latest edition.

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 of 16" Steel Casing Pipe shall include, but is not limited to, excavation, bedding, backfill, piping, fittings, end caps, spacers, thrust blocks, supports, restraints, cathodic protection, hydrotesting, chlorination, bacteria test and offsite disposal of construction debris. 5% of this item's total bid price will be withheld until Final Acceptance is given

102. Utility Encasement- Hopeful Dr. Bridge

(EA)

DESCRIPTION

This WORK consists of the encasement of installed utilities. This BID item includes, but is not limited to:

1. Furnishing, forming and placing concrete, including coloring and fiber-mesh as shown on DRAWINGS
2. Furnishing and applying the curing compounds
3. Furnishing and installing steel reinforcement as shown on DRAWINGS
4. Providing hot and cold protection
5. Furnishing and compacting all material required for a stable subbase, including bedding, if required
6. Backfilling and compacting adjacent to structure
7. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The quantity Utility Encasement to be paid for shall be **lump sum**. Utility Encasement shall be in accordance with Colorado Springs Utilities Wastewater Line Extension & Service Standards, latest edition.

PAYMENT

Payment shall be made at the applicable contract unit price for the Bid Item and shall include full compensation for all materials such as concrete, forming and form removal, finishing and curing concrete, grading, compaction, all labor, excavation, equipment, traffic control, tools, and materials necessary to complete the work. 5% of this item's total bid price will be withheld until Final Acceptance is given.

103. CDOT Class D Concrete (Box Culvert and Headwall) – Ped Culvert (10x1.5) (CY)

DESCRIPTION

This WORK consists of the transportation, furnishing, and installation of all Hopeful Drive Pedestrian Culvert (10x1.5) Structural Concrete. Additionally, the WORK consists of:

1. Preparing and stabilizing subgrade including excavating, backfilling, and compacting to specified densities confirmed by independent testing.
2. Constructing formWORK
3. Placing, finishing, and curing concrete
4. Providing all other related and necessary labor, equipment, and materials required to complete the WORK.

MEASUREMENT

Measurement for payment for this item shall be by the *planned* number of **cubic yards** installed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

**104. Rebar (Epoxy and Black Combined) –
Ped Culvert (10x1.5)**

(LB)

Description, Measurement and Payment shall conform to item 81.

105. Aggregate Base Course (Class 1) (8.5 inch)

(SY)

Description, Measurement and Payment shall conform to item 63.

106. Asphalt Concrete Pavement (Grading S) (2.5 inch) (SY)

Description, Measurement and Payment shall conform to item 64.

107. Asphalt Concrete Pavement (Grading SX) (2.0 inch) (SY)

Description, Measurement and Payment shall conform to item 65.

**108. Curb and Gutter (Type 1, Type 2, Transition Type 1 to 2)
(SY)**

Description, Measurement and Payment shall conform to item 68.

109. Concrete Sidewalk (4 inch)

(SY)

Description, Measurement and Payment shall conform to item 69.

110. Standard Railing – S. Trib Box

(LF)

Description, Measurement and Payment shall conform to item 47.

111. CDOT Type 3 Vertical Panel Traffic Barricades

(LS)

DESCRIPTION

This WORK consists of installing barricades. This WORK shall be done per these SPECIFICATIONS, the latest revision of the "Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways" published by FHWA and adopted by CDOT, the latest revision of the Colorado Supplement thereto, and in conformity with the details show on the PLANS or established.

MEASUREMENT

This Item will be measured by the *planned* number installed in place and accepted by the ENGINEER as complying with the PLANS and SPECIFICATIONS. CDOT Type 3 Vertical Panel Traffic Barricades shall be in accordance with Section 614 of the CDOT Standard SPECIFICATIONS for Road and Bridge Construction.

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. 5% of this item's total bid price will be withheld until Final Acceptance is given.

**112. CDOT Class D Concrete (Box Culvert and Headwall) – S.
Trib Box (CY)**

**113. CDOT Class D Concrete (Downstream Wall – Special) – S.
Trib Box (CY)**

DESCRIPTION

This WORK consists of the transportation, furnishing, and installation of all South Tributary double box culvert, headwalls, and wingwalls. Additionally, the WORK consists of:

1. Preparing and stabilizing subgrade including excavating, backfilling, and compacting to specified densities confirmed by independent testing.
2. Constructing formWORK
3. Placing, finishing, and curing concrete
4. Providing all other related and necessary labor, equipment, and materials required to complete the WORK.

MEASUREMENT

Measurement for payment for this item shall be by the *planned* number of **cubic yards** installed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

114. CDOT Class 1 Structure Backfill – S. Trib Box

(CY)

DESCRIPTION

This WORK consists of the transporting, furnishing, and installing of the backfill of all material required for the construction of the South Tributary double box culvert, headwalls and wingwalls. This WORK includes the necessary compaction, independent testing, and correction of compaction as necessary.

Compaction, water, and all other WORK necessary to complete the above items will not be measured and paid for separately but shall be included in the WORK.

When the CONTRACTOR substitutes Structure Backfill (Flow Fill) for Structure Backfill (Class 1) or (Class 2), there will be no adjustment in the price.

MEASUREMENT

Measurement for payment for this item shall be by the *planned* number of **cubic yards** installed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

115. Unclassified Excavation – S. Trib Box

(CY)

DESCRIPTION

This WORK consists of the removal of all existing fill material around the existing culvert required for the construction of the South Tributary double box culvert, headwalls and wingwalls.

MEASUREMENT

Measurement for payment for this item shall be by the *actual* number of **cubic yards** removed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

116. Rebar (Epoxy and Black Combined) – S. Trib Box (LB)

Description, Measurement and Payment shall conform to item 81.

117. Aggregate Base Course (Class 1) (8.5 inch)

(SY)

Description, Measurement and Payment shall conform to item 63.

118. Asphalt Concrete Pavement (Grading S) (2.5 inch) (SY)

Description, Measurement and Payment shall conform to item 64.

119. Asphalt Concrete Pavement (Grading SX) (2.0 inch) (SY)

Description, Measurement and Payment shall conform to item 65.

120. Standard Railing - Ped Culvert (10x1.5)

(LF)

Description, Measurement and Payment shall conform to item 47.

121. Membrane – S. Trib Box

(SY)

Description, Measurement and Payment shall conform to item 92.

122. 54" Headwall and Wingwalls

(EA)

DESCRIPTION

This WORK consists of installing a 54" concrete headwall and wingwalls at the existing storm outfall along the South Tributary near the Sifred Box Culvert. It includes:

1. Preparing and stabilizing subgrade including excavating, backfilling, and compacting to specified densities confirmed by independent testing.
2. Constructing formWORK and setting and tying reinforcing steel
3. Placing, finishing, and curing concrete
4. Restoring of area, including structure backfill
5. Providing all other related and necessary labor, equipment, and materials required to complete the WORK.

MEASUREMENT

Measurement for payment for this item shall be by the *planned* number of **each** unit installed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER.

PAYMENT

Accepted quantities will be paid for at the contract unit price for this Item. The CONTRACTOR shall provide survey data shots of the headwall submitted in CAD (.dwg format) with each payment application. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

123. Utility Potholes

(EA)

DESCRIPTION

This WORK consists of potholing to find utilities. It includes:

1. Coordinating with utility owners and identifying pothole requirements with utility representatives in coordination and approval with the ENGINEER.
2. Locating and protecting all existing utilities in and along the project reach
3. Identifying the utility type, depth, and dimensions prior to construction
4. Preparing and submitting pothole logs to the ENGINEER
5. Backfilling potholes and patching roadway, as required
6. Providing all other related and necessary labor, equipment, and materials to complete the WORK.

MEASUREMENT

The measurement and payment for utility potholing will be on a per **each** basis for each pothole prior to construction. The CONTRACTOR will only pothole under this item as directed and approved by the ENGINEER. Utilities shown on the DESIGN PLANS to be exposed and protected as part of the construction operations are not included in this item. The unit price will include all the CONTRACTOR's costs.

PAYMENT

Accepted quantities will be paid for at the contract unit price for this Item. Payment will be full compensation for all materials, equipment, labor, and other items necessary and incidental to the completion of the WORK. 5% of this item's total bid price will be withheld until Final Acceptance is given.

124. Force Account

(EA)

DESCRIPTION

If additional WORK or overages that fall within the original bid items arises that is necessary to accomplish the scope of WORK of the contract and is not identified elsewhere in the contract documents, the ENGINEER may authorize WORK under a force account basis. Payment will be made on a time and materials basis necessary to complete the authorized WORK. Before any WORK is authorized by the ENGINEER, the CONTRACTOR and ENGINEER shall agree in writing as to the rate for all employee wages, and material and equipment costs that may be necessary to complete the authorized WORK.

MEASUREMENT

Weekly, the CONTRACTOR and the ENGINEER shall compare and agree upon the records of labor, equipment, and materials used for the force account WORK.

PAYMENT

To receive payment, the CONTRACTOR shall provide itemized statements of all costs of such force account WORK detailed as follows:

- Name, classification, date, daily hours, total hours, wage rate, and extensions thereof for each WORKer and foreman.
- Quantities of materials, prices, and extensions thereof and transportation costs for materials. Attach invoices for all materials used or consumed. If the CONTRACTOR takes the materials from its own inventory, provide certification that:
 - The Material was taken from inventory.
 - The quantity claimed was used.
 - The price and transportation costs claimed represent the CONTRACTOR's actual costs.
- Designations, dates, daily hours, total hours, rental rates, and extensions thereof for each unit of equipment and transportation costs for equipment.

5% of this item's total bid price will be withheld until Final Acceptance is given.

125. Roadway Gate (Lotus Street – CSU Access)

(EA)

DESCRIPTION

This WORK includes, but is not limited to:

1. Furnishing and installing all materials, including but not limited to fence posts, rails, wire, hinges, locking mechanisms, concrete as shown on the DRAWINGS (or an approved equal) for Colorado Springs Utilities to access existing utilities ROW.
2. Excavating, backfilling and compacting
3. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The measurement for payment for this item will be per **each** gate placed in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of CONTRACTOR's costs.

PAYMENT

Payment will be based on units completed and accepted. 5% of this item's total bid price will be withheld until Final Acceptance is given.

126. Temporary Construction Fence

(LF)

DESCRIPTION

This WORK includes, but is not limited to

1. Furnishing and installing all temporary materials, including posts, rails, fencing fabric sections, as shown on the DRAWINGS between the existing triple 9'X12' box culvert and Sculpted Concrete Drop Structure #1. This pay item does not include temporary construction fencing that may be used around the staging areas, near the Hopeful Drive Box Culvert Improvements, or other locations as deemed necessary by the CONTRACTOR or OWNER, or shown on the DRAWINGS. Temporary Construction Fencing outside of the area between the existing triple 9'X12' box culvert and Sculpted Concrete Drop Structure #1 will be considered incidental to Bid Item 1. Mobilization and Demobilization.
2. Moving, placing, leveling, and connecting temporary fence sections.
3. Providing all other related and necessary labor, equipment, and materials to complete the WORK

MEASUREMENT

The measurement for payment for this item will be the actual number of **linear feet** of fence removed and reset in accordance with the DRAWINGS and SPECIFICATIONS or as otherwise directed by the ENGINEER. The unit price will include all of the CONTRACTOR's costs.

PAYMENT

Payment will be based on units completed and accepted. 5% of this item's total bid price will be withheld until Final Acceptance is given.

SCHEDULE F – TECHNICAL SPECIFICATIONS

FOLLOWS THIS PAGE

**TECHNICAL SPECIFICATIONS
SCHEDULE F**

Park Vista Drainage Improvements

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Introduction

The Technical Specifications for this project shall be the “**City of Colorado Springs Engineering Division Standard Specifications,**” (herein referenced as **Standard Specifications**) revised January 2008 incorporating any subsequent revisions. The following Technical Specifications take precedence over, supplement, or modify the Standard Specifications.

Additional City of Colorado Springs specifications incorporated into the contract documents by reference and applicable to this project are as follows:

- The **Pikes Peak Region Asphalt Paving Specifications** dated March 28, 2022
- The **City of Colorado Springs Traffic Control for Street Construction, Utility Work, and Maintenance Operations Supplement to the Manual on Uniform Traffic Control Devices** revised October 21, 2009
- The **City of Colorado Springs Signage and Pavement Markings Guidelines Supplement to the Manual on Uniform Traffic Control Devices** revised May 21, 2018

The following Colorado Springs Utilities Standard Specifications are incorporated in the contract documents by reference as though embodied herein in their entirety, except as modified hereinafter.

- The Standard Specifications for water line construction and protection shall be the **Colorado Springs Utilities Water Line Extension and Service Standards** revised 2018
- The Standard Specifications for wastewater line construction and protection shall be the **Colorado Springs Utilities Wastewater Line Extension and Service Standards** revised 2017
- The Standard Specifications for lighting installation, electrical distribution and electrical transmission line construction and protection shall be the **Colorado Springs Utilities Electric Line Extension and Service Standards** revised 2018

The Hopeful Drive Box Culvert and Wingwalls, South Tributary Box Culvert and Wingwalls and the South Tributary Pedestrian Culvert at Hopeful Drive shall be constructed in accordance with the 2023 **Colorado Department of Transportation Standard Specifications for Road and Bridge Construction** (CDOT Standard Specifications), which are incorporated into the contract documents by reference as though embodied herein in their entirety, except as modified hereinafter.

Revision of Section 200 – Street Section

Add to Subsection 202 – Excavation

Material removed during the excavation process that is not acceptable 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.

Revision of Section 220 – Removal of Structures and Obstructions

Add to Subsection 220.02 – Construction Requirements

Unless otherwise specified, all material that is removed by the Contractor shall become the property of

the Contractor and responsibility of the Contractor for disposal.

Neither the City nor the Engineer has directly conducted any field investigations to determine if asbestos-containing or otherwise hazardous materials are present in existing storm drainage facilities or utility pipes. Utilities have been asked if any asbestos-containing or otherwise hazardous materials are known to be within the project limits and all have answered negative. If asbestos-containing or otherwise hazardous materials become known or encountered, the Contractor shall suspend work in the affected area immediately, protect the area from human contact and exposure, and contact the Engineer immediately. Section 250 of the CDOT Standard Specifications shall apply. Scope of work and payment for dealing with hazardous materials and proposed project adjustments will be negotiated with the contractor.

Removal of Fence shall not proceed until temporary fence is in place and secure. Temporary fence shall not be paid for separate, but shall be included in the cost of work. The Contractor shall coordinate removal of fence with all property owners affected two weeks prior to beginning any work in the area.

Add to Subsection 220.05 – Removal of Pavements

Removed concrete and asphalt shall not be used to construct embankments.

Revision of Section 240 – Reset Structures

Add to Subsection 240.02 – Construction Requirements

Signs to be reset shall be cleaned after removal and prior to resetting.

Revision of Section 500 – Concrete

Add to Subsection 501 – Description

The Hopeful Drive Box Culvert and Wingwalls, South Tributary Box Culvert and Wingwalls, South Tributary Pedestrian Culvert at Hopeful Drive, and the 54-inch RCP headwall and wingwall concrete requirements and construction requirements shall be in accordance with 2023 CDOT Standard Specifications.

All other concrete shall follow the Standard Specifications.

Add to Subsection 502.01 – Cement

In accordance with the Proposed Park Vista Drainage Improvements Geotechnical Evaluation Report prepared by Vivid Engineering Group dated 12/28/2023, indicate a Class 0 exposure of sulfate attack on concreted exposed to overburden soils per CDOT Standard Specifications.

Revise Subsection 508.04 – Protection in Cold and Freezing Weather

In cold weather, concrete shall be mixed and placed only when the ambient temperature is at least thirty-two degrees (32) Fahrenheit, in the shade, and rising. For ambient temperatures below thirty-two degrees (32) degrees Fahrenheit, permission from the Engineer must be obtained prior to placing of concrete.

In freezing weather, suitable means shall be provided for mixing and maintaining concrete at a temperature of at least fifty degrees (50) Fahrenheit, for seven (7) days after placing. Adequate equipment shall be provided for heating the concrete materials and protecting the concrete during freezing or near freezing weather. Under no circumstances shall frozen materials or materials

containing ice be used for the preparation of concrete. All materials, reinforcement, forms, fillers, and ground with which the concrete is to come in contact shall be free from frost. The housing, covering, or other protection used in connection with curing shall remain in place and intact for at least forty-eight (48) hours after the artificial heating is discontinued.

Add to 508.04 Protection in Cold and Freezing Weather – Submittals

- A. In freezing weather, Contractor shall provide a statement of the proposed plan and detailed shop drawings of equipment that will be used to provide heating to the concrete materials. The plan and statement shall be submitted 1 week before implementation.
 - 1. The plan and detailed shop drawings shall include details of the coil heater, digital temperature gauges, and blanket material.

Revision of Section 603 – Reinforcement

First Sentence of Section 603 of the Standard Specifications is revised as follows:

The reinforcing bars shall be in conformity of ASTM A-615 SI Grade 60 for black bars and ASTM A-775 for epoxy-coated steel reinforcing bars and general notes on the structural drawings.

Revision of Section 620 – Drainage Channels

Section 620 of the Standard Specifications is revised as follows:

Revise Subsection 621.02 – Sections and Slopes

Delete the Surface Tolerance Table and replace with the following:

Surfaces	Tolerance
Side Slopes	± 2%
Profile of Invert of ditches and channels	± 0.2 foot

Revise Subsection 621.04 – Dewatering

Delete the words “at no additional cost to the Owner” and replace with “all of the costs for dewatering, not related to individual items as detailed in the project’s Measurement and Payment, shall be included in the Lump Sum bid price for Water Control and Dewatering”.

Add to Subsection 621.05 – Bottom and Side Slopes

A. Excavation and Trench Construction

Excavations may encounter relatively shallow groundwater or caving soils. The Contractor shall be responsible for designing and constructing a shoring system that stabilizes the excavation/trench. All excavations shall be sloped or shored following local, state, and federal regulations, including current OSHA excavation and trench safety standards.

Revise Subsection 621.05 – Bottom and Side Slopes

In Paragraph B, modify the compaction standard for cohesionless soils to ninety-five percent (95%) of maximum Modified Proctor dry density at ± two percent (2%) optimum moisture content.

Add Subsection 621.051 – Fill and Compaction Requirements: Within Bankfull Section

All fill or native subgrade (cut situation) material within the bankfull section shall have a compaction of ninety percent (90%) of maximum Modified Proctor dry density (ASTM D1557) at ± two percent (2%) optimum moisture content. This includes fill or native subgrade (cut situation) material for structural elements (Sculpted Concrete Drop, and Cutoff wall backfill), embankment fill, and all channel fills.

Fill should be placed in level lifts not exceeding nine inches (9”) in loose thickness. If field density tests indicate the required compaction has not been obtained or the surface is pumping/deflecting under construction traffic, the fill material should be reconditioned and recompacted to the required percent compaction before placing any additional material. Onsite fill containing spalls of bedrock (including claystone and sandstone) shall be pulverized to a size not to exceed three inches (3”) before placement as fill material.

Add Subsection 621.052 – Fill Requirements: Within Overbank Section

All fill material within the overbank section shall have a compaction of ninety percent (90%) of maximum Modified Proctor dry density (ASTM D1557) at ± two percent (2%) optimum moisture content.

Fill should be placed in level lifts not exceeding nine inches (9”) in loose thickness. If field density tests indicate the required compaction has not been obtained or the surface is pumping/deflecting under construction traffic, the fill material should be reconditioned and recompacted to the required percent compaction before placing any additional material. Onsite fill containing spalls of bedrock (including claystone and sandstone) shall be pulverized to a size not to exceed three inches (3”) before placement as fill material.

See **Section 970.06 – Soil Prep, Topsoil, Compost, and Soil Conditioner - Execution** for details about soil rip depth in overbank areas.

Add Subsection 621.053 – Drop Structure Subgrade Stabilization

Following subgrade removal in proposed drop structure areas, the exposed subgrade shall be proof rolled to identify soft areas. Proof rolling should use a fully loaded, rubber tired, tandem-axle dump truck or similar equipment providing an equivalent loading. All areas with soft or loose soils identified during proof rolling shall be marked for removal. Unsuitable areas identified by proof rolling shall be removed and replaced with fill in accordance with **Subsection 621.056 or Section 621.057**.

Beneath all proposed concrete structures, if native subgrade (cut situation) is retained or if fill material is added, compaction must be tested in both situations and achieve ninety-five percent (95%) of maximum Modified Proctor dry density (ASTM D1557) at ± two percent (2%) optimum moisture content.

If isolated areas of deep soft soil are encountered, stabilization of the subgrade using geogrid is acceptable if approved by the ENGINEER (see Proposed Park Vista Drainage Improvements Geotechnical Evaluation Report prepared by Vivid Engineering Group dated 12/28/2023). In these areas, over-excavation should extend to a depth of approximately twelve inches (12”) below the existing ground surface. After over-excavation, six inches (6”) of aggregate base material (**Section 302**) should be placed and compacted. Geogrid should then be placed on top of the aggregate base layer and another layer of aggregate base (6” minimum) placed on top of the geogrid. This procedure should continue until subgrade stabilization is achieved through testing by proof rolling. After a stable platform is constructed, remaining earthwork construction can continue.

Geogrid should be designed by the manufacturer for stabilization/reinforcement purposes and should be equivalent or better than Tenser TX5.

Add Subsection 621.055 – Imported Fill Requirements

Additional imported fill, if required, should meet the following criteria:

Standard Sieve Size	Percent Passing	
	Embankment Fill Material	Channel Fill Material
3 inches	100	100
No. 4	30 - 70	30 - 50
No. 200	5 - 30	3 - 12

Plasticity Requirements (Atterberg Limits)

Liquid Limit	30 or less
Plasticity Index	10 or less

Add Subsection 621.056 – Over Excavation and Replacement of Expansive Material

Where excavation to the finished grade or subgrade results in exposure of weathered claystone or clay (unsuitable material), the Engineer may require the Contractor to remove and replace the unsuitable material to a depth up to twenty-four inches (24") below the channel invert. Unsuitable material shall be removed from the project site and disposed of by the Contractor.

The approved replacement fill material shall be CDOT Class 1 Structural Fill and placed in level lifts not exceeding nine inches (9") in loose thickness and compacted to ninety-five percent (95%) of Modified Proctor maximum dry density (ASTM D1557) at \pm two percent (2%) optimum moisture content.

Removal and replacement of unsuitable material shall only be approved by the Engineer in writing, prior to the work occurring and paid by actual costs incurred from the force account.

Add To Subsection 622.03 – Compacted Embankment

Embankments shall be continuously benched for slopes that are steeper than 4:1, measured longitudinally or at right angles to the adjacent ground. This includes embankments placed and compacted on slopes, compacted against existing slopes, or built $\frac{1}{2}$ width at a time.

Benching shall be well keyed and be a minimum of eight feet (8') wide. Each horizontal cut shall begin at the intersection of the original ground and the vertical side of the previous cut. Material cut shall be compacted along with new embankment material at Contractor expense.

An exception to this provision is for areas where the total depth of embankment is six inches (6") or less. For these areas, the foundation material on the slope shall be roughened and moisture conditioned prior to placing embankment material.

Frozen materials shall not be used in construction of embankments.

Embankment Fill or Structural Fill that is eroded or becomes unstable (due to rain, snow, snow melt, channel flows or lack of proper water control) shall be removed and replaced at Contractor expense. Replacement Embankment Fill or Structural Fill shall be placed and compacted as directed by the Engineer in accordance with the Drawings and Specifications. The approved replacement fill material should be placed in level lifts not exceeding nine inches (9") in loose thickness and compacted in accordance with the drawings and specifications.

If designated on the Drawings or when ordered by the Engineer, the embankment shall be proof rolled to identify soft areas. Proof rolling shall be done after the specified compaction has been obtained. Proof rolling should use a fully loaded, rubber tired, tandem-axle dump truck or similar equipment providing an equivalent loading. All areas with soft or loose soils identified during proof rolling shall be ripped, wetted if necessary, and re-compacted to the requirements for density and moisture at Contractor expense. Proof rolling as shown on the Drawings or as ordered by the Engineer shall not be measured and paid for separately but shall be included in the unit prices bid for the work.

Revision of Subsection 624 – Rip Rap and Grouted Rip Rap Channel Construction

Add Subsection 624.04 – Plain, Soil, and Void Filled Riprap

624.04 Plain and Soil Riprap – Submittals

- A. The Contractor shall provide the Engineer samples of specified materials and certified laboratory test certificates for all items required in this Section including:
 - 1. Specific gravity – for riprap and bedding materials
 - 2. AASHTO T96 (L.A. Abrasion test) – for both riprap and bedding materials
 - 3. AASHTO Test T104 (sodium sulfate) – for both riprap and bedding materials
 - 4. AASHTO Test T103 (freeze and thaw) – for both riprap and bedding materials
 - 5. Gradation analysis from rock quarry for bedding material
 - 6. Sample load of riprap delivered to site and field measured gradation data
 - 7. Stabilization Soil sample - sieve analysis, hydrometer analysis, and nutrient testing results

- B. Installation Submittal Requirements
 - a. Survey data - captured by Contractors GPS equipment of the bottom of the excavated area before the riprap is placed and the top of the completed soil riprap.
 - b. Load Tickets of the material delivered
 - c. Photo documentation of all installed buried soil riprap.

624.06 Plain and Soil Riprap – Materials: Plain Riprap

- A. Plain Riprap shall be the type designated on the Drawings and conform to the following:

Riprap Designation	% Smaller Than Given Size By Weight	Intermediate Rock Dimension (inches)	d50 * (inches)
Type VL	70 - 100	12	6
	50 - 70	9	
	35 - 50	6	
	2 - 10	2	
Type L	70 - 100	15	9
	50 - 70	12	
	35 - 50	9	
	2 - 10	3	
Type M	70 - 100	21	12
	50 - 70	18	
	35 - 50	12	
	2 - 10	4	

Type H	70 - 100	30	18
	50 - 70	24	
	35 - 50	18	
	2 - 10	6	
Type VH	70 - 100	42	24
	50 - 70	33	
	35 - 50	24	
	2 - 10	9	

* d_{50} = Mean Particle Size

- B. The riprap designation and total thickness of riprap shall be as shown on the Drawings. The maximum stone size shall not be larger than two (2) times the d_{50} .
- C. The minimum specific gravity of the riprap shall be 2.65. The specific gravity shall be according to the bulk-saturated, surface-dry basis, AASHTO T85.
- D. Neither width nor thickness of a single stone of riprap shall be less than one-third ($\frac{1}{3}$) of its length.
- E. Riprap shall be entirely composed of quarried, angular rock. Broken concrete or asphalt pavement shall not be acceptable for use in the Work. Rounded river rock is also not acceptable for use.
- F. The color of the riprap shall be approved by Engineer prior to delivery to the Project site. Color shall be consistent on the entire Project and shall match the color of rock to be used for all other portions of the Work.
- G. The riprap shall have a percentage loss of not more than forty percent (40%) after five hundred (500) revolutions when tested in the Los Angeles machine in accordance with AASHTO Test T96.
- H. The riprap shall have a percentage loss of not more than ten percent (10%) after five (5) cycles when tested in accordance with AASHTO Test T104 for ledge rock using sodium sulfate.
- I. The riprap shall have a percentage loss of not more than ten percent (10%) after twelve (12) cycles of freezing and thawing when tested in accordance with AASHTO Test T103 for ledge rock, procedure A.
- J. Rock shall be free of calcite intrusions.
- K. Each individual load of riprap shall be well graded from the smallest to the largest size specified and shall meet the gradation requirements of **Section 624.06A**.
- L. Before any riprap is placed, the Contractor will have a sample load of riprap for each designation delivered to the project site.
 - 1. Under the direction of the Engineer, the Contractor will provide the equipment and labor to measure individual rock pieces in the sample load(s) and the Engineer will use the measurements to assess whether it meets the specified gradation.
 - a. If needed, the sample riprap load will be adjusted to meet specifications by adding or removing rock. The needed adjustments will be communicated to the quarry by the Contractor.
 - b. The completed riprap sample is to be protected with construction fencing and

remain undisturbed on the project site until completion of the project. The sample(s) will serve as a visual reference for the Contractor to help verify the gradation of subsequent riprap loads. After this initial sample has been established, control of gradation by the Contractor shall be by visual inspection. Any riprap not appearing to meet this visual reference shall be rejected.

- c. During subsequent construction, in the event the Engineer believes riprap being delivered to the site does not meet the specifications, the Engineer shall pick one (1) to two (2) random truckloads to be dumped and checked for gradation. Mechanical equipment and labor needed to assist in checking gradation shall be provided by Contractor at no additional cost.

624.07 Plain and Soil Riprap – Material: Soil Riprap

- A. Soil Riprap shall be achieved by mixing on-site excavated material less than two inches (2") in size (free from trash and organic matter) with riprap meeting gradations requirements of **Section 624.06A**. One cubic yard of soil riprap shall be comprised of one cubic yard of riprap mixed with approximately .35 cubic yards of on-site excavated soil that will fill the voids between each individual rock in the riprap. When all voids are filled and the surface accepted by the Owner/Engineer, place nine inches (9") of topsoil over the area. Fine grade, seed, and install erosion control blanket per the specifications and or construction plan details

624.09 Plain, Void-Filled, and Soil Riprap – Execution: General

- A. Channel slopes, bottoms, or other areas that are to be protected with riprap or soil riprap shall be free of brush, trees, stumps, and other objectionable material and be graded to a smooth compacted surface.
- B. Contractor shall excavate areas to receive riprap to the subgrade or for soil riprap to the specified depth.
- C. The subgrade materials shall be stable. If unsuitable materials, as determined by the Engineer, are encountered the Engineer may direct additional excavation and removal of the unsuitable material.
- D. For subgrade that has been excavated in undisturbed soil, additional compaction shall not be required unless specified by Engineer.
- E. When subgrade is built up with embankment material it shall be compacted to ninety-five percent (95%) of maximum Modified Proctor dry density (ASTM D1557) at \pm two percent (2%) optimum moisture content.
- F. After an acceptable subgrade is established, the riprap shall be immediately placed and leveled to the specified elevation. If subgrade material is disturbed for any reason, it shall be replaced and graded at Contractor expense.
- G. The Soil Riprap and Void-Filled Riprap shall conform to the following mix requirements:

Mix Requirement for Type M and H Void-Filled Riprap:

Approximate Proportions (Loader Buckets)	Material Type	Material Description
6	Riprap	Type M or H riprap (as defined in 624.06)
2	Void-Fill Material	7-inch minus crushed rock surge (100% passing 7-inch sieve, 80-100% passing 6-inch sieve, 35-50% passing 3-inch sieve, 10-20% passing 1.5inch sieve)
1	Void-Fill Material	VTC (Vehicle Tracking Control) rock (crushed rock with 100% passing 4- inch sieve, 50-70% passing 3-inch sieve, 0-10% passing 2-inch sieve)
1	Void-Fill Material	4-inch minus pit run surge (round river rock and sand, well graded, 90-100% passing 4-inch sieve, 70-80% passing 1.5-inch sieve, 40-60% passing 3/8- inch sieve, 10-30% passing #16 sieve).
1	Void-Fill Material	Type II bedding
½ to 1	Void-Fill Material	Native topsoil

Mix proportions and material gradations are approximate and are subject to adjustment by the Engineer. No adjustment in unit price for void-filled riprap will be allowed based on modifications to the mix proportions.

Mix Requirement for Type VH Void-Filled Riprap

Approximate Proportions (Loader Buckets)	Material Type	Material Description
6	Riprap	Type VH riprap (as defined in 624.06)
2	Riprap	Type M riprap
2	Void-Fill Material	7-inch minus crushed rock surge (100% passing 7-inch sieve, 80-100% passing 6-inch sieve, 35-50% passing 3-inch sieve, 10-20% passing 1.5inch sieve)
1	Void-Fill Material	VTC (Vehicle Tracking Control) rock (crushed rock with 100% passing 4- inch sieve, 50-70% passing 3-inch sieve, 0-10% passing 2-inch sieve)
1	Void-Fill Material	4-inch minus pit run surge (round river rock and sand, well graded, 90-100% passing 4-inch sieve, 70-80% passing 1.5-inch sieve, 40-60% passing 3/8- inch sieve, 10-30% passing #16 sieve).
1	Void-Fill Material	Type II bedding
½ to 1	Void-Fill Material	Native topsoil

Mix proportions and material gradations are approximate and are subject to adjustment by the Engineer. No adjustment in unit price for void-filled riprap will be allowed based on modifications to the mix proportions.

624.11.A Soil Riprap – Execution: Soil Riprap Placement

- A. Mix moist one yard of stockpiled riprap with approximately .35 yard on-site excavated material less than two inches (2") in size (free from trash and organic matter). Use moisture and other control procedures as necessary to assure a homogenous mixture. It is intended that the rock content in a cubic yard of Soil Riprap be the same as the rock content in a cubic yard Plain Riprap of the same gradation. Soil used to create soil riprap should completely fill all voids in the riprap without displacing any rock. An estimated thirty-five percent (35%) of space will be filled with soil.
- B. Soil Riprap shall be placed to be in conformance with the required rock gradation and to the lines, grades, and thicknesses shown on the Drawings.
 - 1. Soil Riprap shall be placed in two (2) layers. The first layer shall have a thickness of approximately the riprap d50 and consist of the smaller size fractions in the riprap gradation. The second and top layer of riprap shall consist of rocks that are largely d50 size or greater with voids filled as necessary with smaller riprap.
 - 2. The mixture shall be consolidated by large vibratory equipment or full weighting with a backhoe bucket to create a tight, dense, interlocked mass with a smooth surface plane free from large projections.
 - 3. Hand placement may be required to achieve the described placement goals.
 - 4. Any areas of accumulation of smaller sizes of stone or soil shall be reworked at the direction of the Engineer. Smaller rock shall be securely locked between the larger stone. It is essential that smaller rock material between the larger stones is not loose or easily displaced by flow or by vandalism.
 - 5. The basic procedure shall result in larger materials flush to the top surface with faces and shapes arranged to minimize voids, and smaller material below, and to a lesser extent, between larger materials.
 - 6. The soil shall be further wetted (using pres to encourage void filling with soil).
- C. Surface grades shall be a plane and projections above or depressions below the finished design grade more than ten percent (10%) of the rock layer thickness shall not be allowed.
- D. The stone shall be consolidated by full loading with the bucket of the backhoe or other approved means. The top surface of the Soil Riprap shall be covered with a minimum of nine inches (9") of topsoil.
- E. The final surface shall be thoroughly wetted for good compaction, smoothed, and compacted by vibrating equipment; the surface shall then be hand raked to receive planting or seeding.
- F. All rock is to be placed in a dewatered condition beginning at the toe of the slope or other lowest point. Contractor shall maintain the riprap protection in a dewatered condition until accepted. Any material displaced for any reason shall be replaced to the lines and grades shown on the Drawings at no additional cost to Owner.

624.11.B - Void-Filled Riprap – Execution: Void-Filled Riprap Placement

- G. The Engineer shall observe mixing and placing of the material.
- H. Void Filled-Riprap shall be placed to be in conformance with the required rock gradation shown above and to the lines, grades, and thicknesses shown on the Drawings.
1. Approved individual component materials of void-filled riprap mix shall be delivered to site in separate marked stockpiles. Mixing shall be accomplished using a front end loader or other approved means to add the specified number of “loader buckets” of each material to a mixing stockpile. Ensure that each loader bucket comprises an approximately equal volume. If the loader operator is only able to fill the bucket partially full with large riprap (due to the force required to push the bucket into the pile), but uses full buckets of finer material, the mix proportions will not be correct. Avoid picking up excessive amounts of native soil from the subgrade under the stockpiled materials during the loader bucket mixing operations. The Engineer may reduce or eliminate the volume of native soil added to the mixture based on the amount of native soil incorporated during the bucket mixing operation.
 2. **Once all the materials have been added to the mixing stockpile in the specified proportions, thoroughly mix the pile using a loader, large trackhoe excavator, or other approved means to fill the voids of the riprap without displacing the riprap or creating pockets of finer material absent of riprap. Segregation of materials shall be minimized when hauling from the stockpile to the installation location. Remixing shall occur as necessary to correct for any segregation as the material is placed.**
 3. The loose material shall be placed in a single lift of sufficient height such that final grade will be achieved upon compaction. Additional mixing with a track excavator shall be required after initial placement to ensure that the void-filled riprap is thoroughly mixed and **no segregation or excessive amount of smaller void-fill material is present on the surface.** The mixing and placement process shall result in larger riprap (D50 size or larger) flush to the top surface with faces and shapes arranged to minimize voids, and smaller material between and below larger materials. The density and interlocking nature of riprap in the mixed material shall essentially be the same as if the riprap was placed without filling the voids. This requires care and persistence on the part of the Contractor to install the work and on the part of the Engineer to assure that the work is installed correctly.
 4. **If the top of the compacted material is below final grade, placement of only the smaller void-fill materials to achieve final grade will not be permitted.** Additional void-filled riprap shall be added and the entire section mixed with a track excavator to eliminate the presence of smaller void-fill material on the surface.
 5. Avoid segregation of materials and remix any section where the combined material consists primarily of the void-fill materials. The density and interlocking nature of riprap in the mixed material shall essentially be the same as if the riprap was placed without filling the voids. This requires care and persistence on the part of the CONTRACTOR to install the work and on the part of the ENGINEER to assure that the work is installed correctly.

- I. At the direction of the Engineer, a 50:50 mixture of pit run and Type II bedding shall be sprinkled on the surface of the void-filled riprap and washed-in with water using a high pressure hose to fill-in small voids. This shall be done just prior to compaction of the void-filled riprap.
- J. Boulder Transitions – Boulders (reused from the existing onsite stacked boulder wall) shall be installed in the locations shown on the PLANS at the end of the Sculpted Concrete Drop Structures transition areas. The void-filled riprap mixture will be installed around the boulders, creating an interlocked surface.
- K. **Compaction of the void-filled riprap shall be performed by running over the void-filled riprap with a large, heavy duty track excavator or dozer.** The moisture content of the mixture shall be at optimum conditions prior to compaction and water shall be added, as necessary, at the direction of the Engineer. Compaction of void-filled riprap shall be reviewed and approved by the Engineer.
- L. The final surface shall be thoroughly wetted for good compaction, smoothed, and compacted by vibrating equipment; the surface shall then be hand raked to receive seeding.
- M. All rock is to be placed in a dewatered condition beginning at the toe of the slope or other lowest point. Contractor shall maintain the riprap protection in a dewatered condition until accepted. Any material displaced for any reason shall be replaced to the lines and grades shown on the Drawings at no additional cost to Owner.

624.13 Plain and Soil Riprap – Rejection of Work and Materials

- A. Engineer may reject delivered or placed rock which do not conform to all the requirements of this section. Rejected rock shall be removed from the Project site by the Contractor and replaced at the Contractor's expense.

Add Section 626 – Sculpted Concrete**626.01 Sculpted Concrete – Submittals**

- B. Provide mix designs and product data for the following:
1. Ready-mixed concrete or Shotcrete mix designs
 2. Fly ash
 3. Admixtures (such as air-entraining and water-reducing admixtures).
 4. Form release agents
 5. Bonding agents
 6. Grout
 7. Concrete coloring pigment
 8. Waterstop
 9. Adhesives
 10. Data for proprietary materials and items including patching compounds, curing compounds, and other requested by the Engineer.
 11. Concrete integral color, topical concrete stain (acid wash), and concrete sealant.
- C. Detailed shop drawings and schedules shall be submitted, covering all reinforcement, 2 weeks before work begins to the Engineer. Any corrected drawings must be delivered to the Engineer, a minimum of ninety-six (96) hours in advance of the work.
2. These drawings shall show the size, number, exact position and spacing of steel reinforcement and the exact location of all openings, framing, or special conditions affecting the work. Detailing of reinforcement shall conform to ACI 315.
- D. Contractor shall provide statement detailing previous sculpted concrete experience including photos and locations of previous installations. Contractor shall have a minimum of two (2) examples of successful projects where sculpted concrete was used. Contractor shall also include project owner references for projects listed in the statement of experience.
- E. A sculpted concrete construction plan shall be submitted by the Contractor to the Engineer for review, a minimum of seven (7) days prior to construction. This plan shall describe methods and equipment proposed for hauling, placing, curing, and protecting sculpted concrete as well as placement schedules indicating anticipated daily progress. Anticipated construction joints and weep drain locations shall be clearly identified.
- F. See Schedule C- Technical Provisions for compaction testing requirements.

626.02 Sculpted Concrete – Materials: Concrete Mix A

- A. Concrete shall meet the requirements of Class B concrete in accordance with **Section 601 of the Colorado Department of Transportation “Standard Specifications for Road and Bridge Construction”** except as modified herein.
- B. Unless otherwise shown on the Drawings, the twenty-eight (28) day compressive strength of structural concrete shall be a minimum of four thousand five hundred (4,500) psi.
- C. The mix shall be designed for required strengths in accordance with ACI 301. The ratio of water to the sum of concrete plus pozzolan shall not exceed 0.45 by weight for durable, watertight, concrete. The amount of fly ash in the mix shall be between fifteen and twenty percent (15 and 20%) by weight of the total cementitious materials. Additional pozzolanic material may be added if alkali-silica reaction (ASR) mitigation is required based on chemical characteristics of fill material as requested by Engineer.
- D. Unless otherwise permitted or specified in the Drawings, the concrete shall be proportioned and produced to have a slump not to exceed four inches (4”) or less than two and one-half inches (2-1/2”). Concrete not consolidated by internal vibration shall be proportioned to have a slump not to exceed five and one-half inches (5-1/2”) or less than four inches (4”). Contractor may propose an alternative slump design. Engineer approval is required for alternative slump design prior to installation.
- E. Air entrainment shall be five to eight percent (5-8%) prior to pumping.
- F. Concrete mix shall be made with AASHTO M 43 (ASTM C33) Size No. 8 Coarse Aggregate.
- G. Fibermesh (Solomon UltraFiber 500 or equivalent) shall be included at the application rate of 3.0 lb/cy or as recommended by the manufacturer.
- H. Use cement conforming to the following.
 - 1. Portland cement conforming to ASTM C-150. The Contractor shall use only one brand of cement throughout the project.
 - 2. Blended hydraulic cement conforming to ASTM C-595 Type IS, IS-A, or IP.
 - 3. The color of the cement shall conform to the following:
 - a. Match existing bedrock in the project area.
 - b. Color for bid purposes shall be Sandstone, 5237, by Davis Colors or approved equal. The Engineer shall select final color from manufacturer or concrete supplier color samples.

626.03 Sculpted Concrete – Materials: Concrete Mix B (50/50 Blend)

- A. Concrete shall meet the requirements of Class B concrete in accordance with **Section 601 of the Colorado Department of Transportation “Standard Specifications for Road and Bridge Construction”** except as modified herein.
- B. Unless otherwise shown on the Drawings, the twenty-eight (28) day compressive strength of structural concrete shall be a minimum of four thousand five hundred (4,500) psi.
- C. The concrete mix shall be designed for required strengths in accordance with ACI 301. The ratio of water to the sum of concrete plus pozzolan shall not exceed 0.45 by weight for durable, watertight, concrete. The amount of fly ash in the mix shall be between fifteen and twenty percent

(15 - 20%) by weight of the total cementitious materials. Additional pozzolanic material may be added if alkali-silica reaction (ASR) mitigation is required based on chemical characteristics of fill material as requested by Engineer.

- D. Unless otherwise permitted or specified in the Drawings, concrete shall be proportioned and produced to have a slump not to exceed four inches (4") or less than two and one-half inches (2-1/2"). Concrete not consolidated by internal vibration shall be proportioned to have a slump not to exceed five and one-half inches (5-1/2") or less than four inches (4"). The Contractor may propose an alternative slump design. Engineer approval is required for alternative slump design prior to installation.
- E. Air entrainment shall be five to eight percent (5-8%) prior to pumping.
- F. Concrete mix shall be made with a 50/50 (%) blend of 3/8" (No 8.) and 3/4" (No. 67) AASHTO M 43 (ASTM C33) Coarse Aggregate. No. 67 aggregate may be substituted with No. 57/67 blended aggregate if requirements for No. 67 gradation are maintained.
- G. Fibermesh (Solomon UltraFiber 500 or equivalent) shall be included at the application rate of 3.0 lb/cy or as recommend by manufacturer.
- H. Use cement conforming to the following.
 - 1. Portland cement conforming to ASTM C-150. Contractor shall use only one brand of cement throughout the project.
 - 2. Blended hydraulic cement conforming to ASTM C-595 Type IS, IS-A, or IP.
 - 3. Color of the cement shall conform to the following:
 - a. Match existing bedrock in the project area.
 - b. Color for bid purposes shall be Sandstone, 5237, by Davis Colors or approved equal. Engineer shall select final color from manufacturer or concrete supplier color samples.

626.04 Sculpted Concrete – Materials: Aggregate

A. Coarse Aggregate for Sculpted Concrete Mix A

- 1. No. 8 Coarse Aggregate, AASHTO M 43 (ASTM C33):

U.S. Standard Sieve Size	Percent by Weight Passing Type I
3/4"	-
1/2"	100
3/8"	85 - 100
No. 4	10 - 30
No. 8	0 - 10
No.16	0 - 5

B. Coarse Aggregate for Sculpted Concrete Mix B (50/50 Blend)

1. 50% No. 67 Coarse Aggregate, AASHTO M 43 (ASTM C33):

U.S. Standard Sieve Size	Percent by Weight Passing Type I
1"	100
3/4"	90 - 100
1/2"	-
3/8"	20 - 55
No. 4	0 - 10
No. 8	0 - 5

*No. 67 aggregate may be substituted with No. 57/67 blended aggregate if requirements for No. 67 gradation are maintained.

2. 50% No. 8 Coarse Aggregate, AASHTO M 43 (ASTM C33):

U.S. Standard Sieve Size	Percent by Weight Passing Type I
3/4"	-
1/2"	100
3/8"	85 - 100
No. 4	10 - 30
No. 8	0 - 10
No.16	0 - 5

C. Fine Aggregate for all Sculpted Concrete Mixes

1. Fine Aggregate, AASHTO M6 or ASTM C33:

U.S. Standard Sieve Size	Percent by Weight Passing Type I
3/4"	-
1/2"	-
3/8"	100
No. 4	95 - 100
No. 8	80 - 100
No.16	50 - 85
No. 30	25 - 60
No. 50	10 - 30
No. 100	2 - 10

D. The fineness modulus must be not less than 2.3 nor more than 3.1.

626.05 Sculpted Concrete – Materials: Reinforcement

- A. Note: In the event there is a discrepancy, reinforcement shown on the drawings shall supersede this specification.
- B. Reinforcement shall be provided as a minimum of #5 (½” deformed, 60 ksi) bars, 12” on center each way, or equivalent welded wire mesh (WWF), with minimum 3” clearance above subgrade. Minimum equivalent WWF shall have a cross sectional area of 0.2 in²/ft² with a minimum tensile strength of 60 ksi (eg) 6x6 W10 or 4x4 W7.
- C. Clearance for all reinforcing bars, unless shown otherwise, shall be:
 - 1. When placed on ground – three inches (3”)
 - 2. All other concrete surfaces – two inches (2”)
- D. All bends, unless otherwise shown, shall be a ninety degree (90°) standard hook as defined in the latest edition of ACI 318.
- E. All wall corner and wall intersection reinforcement bars shall be continuous around corners and through columns or pilasters. Reinforcement shall be extended into connecting walls and lapped on the opposite face of the connecting walls.
- F. Vertical bars shall be lapped with dowels from base slabs and extended into the top face of roof slabs and lapped with top slab reinforcement, provide a minimum of two (2) full height vertical bars with matching dowels at wall ends, corners, and intersections with size to match typical vertical reinforcing steel shown.
- G. Unless otherwise indicated, Contractor may splice continuous slab or longitudinal beam bars at locations of his choosing, except that top bar splices shall be located at midspan, and bottom bar splices shall be located at supports. All reinforcement bends and laps, unless otherwise noted, shall satisfy the following requirement:

Grade 60 Reinforcing Steel (ASTM A615)							
Bar Size		#3	#4	#5	#6	#7	#8
Lap Splice Length							
Spacing < 6”	Top Bar	1’- 4”	2’- 0”	3’- 0”	4’- 0”	5’- 10”	6’- 8”
	Other Bar	1’- 4”	1’- 7”	2’- 3”	3’- 1”	4’- 6”	5’- 2”
Spacing > 6”	Top Bar	1’- 4”	1’- 7”	2’- 0”	2’- 5”	3’- 6”	4’- 0”
	Other Bar	1’- 4”	1’- 4”	1’- 7”	1’- 10”	2’- 9”	3’- 1”
Embedment Length							
Spacing < 6”	Top Bar	1’- 0”	1’- 7”	2’- 3”	3’- 1”	4’- 6”	5’- 2”
	Other Bar	1’- 0”	1’- 2”	1’- 9”	2’- 5”	3’- 6”	4’- 0”
Spacing > 6”	Top Bar	1’- 0”	1’- 3”	1’- 7”	1’- 10”	2’- 9”	3’- 1”
	Other Bar	1’- 0”	1’- 0”	1’- 2”	1’- 5”	2’- 1”	2’- 5”

Top bars shall be defined as any horizontal bars placed such that more than 12” of fresh concrete is cast in the member below the bar in any single pour. Horizontal wall bars are considered top bars.

626.06 Sculpted Concrete – Materials: Waterstop

A. Hydrophilic rubber waterstop shall have the minimum performance standard of:

Property	ASTM Standard	Results
Tensile Strength (MPa)	D412	0.98
Elongation	D412	550
Hardness (Hs)	D2240	30 Durometer Type A

The period to maximum volume expansion is 35 days

- B. The waterstop shall be comprised of Adeka Corporation MC-2010M or approved equal.
- C. The adhesive shall be 3M-2141 as manufactured by the 3M Company, Adeka Corporation H-1000 Ultra Bond, or approved equal.

626.07 Sculpted Concrete – Materials: Subgrade

- A. Subgrade shall be inspected by Engineer prior to placement of engineered fill (**see Subsection 621.053**).
- B. Excavation to subgrade shall be carefully considered by the Contractor. Subgrade shall be sloped uniformly or stepped in accordance with the grading shown on the Drawings. The building of earthen steps on top of a sloping subgrade plane that has been compacted and approved is prohibited.
- C. All contours, spot elevations, and limits shown are finish design grade.
- D. Subgrade shall meet compaction requirements described in **Subsection 621.054**

626.08 Sculpted Concrete – Execution: Concrete and Shotcrete Placement

- A. Subgrade
- Subgrade shall be free of water, mud, debris, or loose or frozen materials. Concrete shall be placed directly on approved subgrade.
 - Thoroughly dampen the surfaces that may contact the concrete to be placed.
 - A shotcrete flash coat may be applied over the completed subgrade. The flash coat shall consist of a 1-inch layer of shotcrete that will cap and protect the subgrade material during placement of reinforcing steel and prior to placement of sculpted concrete.
- B. Reinforcement Inspection
- Prior to placing concrete, the Engineer shall observe all reinforcing forms and surfaces receiving concrete and contractor shall repair all discrepancies identified by the Engineer
- C. Environmental Conditions
- See **Subsection 508.04 – Protection in Cold and Freezing Weather** for weather requirements during concrete placement.

2. Concrete shall not be placed against forms exposed to heating unless the temperature of the forms is first cooled to less than or equal to 90°F.
3. Concrete placement shall not be permitted in wind speeds greater than twenty (20) miles per hour.

D. Concrete Placement

1. Concrete shall not be dropped more than 5' unless confined by closed chutes or pipes.
2. Concrete shall be placed to avoid segregation of the materials and the displacement of the reinforcement.

626.09 Sculpted Concrete – Execution: Concrete Construction Joints

- A. The location of all construction joints shall be subject to the acceptance of Engineer. The surface of all construction joints shall be thoroughly cleaned and all laitance and standing water removed. Clean aggregate shall be exposed by abrasive blast cleaning. Wire brushing and air water jets may be used while concrete is fresh provided results are equal to abrasive blast cleaning. Construction joints shall be keyed at right angle to the direction of shear. Except where otherwise shown on the Drawings, keyways shall be at least one and one-half (1-1/2) inch in depth over at least twenty five percent (50%) of the area of the section. Center keyways on slab.
- B. Horizontal construction joints shall be placed with new concrete poured over placed concrete. Reinforcing from the first pour shall project up into the second pour. Ensure adequate lap length is provided for the new pour according to **Section 626.05 Materials - Reinforcement**.
- C. Longitudinal construction joints shall be placed with new concrete poured alongside placed concrete. Reinforcing from the first pour shall project into the second pour. Ensure adequate lap length is provided for the new pour according to **Section 626.05 Materials - Reinforcement**.
- D. Longitudinal construction joints are not permitted in the low flow channel or stilling basin of the sculpted concrete drop structure.
- E. Horizontal construction joints placed in the low flow channel shall be perpendicular to flow. The upper layer of concrete shall be placed to encourage water to drain away from the construction joint.
- F. Taper construction joints to a shallow edge form, about one inch (1") thick, except where the joint will be subjected to compressive stress. In this case, use non-tapered joints and take special care to avoid or remove trapped rebound at the joint.
- G. The entire joint shall be thoroughly cleaned and wetted prior to the application of additional concrete/Shotcrete.
- H. Make horizontal construction joints perpendicular to the main reinforcement. Continue reinforcement across joints.
- I. Position construction joints to conform to the locations of natural occurring cracks and joints in the simulated rock and earth forms.
- J. If the concrete drop structure is poured in layers, concrete shall overlap the previous layer by a minimum of 50% of the horizontal layer width.

626.10 Sculpted Concrete – Execution: Waterstop

- A. Waterstop shall be set in keyway of all construction joints and centered in the keyway.
- B. The components and installation procedures shall be in accordance with the manufacturer's printed specifications and recommendations. Installation shall be performed by skilled workers who are trained in procedures and methods required for proper performance of the waterstop.
- C. Examine the concrete surface and correct any surface imperfections which may prevent proper installation and performance of the waterstop.
- D. Concrete surfaces shall be clean and free of dirt, saw dust, laitance, grease, form oils, form release agent, or other contamination to ensure proper adhesion of the waterstop to the concrete surface. Use a wire brush to lightly roughen the surface. Remove all concrete dust with a soft brush.
- E. Measure and cut an exact length of waterstop. Splices in horizontal joints are acceptable, however, only one (1) splice is permitted in twenty-five (25) feet. Splices of waterstops in horizontal joints shall be made by butting and gluing the ends of the waterstop with an approved adhesive.
- F. Using a brush, apply a uniform coat of adhesive to the concrete surface along the line of placement. Apply a uniform coat of adhesive to the waterstop. Gaps in the glue application shall not be permitted.
- G. After the adhesive has dried to a tacky condition (about fifteen [15] minutes in the summer and thirty [30] minutes in the winter), firmly press the waterstop to the concrete surface. When installing the waterstop on curved surfaces such as pipes, temporary bands (for example, wire or rope) may be used to assist in securing the waterstop to the surface. Any temporary means of securing the waterstop shall be removed prior to placing concrete or grout.
- H. Concrete placement within twelve (12) hours is required. The waterstop shall be protected from water and from displacement prior to concrete placement. During concrete placement, Contractor shall visually observe the waterstop to ensure proper placement and alignment.

626.11 Sculpted Concrete – Execution: Concrete Finishing

- A. Contractor shall provide an expert(s) approved by Engineer to perform texturing and shaping of the concrete that is left above exposed ground.
- B. Finished product shall simulate natural rock or natural wood logs as described in the Drawings and Specifications. Contractor shall achieve the desired appearance by:
 - 1. Following featured elements provided by the Engineer on the approved design plans. The Contractor shall submit featured element questions 24 hours before the structure concrete placement.
 - 2. Troweling sculpted concrete smooth.
 - 3. Cutting rock formation scars into the surface.
 - 4. Texturing the entire surface using both texture mats, power washing, and other techniques approved by Engineer to achieve a natural rock finish.
 - 5. Alternative methods must be approved by the Engineer.

- C. The fabrication of sculpted concrete, installation, and adjustment of finish details shall be accomplished in such a manner as to appear as realistic as possible. This element is artistic in nature and may require field adjustments to completed work to obtain the desired effect. The Engineer shall decide questions of aesthetic effect. Minor changes or adjustments to in-place work shall be made at the Contractor expense.
- D. The Contractor shall burn off all fibermesh exposed on the surface of the concrete before applying any sealing agent.

626.12 Sculpted Concrete – Execution: Sample Installation

- A. Contractor shall construct a sample sculpted concrete panel measuring not less than 10 cubic yards/one truck. Sample shall represent all aspects of the proposed installation including:
 - 1. Concrete thickness
 - 2. Reinforcement
 - 3. Finished surface texturing
 - 4. Coloring and etching of the concrete feature
- B. The Engineer shall observe and approve the sample panel prior to the construction of any sculpted concrete features.
- C. Sample installation will be paid using unit prices for sculpted concrete.
- D. Sample installation will be placed at an approved location under direction of the Engineer and may be incorporated into a proposed structure under direction of the Engineer.

Add Section 627 – Weep Drains

627.01 Weep Drains – Submittals

- A. Contractor shall provide the Engineer samples of all specified materials and certified laboratory test certificates for all items required in this Section including:
1. Geotextile fabric manufacturer's data
 2. Rock bedding material gradation test results
 3. AASHTO T96 (L.A. Abrasion test) – for rock bedding
 4. AASHTO Test T104 (sodium sulfate) – for rock bedding
 5. AASHTO Test T103 (freeze and thaw) – for rock bedding
 6. Sample load of rock bedding delivered to site
 7. High Density Polyethylene (HDPE) pipe manufacturer's data

627.02 Weep Drains – Materials: Geotextile Fabric

- A. Geotextile fabric shall have complete resistance to deterioration from ambient temperatures, acid, and alkaline conditions, and shall be indestructible to microorganisms and insects. The material shall be resistant to short-term (until placement) deterioration by ultraviolet light or protected until placement, as recommended by the manufacturer, such that no deterioration occurs. During shipment and storage, the rolls of fabric shall be protected against deterioration from the sun, mud, dirt, dust, and other deleterious conditions always.
- B. Fibers used in the manufacture of geotextiles, and the threads used in joining geotextiles by sewing, shall consist of long chain synthetic polymers composed of at least eighty five percent (85%) by weight polyolefins, polyesters, or polyamides. They shall be formed into a network such that the filaments or yarns retain dimensional stability relative to each other, including selvages.
- C. The property values shown below are not design values but represent the minimum accepted physical characteristics of the geotextile required. The number represents a value to be confirmed by the manufacturer. These values represent minimum average roll values.

Property	Value	Test Method
Grab Strength	120 lbs	ASTM D 4632
Grab Tensile Elongation	55%	ASTM D 4632
Burst Strength	225 psi	ASTM D 3786
Puncture Resistance	65 lbs	ASTM D 4833
Trapezoid Tear Strength	50 lbs	ASTM D 4533
Apparent Opening Size	70, U.S. Standard Sieve	ASTM D 4751
Permittivity	1.7 sec ⁻¹	ASTM D 4491
Water Flow Rate	140 gal/min/ft ²	ASTM D 4491

- D. Geotextile fabric for weep drains shall be Mirafi 140N or equivalent.

627.03 Weep Drains – Materials: Rock Bedding

- A. Unless otherwise shown in the Drawings, rock shall consist of dense, clean, uniformly graded material with a maximum size of one (1) inch and less than five percent (5%) passing the three-eighths inch ($\frac{3}{8}$ ") sieve. Coarse concrete aggregate meeting the requirements of ASTM C 33 No. 5 may be used.

627.04 Weep Drains – Materials: Pipe and Fittings

- A. Pipe and fittings for weep drain systems shall be 3" HDPE. HDPE pipe shall be Hancor Heavy Duty Pipe, single wall, flexible pipe or approved equal made from virgin compounds and meeting the requirements of ASTM F 405. HDPE joints shall be Hancor "soil tight" type or approved equal.

627.05 Weep Drains – Execution: General

- A. Contractor shall furnish all labor, tools, and equipment and perform all Work necessary for, or incidental to, the supply and installation of weep systems as shown in the Drawings and specified here. This Work includes trenching, placement of a geotextile fabric, rock, and pipe. The Work shall be coordinated with the work of all other trades and activities on the Project.

627.06 Weep Drains – Execution: Geotextile Fabric Installation

- A. Geotextile fabric shall surround the weep drain filter material at all points. Care shall be taken not to tear any geotextile fabric during backfilling.

627.07 Weep Drains – Execution: Rock Placement

- A. Rock shall be placed on the geotextile fabric to the depth shown prior to placement of the underdrain pipe. After the pipe is in place, rock shall be placed along and over the top of the pipe in a manner that will not damage the pipe.

627.08 Weep Drains – Execution: HDPE Pipe and Fittings Installation

- A. Pipe and fittings shall be installed in accordance with the manufacturer's written instructions, a copy of which shall be maintained on site during installation.

Add Section 628 – Sheet Pile**628.01 Sheet Pile – Submittals**

- A. Sheet pile installer will provide, as a minimum, three (3) successful past installations of sheet piling of comparable overall heights and sections and comparable penetration into soils like those found on the Project.
- B. Contractor shall provide information from the manufacturer that indicates the sheet piling meets or exceeds the Specifications listed in this section.
- C. Contractor shall submit verification from the manufacturer that the hammer can deliver the required energy.
- D. Splice locations, if necessary, shall be reviewed and accepted by Engineer prior to installation.
- E. Contractor shall submit refusal depths of all installed sheet pile before subgrade forming or concrete placement. Additionally, the contractor shall submit a CAD file that includes GPS captured spot elevations points at all grade breaks along the installed sheet pile. The engineer shall review the spot elevations points and refusal depths within ` of receiving the data and provide approval or needed correction to the contractor.

628.02 Sheet Pile – Materials

- A. All steel sheet piling shall be new and unspliced material throughout, unless otherwise reviewed and accepted by Engineer.
- B. Steel sheet piles and special fabricated shapes shall be of a design that ensures continuous interlock throughout the entire length when in place.
- C. Steel sheet piling shall meet the requirements of ASTM A328, (Grade 50).
- D. Steel corners, tees, wyees, and crosses shall meet the requirements of ASTM A328 or ASTM A690.
- E. Steel sheet piles required for the Project shall be the type and weight shown on the Drawings. Sheet piling shall be constructed with a weathering finish.
 - 1. Additional length beyond those indicated on the Drawings may be required to provide for trimming of tops of sheet piling.
- F. The interlocks between steel sheet pile sections shall be configured such that the average width of the annular space between all contact points of the interlocks shall be a maximum of one-eighth (1/8) inch, as determined by Engineer.
- G. Steel sheet piles and interlocks shall not have excessive kinks, camber or twist that would prevent the pile from reasonably free sliding to grade.
- H. All fabricated connections shall be made with the use of angles or bent plates, as necessary, and shall be adequately welded or connected with high strength bolts as accepted by Engineer.

628.03 Sheet Pile – Handling and Storage

- A. Do not subject piles to damage by impact bending stresses during transportation or onsite storage.

- B. Store and handle piles such that the corrosion protection coating will not be damaged.

628.04 Sheet Pile – Execution: General

- A. Do not begin sheet pile installation until earthwork in the area (where piles are to be driven) is completed that the grade elevation is at no more than twelve (12) inches above or below the top of the piling elevation as indicated on the Drawings.

628.05 Sheet Pile – Execution: Preparation

- A. Any fill along the alignment of the sheet pile must be in place to sub-grade elevations and compacted prior to driving the sheet pile.
- B. Fill material (except riprap, boulders, bedding and grout) is not to be placed around the sheet pile after the sheet pile is in place.

628.06 Sheet Pile – Execution: Installation

- A. All welding or gas cutting shall be in accordance with the current standards of the American Welding Society.
- B. Sheet Pile Driving
 1. Steel sheet piling shall be assembled before driving and then driven as a continuous wall, progressively in stages to keep the piles aligned correctly and minimize the danger of breaking the interlock between the sheets. Steel sheet piling shall be driven to form a tight bulkhead.
 2. A driving head shall be used and any piling which is damaged in driving, or which has broken interlocks between sections shall be pulled and replaced at Contractor expense.
 3. The piling shall be driven within the following tolerances:
 - a. Alignment: Sheet pile shall be driven to form a relatively straight line between the termini points shown on the Drawings. Horizontal deviation of any point from a straight line connecting the two ends of the wall section shall be a maximum of six inches (6”).
 - b. Plumbness: Each individual sheet pile section shall be driven vertical, within a horizontal tolerance of two percent (2%) of any vertical length measured along the pile.
 - c. Elevation: Tops of sheet pile sections shall be within a tolerance of one inch from plan elevations. Contractor shall not be paid for excess sheet pile trimmed off the end of the pile to meet final grade.
 4. Contractor shall brace and/or provide soil grading as necessary during construction operations to provide lateral stability for the sheet pile wall. The sheet pile wall has been designed for the soil grades of the final configuration denoted on the Drawings only. Other temporary configurations during the construction period shall not be allowed.
 5. Care shall be taken during driving to keep from causing deformations of the top of the piles, splitting of section, or breaking of the interlock between sections. Care shall

also be taken during driving to prevent and correct any tendency of steel sheet piles to twist or get out of plumb.

6. Steel Z piling shall be driven with the ball-end leading. Proper care and planning shall be used to allow for this construction procedure in both immediate and possible future walls.
7. Alternate Z piles shall be reversed end for end for proper interlocking in the "normal" position. Piles shall also be aligned properly to maintain a "normal" driving width.
8. For sheet piles driven into the native soils, pre-drilled soils, or excavated soils, a vibratory driver may be used if the required depth is obtained.
9. For sheet piles being driven into bedrock, an approved hammer utilizing minimum hammer energy of 19,000 foot-pounds per square inch of steel section shall be used to obtain the required depth or virtual refusal. The hammer shall be clearly marked so that it can be identified at the job site.
10. Steel sheet pile that is full length as shown on the Drawings and is required to be driven below the specified cutoff elevation shall be spliced with additional steel sheet piling with a full penetration butt weld.

C. Virtual Refusal

1. Steel sheet piling shall be driven to the depths shown on the Drawings or to virtual refusal.
2. Virtual refusal is defined as ten (10) blows per inch with an approved pile hammer.
3. A pile hammer shall be used to determine virtual refusal.
4. The hammer shall be operating at the manufacturer's recommended stroke and speed when virtual refusal is measured.

Revision of Section 636.04 – Construction Requirements for Manholes, Junction Boxes, Cast in Place Reinforced Concrete Box, Inlets, Pipe end Finish and Fittings

Add to Subsection 636.04 – Cast in Place Reinforced Concrete Box Culvert

The Hopeful Drive Box Culvert and Wingwalls, South Tributary Box Culvert and Wingwalls, and the South Tributary Pedestrian Culvert at Hopeful Drive materials and construction shall be in accordance with the CDOT Standard Specifications. All concrete shall be CDOT Class D Concrete.

Revision of Section 800

Section 800 of the City Standard Specifications is revised as follows:

SECTION 825 – CONSTRUCTION SURVEYING

This work consists of the construction surveying, calculating, and staking necessary for the construction of all elements of the project. The work shall be done under the supervision of a Professional Land Surveyor (PLS) who is experienced and competent in road, channel, and bridge construction surveying and licensed in the State of Colorado.

Locating, preserving, referencing, installing and restoring land monuments such as Primary Control monuments from which the right of way or any land boundary will be calculated, described or monumented, Public Land Survey System (PLSS) monuments, General Land Office (GLO) monuments, Bureau of Land Management (BLM) monuments, Mineral Survey (MS) monuments, Right-of-way (ROW) monuments, property boundary monuments, easement monuments, Block Corner Reference monuments (5x5's and 5 off's) and other monuments that are required by law or regulation to be established by a PLS, and the determination of any land boundary, shall be done in, under the supervision of a Professional Land Surveyor (PLS) who is experienced and competent in Right of Way and boundary surveying and licensed in the State of Colorado.

The intent of the above description is:

1. Locate and document all monuments within the construction project limits and provide the information to the City prior to commencement of construction activities.
2. Identify monuments which will be impacted by construction activities, reference these monuments for replacement after construction completion.
3. Provide construction survey for the construction of the project including horizontal and vertical control.
4. Verify after the completion of construction, monuments identified prior to construction either remained or were replaced.
5. Document final conditions, submit required documentation to the State for reset monuments, and submit data to City staff.

The PLS shall be available to review work, resolve problems, and make decisions in a timely manner.

A. MATERIALS AND EQUIPMENT

The Contractor shall furnish all personnel, survey equipment, safety equipment, materials, and traffic control necessary to perform the required construction surveying and staking. All surveying equipment shall be in good working condition. If any survey equipment is found to be functioning outside the manufacturer's specified tolerance, certification from an approved repair facility showing that the instruments have been repaired, properly adjusted, or both, if necessary, shall be included in the survey records and submitted to the Engineer before being used.

B. CONSTRUCTION REQUIREMENTS

Construction Survey meeting shall be held prior to performing surveying work under this section. The Engineer, City Surveyor, City Project Manager, Construction Project Manager, Contractor's Superintendent, Contractor's Surveyor (PLS) shall attend. A surveying work schedule shall be submitted to the Construction Project Manager for review prior to the presurvey conference.

- 1. Contractor Surveying** - The Contractor shall perform all construction surveying and staking necessary for construction of the project and documentation for monuments.
- 2. Accuracy and Tolerances** - Horizontal and vertical accuracy tolerances for Secondary Control surveys and monuments, and for each construction item being staked shall be as specified in the Contract. If a discrepancy should occur, the higher degree of accuracy or the more restrictive tolerance shall apply. Horizontal accuracy tolerances for Primary Control surveys and monuments. Vertical accuracy tolerances for Primary Control surveys and monuments. Horizontal accuracy tolerances for Secondary Control surveys and monuments. Vertical accuracy tolerances for Secondary control surveys, monuments, and/or Secondary benchmarks. Engineered surveying accuracy and tolerances shall be the same as the staking accuracy and tolerances.
- 3. Responsibility and Inspection.** Supervision and coordination of construction surveying and staking is the Contractor's responsibility. The Engineer may inspect the Contractor's surveying; however, such inspection will not relieve the Contractor of any responsibility for accuracy or completeness of work. The Contractor shall check the work to verify the accuracy and include documentation of this check in the Survey Records. All Contractor surveying inaccuracies, errors, or omissions shall be corrected at the Contractor's expense. Inspection of the Contractor's corrections shall not entitle the Contractor to additional payment or contract time extension
- 4. Reset Monuments and Stakes.** Primary and Secondary Control monuments, benchmarks, and other significant stakes that are damaged, destroyed, or made inaccessible by the progress of construction shall be replaced, transferred, or re-established at the Contractor's expense. A supplemental or amended Project Control Diagram shall be submitted to the City for any replaced, transferred, or re-established Primary Control monuments.

Locating, preserving, referencing, installing and restoring land monuments such as Primary Control monuments from which the right of way or any land boundary will be calculated, described or monumented, PLSS monuments, GLO monuments, BLM monuments, MS monuments, ROW monuments, property boundary monuments, easement monuments, Block Corner Reference monuments (5x5's and 5 off's) and other monuments that are required by law or regulation to be established by a PLS, under the supervision of a PLS who is experienced and competent in Right of Way and boundary surveying and licensed in the State of Colorado.

Traffic control for construction surveying the responsibility of the contractor. All costs associated with surveying will not be measured and paid for separately but shall be included in the work.

The Engineer will perform all interim and final measurements deemed necessary by the City, to determine contract pay quantities.

Changes. All changes in lines and grades required by field conditions and all discrepancies in grades, alignment, location, or dimensions detected by the Contractor shall be immediately submitted to the Engineer in writing. No changes in given data or plans will be allowed unless approved by the Engineer in writing. All changes shall be documented in the survey records.

Section 826 SURVEY MONUMENTATION

DESCRIPTION This work consists of locating, preserving, referencing, installing and restoring land monuments, such as Primary Control monuments from which the right of way or any land boundary will be calculated, described or monumented, Public Land Survey System (PLSS) monuments, General Land Office (GLO) monuments, Bureau of Land Management (BLM) monuments, Mineral Survey (MS) monuments, Right-of-way (ROW) monuments, property boundary monuments, easement monuments, Block Corner Reference monuments (5x5's and 5 off's) and other monuments that are required by law or regulation to be established and recorded by a Professional Land Surveyor (PLS), along with installing or adjusting monument boxes as listed on the Survey Tabulation Sheet or as shown on the plans.

Monuments included in this section shall be established in accordance with the applicable and most recent editions of the Department of Interior's Manual of Surveying Instructions (BLM Manual), Colorado Revised Statutes (CRS), Colorado State Board of Licensure for Professional Engineers and Land Surveyors (State Board) Rules and Policies, under the supervision of a City approved PLS experienced and competent in Right of Way and boundary surveying and licensed in the State of Colorado.

The PLS shall be available to review work, resolve problems, and make decisions in a timely manner.

MATERIALS AND EQUIPMENT The Contractor shall furnish all personnel, survey equipment, safety equipment, materials, and traffic control necessary to perform the required monumentation and related surveying.

The various types of monuments and monument boxes shall be constructed according to the details shown on CDOT Standard Plan M-629-1.

The Contractor shall furnish all labor, survey tools, equipment, and incidental materials such as but not limited to concrete, grout, asphalt caulk, glue, epoxy, nails, stakes, lath, and replacement monuments.

All surveying equipment, including Electronic Distance Meters (EDM), total stations, theodolites, levels, rods, tapes, tripods, tribrachs, and Global Positioning System (GPS) receivers and equipment, shall be in good working condition.

If any survey equipment is found to be functioning outside the manufacturer's specified tolerance, certification from an approved repair facility showing that the instruments have been repaired, properly adjusted, or both if needed shall be included in the survey records and submitted to the Engineer before being used.

The Contractor will provide Traffic Control as needed to complete the survey.

CONSTRUCTION REQUIREMENTS:

Construction Survey meeting shall be held prior to performing any surveying work under this section. The Engineer, City Surveyor, City Project Manager, Construction Project Manager Contractor's Superintendent, Contractor's Surveyor (PLS) shall attend. A surveying work schedule shall be submitted to the Construction Project Manager for review prior to the presurvey conference.

The Contractor shall check all established Primary horizontal and vertical control and verify and document in the survey records their horizontal and vertical accuracy tolerance. Survey records shall be completed as the work is done. Field survey notes for monumentation, surveying and checking by the Contractor shall be recorded. The Contractor shall make all survey records generated available to the Construction Project Manager for inspection or reproduction at all times.

The Contractor shall submit all survey records to the City Surveyor before Final Acceptance. All survey records are considered property of the City. The responsible PLS identified shall electronically seal all survey records. Copies of any new Monument Records filed by the PLS with the State Board of Registration, shall be submitted prior to filing.

Locating Monuments: This work consists of field locating all survey monumentation that is in place because of a Government (Federal, State, County or Municipal) survey or resurvey as shown on original PLSS, GLO, BLM, or MS plats, notes, or other survey monumentation documented in the public record.

A diligent search of construction zones and project limits shall be performed by the PLS, to locate any survey monumentation of the public record. An electronic magnetic field sensor or locator shall be used in this search. The responsible PLS shall document the search, and time spent searching, in the survey records. The survey records shall include the procedures used to make the diligent search, a description of each monument searched for, and the actions taken to reference and preserve the location of the monument.

Preserving and Referencing Monuments. This work consists of field surveying, establishing, installing, and making measurements to reference monuments that will facilitate the installation of a replacement monument in the event the construction activity disturbs a monument of the public record.

Referencing of monuments for possible replacement requires the use of correct replacement methods so the stated precision of the monument in question is not degraded. When a construction activity is planned which will disturb an existing PLSS, GLO, B.L.M., or MS monument, the monument shall be referenced and the survey records and the monument shall be upgraded by the PLS and a new Monument Record filed with the State Board, when the following conditions are met:

- 1) No boundary survey was done for the project.
- 2) A Monument Record has been filed with the State Board and there are no Monument Records that indicate conflicting locations.
- 3) The existing monument does not meet the physical standards set by the State Board.

A new monument record shall be filed with the State Board in accordance with Title 38 CRS and State Board Rules and Polices, a disclaimer should be written on the new Monument Record stating, "the new monument was set in the same location as described by the previous monument record". 629.06 629-3 When conflicting evidence of the location of an existing PLSS, GLO, BLM, or MS monument is encountered and construction activity is planned which will alter the evidence, the monument shall be referenced, and the survey records shall include the information required.

A minimum of two permanent reference monuments shall be to reference the location of all existing found monuments. Reference monuments must meet the required physical standards of the actual monument for the type of monument being referenced. These references shall be set when the following conditions are met:

- 1) No boundary survey was done for the project.
- 2) No monument record or conflicting monument records are filed with the State Board.

The reference monuments shall be set and stamped in accordance with Title 38 CRS and State Board Rules and Polices, a new monument record should be marked "Other" for "Type of Monument" and a full explanation given on the monument record as to why the presumed monument was not upgraded, the monument record shall be filed with the State Board in accordance with Title 38 CRS.

Copies of all new Monument Records filed by the PLS with the State Board shall be submitted to the City Surveyor prior to filing.

The equipment used in referencing or replacing the monument shall be able to produce the stated accuracies as specified by the owner of the monument. For example, the Colorado High Accuracy Reference Network (HARN) and CDOT HARN Densification (HARND) monuments shall be referenced or replaced using Dual Frequency survey grade GPS equipment in accordance with the procedures set forth under the most recent Policy of the National Ocean Service Regarding the Incorporation of Geodetic Data of Other Organizations into the National Geodetic Survey Data Base, standards of accuracy are given in the Standards and Specifications for Geodetic Control Networks and Geometric Geodetic Accuracy Standards and Specifications for using GPS Relative Positioning Techniques (as amended).

National Geodetic Survey (NGS), U.S. Coast and Geodetic (USCG), and U.S. Geological Survey (USGS) benchmarks shall be referenced by setting a minimum of 3 temporary benchmarks in accordance with the procedures set forth under the most recent edition of the NGS Benchmark Reset Procedures. The temporary benchmarks shall be set outside the construction area so a permanent monument can be reset upon completion of the construction.

Prior to referencing, moving, or replacing the monument the NGS State Geodetic Advisor and the City Surveyor is to be notified, Survey records for referencing, moving, or replacing a federal or local government agency monument shall include documentation of the work. The survey records shall be submitted to the Engineer, for review by the City Surveyor, before payment is made and shall include the following:

- 1) Description of the original monument and two sets of close-up photographs.
- 2) Two sets of labeled color photographs showing a close up of the replaced monument, and a view of the monument looking toward the horizon in each of the cardinal directions.
- 3) A complete description of the reference monuments and replacement monument with a "to-reach" description.
- 4) A signed and sealed statement by the responsible PLS that states the replacement monument's positional tolerance has not been degraded. The documentation shall conform to the owner of the monument's specifications that control the work.

Before Survey Monumentation payment is made, the Contractor's surveyor shall submit legible electronically sealed copies of the survey records. Before final Survey Monumentation payment and prior to depositing with the county, in accordance with Title 38 CRS, Property – Real and Personal, State Board Rules and Policies, MOU, the Contractor shall complete and electronically seal all survey records, the ROW Plans, and the Project Control Diagram (new, supplemental or amended) and submit copies the Engineer.

Installing Monuments. This survey work consists of installing Primary Control monuments, benchmarks, ROW monuments, property boundary monuments, easement monuments, PLSS, GLO, BLM, or MS monuments, and other monuments included on the plans. The work shall include determining the location of the monuments, installing the monuments, and verifying the positional accuracy of the monument is correct.

A Primary Control survey, when not furnished, shall be meeting the horizontal and vertical accuracy tolerances -A Project Control Diagram shall be submitted to the Engineer and the City Surveyor for all new Primary Control monuments and surveys.

Vertical accuracy tolerances for Primary Control monuments and surveys shall be as specified.

Unless stated otherwise in the contract, if construction activity disturbs a Primary Control monument (or benchmark) a new Primary Control monument (or benchmark) shall be installed by the Contractor. Primary Control monuments shall be set so they are intervisible from at least two adjacent Primary Control monuments and shall not exceed 0.2 mile between adjacent intervisible Primary Control monuments. Primary Control monuments set by the Contractor shall not conflict with construction activities. The Primary Control survey shall consist of a closed loop network and have adequate

redundancy, precision, and accuracy to prove that all the monuments included in the network are within the horizontal and vertical accuracy tolerance.

Survey records shall include documentation of Primary Control monuments and. A supplemental or amended Project Control Diagram shall be submitted to the Engineer and the City Surveyor for all replaced, transferred or re-established Primary Control monuments, ROW monuments, property boundary monuments, and easement monuments shall be installed.

Secondary Control monuments may be required, meeting the horizontal accuracy tolerance. The procedures used to set ROW monuments shall include an independent check of the installation. Survey records shall include documentation of the survey performed to establish the monuments. The independent check shall be documented in the survey records and the field measured differences calculated or reduced to show the work is within the specified horizontal accuracy tolerance. PLSS, GLO, BLM, or MS monuments, The independent check shall be documented in the survey records and the field measured differences calculated or reduced to show the work is within the specified horizontal accuracy tolerance. The installation of ROW, property boundary, easement, PLSS, GLO, BLM, or MS monuments installed at a different location than the data shown on the Monumentation sheet of the ROW plans shall be submitted to the Engineer and the City Surveyor along with the monument's description and horizontal data in order that the new monument can be revised on the Land Survey Control Diagram and ROW plan sheets. Copies of all new Monument Records filed by the PLS with the State Board for the installation of new PLSS, GLO, BLM, or MS monuments shall be submitted to the Engineer prior to filing.

Monument Box. This survey work shall consist of installing or adjusting monument boxes included on the plans. When it is necessary to set a monument within a monument box in accordance with Title 38 CRS and State Board Rules and Policies. If the monument meets the physical standard as stated by the State Board and is situated within the finished roadway, a monument box shall be installed. When an existing monument box, due to construction, will no longer meet the physical standard set by the State Board, the box shall be replaced or adjusted to meet those standards.

Revision of Section 900 – Seeding, Fertilizer, Mulching and Sodding

Add to Subsection 900.01 – Description

For native seeding, spring seeding is allowed during the seeding window from the spring thaw to April 15th and fall seeding is allowed from October 15th until consistent ground freeze. Upon approval of the Engineer, dormant seeding may be accomplished between October 15th and April 15th. No seeding shall occur when the ground is frozen, muddy, covered with snow, or otherwise in a condition unsuitable for seeding. Seeding will not be allowed between April 15th and October 15th unless approved by the Engineer and an irrigation or sprinkler system is being utilized and is installed and operational at time of seeding.

Revise Subsection 900.02, Part A Materials – Seed, Fertilizer, Mulch and Sod

- F. Seed. All seed shall be furnished in bags or containers clearly labeled to show the name and address of the supplier, seed name, lot number, net weight, origin, percent of weed seed content, guaranteed percentage of purity and germination, pounds of pure live seed (PLS) of each seed species, and total pounds of pure live seed in the container. All brands furnished shall be free from Colorado listed noxious weed seeds and aggressive non-native seeds including, but not limited to, Russian thistle, Canada thistle, European bindweed, cheatgrass, Johnson grass, kochia, smooth brome, and leafy spurge. Prior to seed purchase, the Contractor shall submit to the Engineer the individual seed lot analyses with weed species information certifying that the seed furnished is from a lot that has been tested by a recognized laboratory for seed testing within six (6) months prior to the date of delivery. The Engineer may reject the submittal and request a different seed lot utilized if materials found in the seed lot analyses are deemed inappropriate to use on the site. Seed purchased prior to review and approval of the seed lot analysis will be at Contractor's expense and is not allowed to be used onsite. Seed which has become wet, moldy, or otherwise damaged in transit or in storage will not be accepted for use onsite

The mixture shall consist of the species and rates as shown on the plans. Planting rates are expressed in terms of pure live seed (PLS).

Add Subsection 900.06 – Native Revegetation Expertise and Submittals

- A. Contractor shall have Colorado native revegetation installation and maintenance experience. Contractor shall provide statement detailing previous native revegetation experience with a minimum of two (2) project examples including photos and locations of installations. Contractor shall also include project owner references for projects listed in the statement of experience.
- B. Contractor shall have a licensed and/or certified pesticide applicator on staff and shall submit proof of license and/or certification of pesticide applicator.

Add Subsection 900.07 – Site Inspection

- A. Inspection: The Contractor will inspect existing site conditions prior to commencing revegetation work and note any irregularities affecting work of this section. The Contractor will:
1. Verify that grading operations have been satisfactorily completed and that topsoil of adequate quantity and quality has been replaced in all disturbed areas as specified.
 2. Verify that the area to be re-vegetated is protected from concentrated runoff and sediment from adjacent areas.

3. Note any previous treatments to the area such as temporary seeding or mulching and discuss how these treatments will affect permanent revegetation with the Engineer.
4. Verify any discrepancies between areas disturbed by construction activities and the revegetation plans. All areas disturbed by construction activities, including areas outside of the limits of disturbance, shall be revegetated at no cost to the Owner.
5. Report all irregularities affecting work of this section to the Engineer before beginning work. Beginning the work of this section implies acceptance of existing conditions.

Add Subsection 900.08 – Revegetation Area Maintenance

Roles Definitions:

Contractor: the General Contractor and all Subcontractors

Owner: City of Colorado Springs

Engineer: As designated by the OWNER

Maintenance Contractor: A revegetation contractor who specializes in maintenance of Colorado native revegetation, who will be hired by the Owner under a separate contract for revegetation maintenance.

- A. **Revegetation Area Maintenance:** Revegetation Area Maintenance includes site visits by the Contractor to perform inspection and associated maintenance activities as described below. Revegetation Area Maintenance shall be performed during construction until Substantial Completion is awarded to ensure a healthy, established plant community that meets project goals and objectives.
- B. **Revegetation Area Maintenance Requirements:** It is the Contractor's responsibility to perform revegetation area maintenance site visits to complete chemical and mechanical weed control per Colorado native landscape best maintenance practices. The Contractor shall follow direction provided by the Engineer to supplement Colorado native landscape best maintenance practices. The Contractor shall notify the Engineer prior to performing revegetation maintenance operations. The following maintenance actions are required for successful native vegetation establishment to be performed at each Revegetation Area Maintenance site visit until Substantial Completion is awarded:
 1. **Weed Control:** Perform applicable chemical and/or mechanical weed control depending on species eradication and/or control requirements. Apply appropriate herbicide(s) in accordance with manufacturer's suggested rate(s) to control weeds. Herbicide application must comply with all requirements of herbicide/pesticide applicators license, including suitable warning/signing following application.
 2. **Revegetation Area Cleaning:** Perform cleaning weekly at revegetation areas during installation of the work, and upon completion of the work. Remove and haul from the site all excess materials, debris, and equipment without disturbing existing revegetation. Repair damage resulting from seeding and maintenance operations. Clean mulch from paved surfaces.

As necessary, it is the Contractor's responsibility to perform additional maintenance actions as described below per Colorado native landscape best maintenance practices, until Substantial Completion is awarded. The Contractor shall notify the Engineer prior to performing additional revegetation maintenance operations. The following maintenance actions are required, as determined by Colorado native landscape best maintenance practices and/or directed by the Engineer, for successful native vegetation establishment to be performed at each Revegetation Area Maintenance site visit until Substantial Completion is awarded:

1. Repair and Reseed: Reform grades, as needed, and re-seed areas that have washed out, are eroded, or do not meet cover requirements. All re-seeded areas need to have proper erosion control measures redone as well.
2. Disease and Insect Control: Apply fungicides and insecticides as required to control diseases and insects by a licensed applicator in accordance with state law requirements.
3. Watering: The Contractor shall be responsible for watering of seeded areas as described in Section 900.01.
4. Protection: Provide sufficient barriers and signage notifying the public to keep off newly seeded and planted areas.

Add Subsection 900.09 – Substantial Completion and Final Acceptance

- A. Substantial Completion Walk-Through: The following steps will be taken to perform the Substantial Completion Walk-Through to receive Conditional Acceptance (Substantial Completion):
1. The Substantial Completion Walk-Through shall be performed at the completion of all revegetation operations under this contract within whole and complete portions of project areas.
 2. At the time of the Substantial Completion Walk-Through, the Contractor shall have revegetation areas free of debris. Debris and litter shall be cleaned up, and walkways, curbs, and roads shall be cleared of soil and debris.
 3. The Engineer shall identify any deficiencies in the form of a punch list. The Contractor shall address any deficiencies and verify work has been performed in compliance with the contract documents.
- B. Substantial Completion: The Owner shall issue Substantial Completion for all of the Project or segmented areas of revegetation of the Project once all revegetation operations under this contract have been completed. The Substantial Completion Walk-Through has been performed. Substantial Completion shall not be given until all deficiencies have been corrected.

Contractor may request Substantial Completion for segmented revegetation areas (only) that are installed correctly per design plans and specifications and that have no additional punch list items. Substantial Completion areas must be agreed upon by the Owner, Engineer, and Contractor. Once Substantial Completion is given for a segmented revegetation area, the Owner's preferred Maintenance Contractor (under separate contract with Owner) will begin revegetation establishment maintenance tasks.

A kick-off meeting shall be held between the Contractor, Maintenance Contractor, Owner, and Engineer before Substantial Completion is issued for any revegetation area segments of the Project. If the Contractor and Maintenance Contractor are onsite concurrently, they shall communicate to not disturb the completed work or active work zones. Any disturbance that is incurred to revegetation areas that had been granted Substantial Completion will be the responsibility of the Contractor to restore. If the Contractor has any concerns during the revegetation establishment maintenance period and the Maintenance Contractor's work, they should be communicated in writing to the Owner. If any revegetation area segments of the Project that have received Substantial Completion are damaged due to flood and/or erosion, the Contractor will be responsible for all repairs.

Substantial Completion of all other civil work (structures, earthwork, utilities, erosion control) will be given once all work, including revegetation, is completed per the plans and specifications. Substantial Completion will not be given for individual project elements of all other civil work.

- C. Final Walk-Through: The following steps will be taken to perform the Final-Walk Through to receive Final Acceptance:
1. The Final Walk-Through shall be performed at the completion of all revegetation and civil construction activity under this contract.
 2. At the time of the Final Walk-Through, the Contractor shall have the entire project area free of debris. Debris and litter shall be cleaned up, and walkways, curbs, and roads shall be cleared of soil and debris and restored to pre-project conditions.
 3. The Engineer shall identify any deficiencies in the form of a punch list. The Contractor shall address any deficiencies and work has been determined to be performed in compliance with the contract documents.
- D. Final Acceptance: The Owner shall issue Final Acceptance once Substantial Completion has been issued for all revegetation areas of the Project and the Final Walk-Through has been performed for all civil construction activity. Final Acceptance shall not be given until all deficiencies have been corrected. The Contractor shall maintain all civil work areas of the site until Final Acceptance has been issued.

Add Section 910 – Erosion and Sediment Control

910.01 Erosion and Sediment Control – Scope of Work

- A. This work shall consist of temporary measures needed to control erosion and water pollution. These temporary measures shall include, but not be limited to, berms, dikes, dams, sediment basins, fiber mats, sediment control logs, netting, gravel, mulches, grasses, slope drains and other erosion control devices or methods. These temporary measures shall be installed at the locations where needed to control erosion and water pollution during the construction of the project, and as directed by the Engineer, and as shown on the Drawings.
- B. The Erosion Control Plan presented in the Drawings serves as a minimum for the requirements of erosion control during construction. The Contractor has the ultimate responsibility for developing an adequate erosion control plan that is compatible with their plan for executing the work and for providing adequate erosion control and water quality throughout the duration of the project. Therefore, if the provided plan is not working sufficiently to protect the project areas, then Contractor shall provide additional measures as required to obtain the required protection.
- C. The Contractor shall include in his bid price for erosion control a minimum of all items shown on the Erosion Control Plan and any additional items that may be needed to control erosion and water pollution during the execution of the work.

910.02 Erosion and Sediment Control – Submittals

- A. The erosion and sediment control facilities shown on the Drawings are conceptual. The Contractor shall not install any components of the erosion and sediment control facilities by scaling dimensions from the Drawings. The Contractor shall:
1. Develop a detailed Storm Water Management Plan (SWMP) prior to construction activity.
 2. Be prepared to submit the SWMP to the Colorado Department of Public Health and Environment (CDPHE) upon request.

3. Implement the provisions of the SWMP as written and updated, from commencement of construction activity until final stabilization is complete.
 4. Retain a copy of the SWMP onsite.
 5. Apply and obtain a Construction Stormwater General Permit (COR400000) from the CDPHE prior to commencement of any construction activity.
 6. Submit a City of Colorado Springs Stormwater Management Plan (CSWMP) with the required signature blocks and signatures to the Engineer for approval.
- B. The SWMP/CSWMP shall indicate that it has been prepared for the City and the State. Permits/approvals must be obtained prior to construction. The Contractor is responsible for implementing the SWMP/CSWMP and compliance with the conditions of the Stormwater Construction Permit. The State or the Engineer may direct the Contractor to modify the SWMP during construction as conditions warrant. The Contractor shall note changes on the SWMP/CSWMP immediately as it must reflect current site conditions.

910.03 Erosion and Sediment Control – Materials

- A. Materials may include hay bales, straw, fiber mats, erosion control logs, fiber netting, wood cellulose, fiber fabric, gravel, and other suitable materials, and shall be reasonably clean, free of deleterious materials, and certified weed free. All materials shall be submitted to the Engineer for approval prior to installation.
- B. Use erosion control blankets on slopes as directed in the Drawings. Add blankets after application of mulch.
- C. Blankets used for temporary stormwater pollution, erosion and sediment control shall consist of a biodegradable (12 – 18 months) straw or coconut mat.
- D. Erosion control blanket to be applied in strips perpendicular to prevailing wind or to water flow direction. Lapping will be at least four inches (4") on sides and six inches (6") on ends and will be configured to allow wind or water flow over (not into) lapped seams.
- E. Temporary grass cover (if required) shall be a quick growing species suitable to the area, which will provide temporary cover and will not later compete with the grasses sown for permanent cover. All grass seed shall be approved by the Engineer prior to installation.
- F. Fertilizer and soil conditioners shall be approved by the Engineer prior to installation.
- G. Miscellaneous: All other material used by the Contractor for water diversion and erosion control shall be specified on a detailed Erosion and Sediment Control Plan to be completed by the Contractor and reviewed by the Engineer prior to starting work.

910.04 Erosion and Sediment Control – Construction Requirements

- A. All materials for erosion and sediment control shall be installed in accordance with these Specifications. To the extent possible, movement of construction equipment within the flowing portions of waterways should be minimized.
- B. Frequent fording of the channel should be avoided. The Contractor shall isolate or divert flows, so construction equipment, materials, and earthwork are not exposed to flow.
- C. The erosion and sediment control facilities shall be installed prior to construction and shall remain

in place throughout. The Contractor will be required to clean sediment collected in BMPs and provide other maintenance as required to the erosion and sediment control facilities during construction.

910.05 Erosion and Sediment Control – Permits and Compliance

- A. The Contractor must apply for and obtain a Construction Dewatering Permit (COG080000; CDPHE), Construction Stormwater General Permit (COR400000; CDPHE), and Grading and Erosion Control (GEC) permit from the City of Colorado Springs. Costs for permits shall be the responsibility of the Contractor. These permits require that specific actions be performed at designated times. The Contractor is legally obligated to comply with all terms and conditions of the permits including testing for effluent limitations if required by the terms of the permits.
- B. The Contractor shall allow CDPHE or other representatives to enter the site to test for compliance with the permit. Noncompliance with the permit can result in stoppage of all work.
- C. In addition to permit requirements, the Engineer shall also monitor the Contractor erosion control and work methods. If the overall function and intent of erosion control is not being met, then the Engineer shall require the Contractor to provide additional measures as required to obtain the desired results. Costs for any additional erosion control measures shall be the responsibility of the Contractor.

910.06 Erosion and Sediment Control – Stabilization of Disturbed Areas

- A. Temporary sediment control measures shall be established within five (5) days from time of exposure/disturbance. Permanent erosion protection measures shall be established within twenty-one (21) days after final grading of areas.

910.07 Erosion and Sediment Control – Protection of Adjacent Properties

- A. Properties adjacent to the site of a land disturbance shall be protected from sediment deposition. In addition to the erosion control measures required on the Drawings, perimeter controls may be required if damage to adjacent properties is likely. Perimeter controls include, but are not limited to, a vegetated buffer strip around the lower perimeter of the land disturbance, sediment barriers such as straw bales and silt fences; sediment basins; or a combination of such measures. Vegetated buffer strips may be used only where runoff in sheet flow is expected and should be at least 20 feet in width.

910.08 Erosion and Sediment Control – Sequence and Timing of Stabilization

- A. Sediment barriers, perimeter dikes, and other measures intended to either trap sediment or prevent runoff from flowing over disturbed areas must be constructed as a first step in grading and be made functional before land disturbance takes place. Earthen structures such as dams, dikes, and diversions must be stabilized within 5 days of installation. Stormwater outlets must also be stabilized prior to any upstream land disturbing activities.

910.09 Erosion and Sediment Control – Stabilization of Waterway and Outlets

- A. All on-site stormwater conveyance channels used by the Contractor for temporary erosion control purposes shall be designed and constructed with adequate capacity and protection to prevent erosion during storm and runoff events. Stabilization adequate to prevent erosion shall also be provided at the outlets of all pipes and channels.

910.10 Erosion and Sediment Control – Storm Sewer Inlet Protections

- A. All storm sewer inlets which are made operable during construction, or which drain stormwater runoff from a construction site shall be protected from sediment deposition using filters.

910.11 Erosion and Sediment Control – Crossing and Working In Waterways

- A. Construction vehicles should be kept out of watercourses. Where in-channel work is necessary, precautions must be taken to stabilize the work area during construction to minimize erosion. The channel (including bed and banks) must always be destabilized immediately after in-channel work is completed.
- B. Where a live (wet) watercourse must be crossed by construction vehicles during construction, a Temporary Stream Crossing must be provided for this purpose.

910.12 Erosion and Sediment Control – Construction Access Routes

- A. Wherever construction vehicles enter or leave a construction site, a Stabilized Construction Entrance is required.
- B. Where sediment is transported onto a public road surface, the road shall be cleaned thoroughly at the end of each day. Sediment shall be removed from roads by shoveling or sweeping and be transported to a sediment-controlled disposal area. Street washing shall be allowed only after sediment is removed in this manner.

910.13 Erosion and Sediment Control – Disposition of Temporary Measures

- A. All temporary erosion and sediment control measures shall be disposed of within 30 days after final site stabilization is achieved or after the temporary measures are no longer needed as determined by Engineer.
- B. Trapped sediment and other disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion.

910.14 Erosion and Sediment Control – Maintenance

- A. All temporary and permanent erosion and sediment control practices must be maintained and repaired as needed to assure continued performance of their intended function.

Add Section 915 – Mobilization

915.01 Mobilization – Scope of Work

- A. Mobilization shall consist of the preparatory work and operations in mobilizing for beginning work on the Project. This work shall include, but not be limited to, those operations necessary for the movement of personnel, equipment, supplies and incidentals to the Project Site, and for the establishment of temporary offices, building facilities, utilities, testing laboratories, safety equipment and first aid supplies, sanitary and other facilities, as required by these Specifications, and State and local laws and regulations. Mobilization will include all coordination and preparation required to develop an approved site specific safety plan that meets Colorado Springs Utilities requirements for the project. Mobilization will include completing a Migratory Bird Treaty Act compliant and Haul Route Plan.
- B. The contractor shall document the existing conditions of the roadway along their approved Access Route Plan before the project, note any existing defects in the roadway infrastructure, and provide their documentation to the CITY AND ENGINEER. The CITY and the CONTRACTOR shall come to an agreement about cost share for any roadway that is damaged as a result of the

construction. The CONTRACTOR will not be held responsible for damage to public roadways because of legal use of roadways from construction activity.

- C. The costs of bonds, permits and any required insurance and other pre-construction expense necessary for the start of the work, excluding the cost of construction materials, shall also be included in this section.
- D. The following table lists the anticipated permits required for the execution of this project and identifies the party responsible for obtaining each permit. The Contractor shall be responsible for obtaining all required permits regardless of their inclusion or exclusion in the table below.

Permit	Governing Agency	Responsible Party
CLOMR	Federal Emergency Management Agency (FEMA)	Owner
Floodplain Development Permit	Pikes Peak Regional Building Department (PPRBD)	Owner
State Waterway Permitting (CW-17)	Colorado Department of Public Health and the Environment (CDPHE)	Owner
Construction Dewatering COG080000	CDPHE	Contractor
Stormwater Discharge COR400000	CDPHE	Contractor
Grading, Erosion Control Permit	City of Colorado Springs	Contractor
Traffic Control Permit	City of Colorado Springs	Contractor
Air Quality Construction Activity Permit	El Paso County	Contractor

915.02 Mobilization – Migratory Bird Treaty Act Compliance

- A. If construction starts within raptor nesting season (January 15 through September 30) contractors shall schedule a site wide bird survey with a QUALIFIED BIOLOGIST seven (7) days prior to construction.
- B. If an active nest is found and is not avoidable during construction, biological monitoring will be required throughout the overlap of active construction and the active nest.
- C. If an active nest becomes abandoned as a result of construction activities, United States Fish and Wildlife Service will need to be contacted.

Add Section 920 – Water Control**920.01 Water Control – Scope of Work**

- A. The work of this section consists of controlling all sources of surface water, including but not limited to: groundwater, snow melt, continuous low flow in the channel, large channel flow from storm events, pipe outlet flows, and surface flow from adjacent areas.

920.02 Water Control – Submittals

- A. The Contractor is required to submit a detailed water control and dewatering plan for review prior to installing any components of the plan. The plan shall include detailed description and narrative for the following elements:
1. Overall site bypass/ channel water diversion including proposed pipe material and check dam structure design information.
 2. Constructed structures including but not limited: sculpted concrete structures, riprap, Hopeful Drive Box culvert improvements, South Tributary improvements, and stormwater outfall and pipe extensions.
 3. Wetlands seeps and local saturated areas within excavation areas
 4. Existing storm drain pipelines and other flows entering the channel.

920.03 Water Control – Permit

- A. Construction Activity Permit: The Contractor shall be responsible to obtain and maintain a valid Construction Activity Permit from El Paso County Public Health, Colorado.

920.04 Water Control – Materials

- A. Onsite materials may be used within the limits of construction to construct temporary dams and berms. Other materials such as plastic sheeting, sandbags, and storm sewer pipe may also be used if desired by the Contractor.

920.05 Water Control – Execution: General

- A. For all excavation, the Contractor shall provide suitable equipment and labor to remove water and ice and keep the excavation dewatered so that construction can be completed in dry conditions where required by the Drawings and Specifications.
- B. Water control shall be accomplished such that no damage is done to adjacent channel banks, structures, and utilities.
- C. The Contractor is responsible for investigating and familiarizing himself with all site conditions that may affect the work including surface water; level of groundwater and the time of year the work is to be done.
- D. All excavations made as part of dewatering operations shall be backfilled with the same type of material (except where replacement by other materials and/or methods are required) that was removed and compacted to ninety-five percent (95%) of maximum Modified Proctor dry density (ASTM D1557) at \pm two percent (2%) optimum moisture content.

920.06 Water Control – Execution: Surface Water Control

- A. Surface water control is generally categorized as:
1. Normal low flows along the channel.
 2. Storm/flood flows along the channel.
 3. Flows from existing storm drain pipelines and other flows entering the channel.
 4. Local surface inflows not conveyed by pipelines.
- B. The Contractor shall coordinate, evaluate, design, construct, and maintain temporary water conveyance systems. These systems shall not worsen flooding, increase the potential for erosion, or worsen flow characteristics during construction. The Contractor is responsible to ensure that any such worsening of flooding or erosion potential does not occur.
- C. At a minimum, the Contractor will be responsible for diverting surface flow around the construction area so that the excavation for the concrete, shotcrete and grouted boulder channel remain free of surface water and ice for the time it takes to install these materials, and the time required for curing of any concrete and grout. It shall be the Contractor's responsibility to determine the quantity of water which shall be diverted to protect all work and adjacent properties from potential damage caused by stormwater. The Contractor will be responsible for all repairs required due to flood and erosion damage.
- D. The Contractor shall always maintain a flow path for the channel flow. Temporary structures such as berms, sandbags, pipeline diversions, etc. may be permitted for the control of channel flow, if such measures are not a major obstruction to flood flows, do not worsen flooding, and do not increase the potential for erosion affecting adjacent private property.

920.07 Water Control – Execution: Groundwater Control

- A. Groundwater may be encountered in excavation activities within the project. If groundwater is encountered, it will need to be temporarily lowered to construct portions of the improvements.
- B. The Contractor shall install adequate measures to maintain the level of groundwater below the foundation subgrade elevation and maintain sufficient bearing capacity for the concrete structures, pipelines, earthwork, and rockwork. Such measures may include, but are not limited to:
1. Installation of perimeter sub drains
 2. Pumping from drilled holes
 3. Pumping from sumps excavated below the subgrade elevation.
- C. The foundation bearing surfaces are to be kept dewatered and stable until the structures or other types of work are complete and backfilled. Disturbance of foundation subgrade by Contractor operations shall not be considered as originally unsuitable foundation subgrade and shall be repaired at Contractor's expense.
- D. Any temporary dewatering trenches or well points shall be restored following dewatering operations to reduce permeability in those areas as approved by the Owner.

Add Section 925 – Clearing and Grubbing***925.01 Clearing and Grubbing – Scope of Work***

- A. This work consists of clearing, grubbing, removing, and disposing of vegetation and debris within the limits of the project site as shown on the Drawings and as required by the Work. Vegetation and objects designated to remain shall be preserved free from injury or defacement.

925.02 Clearing and Grubbing – Submittals

- A. The Contractor is required to submit a detailed clearing and grubbing plan that includes a phased plan how they will be clearing, grubbing, removing, and disposing of vegetation and debris within the limits. Additionally, the contractor shall include a plan for any vegetation (willows, trees, shrubs, etc.) that obtain injury and defacement by equipment during the construction period.

925.03 Clearing and Grubbing – Execution

- A. All trees located within the project limits as shown on the plans are to be removed, unless otherwise specified on the plans or by the Owner.
- B. Trees to be removed shall be marked by the Contractor and approved by the Owner prior to removal.
- C. Any object including trees, shrubs, plants, not designated for removal by the Owner, that are damaged shall be repaired or replaced as directed by the Owner, at the Contractor's expense.
- D. All surface objects, trees, stumps, roots, and other protruding obstructions not designated to remain shall be cleared and grubbed, including mowing, as required. Undisturbed stumps, roots, and nonperishable solid objects located two feet or more below sub grade or embankment slope may remain in place.
- E. Except in areas to be excavated, all holes resulting from the removal of obstructions shall be backfilled with suitable material and compacted in accordance with the Standard Specifications.
- F. All cleared timber shall be removed from the project and shall become the property of the Contractor. Branches on trees or shrubs shall be removed as directed. All trimming shall be done in accordance with good tree surgery practices as recommended by City Parks and Recreation Department.
- G. The Contractor shall scalp the areas within the excavation or embankment grading limits. Scalping shall include the removal from the ground surface of sawdust, and other vegetation matter.

Add Section 970 – Soil Prep, Topsoil, Compost, and Soil Conditioner**970.01 Soil Prep, Topsoil, Compost, and Soil Conditioner – Scope of Work**

- A. This work consists of off-site available sources and on-site topsoil to place on designated areas.
- B. It shall include the placing of topsoil upon constructed cut and fill slopes after grading slope construction operations are completed.
- C. Topsoil shall be placed to a depth of nine inches (9") on all disturbed areas, excluding drop structures and the flat channel bottom.
- D. Topsoil is to be included at elevated bench sections of the channel bottom.
- E. Quantities of soil conditioner shown on plans and cost estimates are for bidding estimations only. Final compost amendment and/or soil conditioner application rate is based on soil fertility testing results and recommendations.
- F. Native seed areas shall receive Soil Conditioners when compost amendment is deemed impractical by the Engineer. Areas that receive the Channel Seed Mix shall not receive Soil Conditioners or Soil Amendments.

970.02 Soil Prep, Topsoil, Compost, and Soil Conditioner – Submittals

- A. The Contractor shall submit information for a state accredited soil testing laboratory information that will be used for all topsoil and soil conditioner testing. The Contractor shall provide information on the soil properties and nutrient testing to be reported from the proposed laboratory and their estimated testing review timeline.

970.03 Soil Prep, Topsoil, Compost, and Soil Conditioner – Materials: Topsoil

- A. Topsoil must consist of loose friable soil, a loamy texture, with balanced proportions of sand, silt, and clay. Topsoil shall be from the zone of major root development and free of subsoil, refuse, stumps, woody roots, rocks, brush, noxious weed seed, and reproductive plant parts from current state and county weed lists, heavy clay, hard clods, toxic substances, or other material which would be detrimental to its use on the project.
- B. Soil Conditioning
 - 1. After soil preparation has been completed and high and low spots graded, add soil amendments as indicated below and rototill, making repeated passes with the cultivator to the depth specified until the amendments have been thoroughly mixed. The application of soil conditioners and rates shall be finalized based on soil fertility testing as indicated in the design plans. For planning purposes, the application rates and type of conditioners shall be:
 - a. Organic Compost Soil Amendment shall be applied at a rate of three cubic yards (3 cy) per one-thousand square feet (1000 sf) or as shown on the Drawings and incorporated into the top 9 inches (9") of soil prior to seeding.
 - b. Humate Soil Conditioner shall be applied to topsoil topically at a rate of two-hundred and fifty pounds (250 lbs) per one acre (1 ac) prior to seeding.
 - c. No Soil Amendment or Soil Conditioner shall be applied to areas receiving the Channel Seed Mix.
- D. Topsoil Testing Requirements
 - 1. After rough grading has been completed, a minimum of four (4) composite soil samples shall be collected by the Engineer or Ecologist and submitted for soil fertility

and texture testing prior to application of soil conditioner or amendment and installation of seed. One (1) sample shall be taken from the topsoil stockpile, one (1) sample shall be taken from the Upland Seed Mix area subsoils, one (1) sample shall be taken from the Riparian Transitional Seed Mix area, and one (1) sample shall be taken from the shallow bed rock area. Contractor shall indicate topsoil stockpile or placement locations to the Engineer or Ecologist prior to sampling. Soil samples shall be collected to a minimum depth of six inches (6"). Each composite soil sample must include a minimum of four (4) grab samples that are representative of the sampling area. Grab samples shall be combined to form each composite sample. All samples shall be labeled with the collection date and a unique soil sample identifier that correlates to a location marked on the site plan.

2. Based on test results, the Engineer shall provide recommendations for soil treatments, amendments, and conditioners to be incorporated to produce a soil suitable for healthy viable plant growth for the species indicated in the contract documents.
- E. Topsoil required characteristics:
1. Soil reaction (pH): 6.5 – 7.8
 2. Organic Matter Content: 1-3%
 3. Cation exchange capacity: 10-30 meq/100g
 4. Soluble Salt Content (conductivity): <0.8 mmhos/cm for soil: water ratio of 1:2
 5. Nitrogen: 5-15 ppm
 6. Phosphorus: 10 – 15 ppm (Olson bicarbonate method); 20 – 30 ppm (Mehlich III method)
 7. Potassium: 100 – 200 ppm
 8. Magnesium: 60 - 300 ppm
 9. Sulfur: 5.0 20 ppm
 10. Zinc: 1.0 – 3.0 ppm
- F. Topsoil must be imported from a known source and one location. To reduce the potential damage of extra handling and temporary storage on undisturbed land, imported topsoil should be stockpiled in the existing staging areas or applied to the revegetation area immediately following delivery.
- G. Alternative topsoil characteristics may be substituted with prior approval from the Engineer.

970.04 Soil Prep, Topsoil, Compost, and Soil Conditioner – Materials: Compost

- A. Compost shall be Class A as defined by CFR Title 40, Part 503 or Class I compost material consisting of aged organic matter, free of weed or other noxious plant seeds, lumps, stones, or other foreign contaminants harmful to plant life, and having the following characteristics based on a nutrient test performed no longer than three (3) months prior to its incorporation into the project.
- B. Compost Testing Requirements
 1. Samples for testing must be taken from the same source that will be used for this project.

2. Lab test shall be taken a maximum of six (6) months prior to application.

C. Organic Compost required characteristics:

1. pH Range: 6.0 – 8.4
2. Soluble Salt Concentrations: 0 - 3 mmhos/cm
3. Moisture Content: 35% - 60%, wet weight basis
4. Organic Matter Content: 30% – 70%.
5. Particle Size: Pass through one inch (1") screen or smaller – 100%. Pass through one half inch (1/2") screen – 95%
6. Man-made inert contamination: <1%, dry weight basis
7. Stability: < 8 mg CO₂, - C per g TS per day
8. Maturity/Seedling Vigor: > 80%

970.05 Soil Prep, Topsoil, Compost, and Soil Conditioner – Materials: Soil Conditioner

A. Soil Conditioner - Humate characteristics:

1. Humic Acids > 50%
2. Organic Matter > 85%
3. pH: 3.4, maximum.
4. Nitrogen: 1%
5. Phosphorus P₂O₅ < 0.1%
6. Potassium K₂₀ < 0.1%
7. Mountain peat, aspen humus, gypsum, and sand will not be accepted.

970.06 Soil Prep, Topsoil, Compost, and Soil Conditioner – Execution

A. Topsoil Salvage, Stockpile, and Placement

1. Topsoil within the limits of the project area shall be salvaged prior to beginning hauling, excavating, or fill operations by excavating and stockpiling the material at designated locations in a manner that will facilitate measurement, minimize sediment damage, and not obstruct natural drainage.
2. Topsoil stockpiles shall not exceed a height of ten feet (10') to preserve soil microbes.
3. Stockpiled topsoil shall be treated for any weeds that may start to grow. The stockpile shall be ripped/turned as necessary to maintain the inherent organic material present in the soil from drying due to compaction.
4. Topsoil shall be placed directly upon completed cut and fill slopes whenever conditions and the progress of construction will permit.

5. Topsoil shall be placed on all disturbed areas to a depth of nine inches (9").
6. Topsoil shall not be placed when subsoil is frozen or saturated.
7. Imported topsoil shall conform to the characteristics described in **Section 970.03**.

B. Soil Preparation

1. **Weed and Debris Removal:** All ground areas to be planted shall be cleaned of all weeds and debris prior to any soil preparation or grading work. Any growing noxious weeds on the site shall be pretreated with approved herbicide prior to grading. Annual or biennial weeds over two feet (2') tall shall be mowed, raked, and removed prior to grading. Weeds and debris shall be disposed of off the site.
2. **Moisture Content:** Soil shall not be worked when moisture content is so great that excessive compaction occurs, nor when it is so dry that dust will form in the air or clods will not break readily. Water shall be applied, if necessary, to bring soil to an optimum moisture content for tilling and planting.
3. Prior to spreading topsoil and seeding at all areas to be landscaped except areas that receive the Channel Seed Mix, including staging areas and access routes, thoroughly rip to a minimum depth of twelve inches (12") all disturbed areas with an agricultural ripper. Soil shall be decompacted to a field soil penetrometer test resistance between 75 - 125 psi. If field decompaction tests indicate the required decompaction has not been obtained, soils should be decompacted to the required percent compaction before placement of topsoil. The use of excavator tines for ripping shall not be acceptable. The soil shall be ripped in rows perpendicular to the flow of water across side slopes. If depth is not possible, notify the Engineer. Soils shall be worked until no clods greater than four inches (4") in diameter remain, unless directed otherwise by Engineer. Remove rocks and other objects three inches (3") or greater in any dimension.
4. The Engineer shall inspect the decompacted soils and ensure material decompaction depths as described within and approve the material.
5. **Repair of Re-compacted Soils:** After decompaction has taken place, any soil that becomes re-compacted due to construction activity shall be decompacted again, unless it is in an area that will receive the Channel Seed Mix.
6. After soil preparation has been completed and high and low spots graded, add compost and rototill, making repeated passes with the cultivator to a 9" depth until the amendments have been thoroughly mixed. The application of compost and rates shall be finalized based on soil fertility testing as indicated in the design plans.
7. Soil conditioner shall be topically applied prior to seeding at a rate as shown on the Drawings.

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 material for this City project.

Revisions to City of Colorado Springs Signage and Pavement Markings Guidelines Supplement to the Manual on Uniform Traffic Control Devices

Page 4, General Notes, delete note #8 and replace with the following:

8. All traffic signs shall have a minimum of High Intensity sheeting that meets the requirements of Type III sheeting per ASTM D4956.

Page 5, General Notes, is revised to include the following:

16. Class I sign panels are those that have horizontal and vertical dimensions less than 36 inches. Class I sign panels shall be single sheet aluminum with a minimum thickness of 0.080 (eight hundredths of an) inch.
17. Class II sign panels are those with a horizontal or vertical dimension equal to or greater than 36 inches. Class II sign panels shall be single sheet aluminum with a minimum thickness of 0.100 (one tenth of an) inch.
18. Aluminum used for sign panels shall meet the material requirements of Section 713.02 of the CDOT Standard Specifications.
19. Backing zees shall meet the material requirements and attachment methods of CDOT Standard Plan S-614-3. All exposed fastener heads on the faces of panels with backing zees shall be covered with material matching the background of the panel.
20. All sign panels that share a post shall be the same type. If one panel requires backing zees, backing zees shall be required on all panels that share the same post. Street name panels that attach to the top of a post are excluded from this requirement.
21. Bolts, nuts, and washers shall be galvanized or cadmium-plated.
22. All sign panels shall be identified with the month and year that the sign was manufactured. The date shall be located on the lower right side of the back of the sign panel and be approximately ¼ inch high. The date shall be stamped or adhered onto the sign panel material for a permanent record.
23. The Contractor shall provide sign panel legends for standard signs in accordance with the Standard Highway Signs published by FHWA and the Colorado Supplement thereto, and sign panel legends for special signs in accordance with the detailed sign layouts shown in the plans.
24. This document shall be interpreted as "Specifications" that are contractually binding and not optional despite the word "Guidelines" in the title.
25. Vertical spacing between panels that share the same post and type of mount shall be 1 inch to 1.5 inch.

**SCHEDULE G – CLAUSES FOR CONTRACTS SUBJECT TO FEDERAL REQUIREMENTS
FOLLOWS THIS PAGE**

SCHEDULE G - CLAUSES FOR CONTRACTS SUBJECT TO FEDERAL REQUIREMENTS

1. EQUAL EMPLOYMENT OPPORTUNITY

To view the City of Colorado Springs EEOP (Equal Employment Opportunity Plan) Utilization Report, the link is www.coloradosprings.gov/eeop.

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, color, religion, sex, 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, color, religion, sex, or national origin. such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

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 considerations for employment without regard to race, color, religion, sex, or national origin.

C. The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

D. The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

E. The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

F. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

G. The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding

upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: *Provided, however*, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

H. Subcontracts. Each nonexempt prime contractor or subcontractor shall include the equal opportunity clause in each of its nonexempt subcontracts.

I. Incorporation by reference. The equal opportunity clause may be incorporated by reference in all Government contracts and subcontracts, including Government bills of lading, transportation requests, contracts for deposit of Government funds, and contracts for issuing and paying U.S. savings bonds and notes, and such other contracts and subcontracts as the Deputy Assistant Secretary may designate.

J. Incorporation by operation of the order. By operation of the order, the equal opportunity clause shall be considered to be a part of every contract and subcontract required by the order and the regulations in this part to include such a clause whether or not it is physically incorporated in such contracts and whether or not the contract between the agency and the contractor is written.

K. Adaptation of language. Such necessary changes in language may be made in the equal opportunity clause as shall be appropriate to identify properly the parties and their undertakings. [43 FR 49240, Oct. 20, 1978, as amended at 62 FR 66971, Dec. 22, 1997]

2. EQUAL EMPLOYMENT OPPORTUNITY REPORTS AND OTHER REQUIRED INFORMATION

A. Requirements for prime contractors and subcontractors.

1. Each prime contractor and subcontractor shall file annually, on or before the September 30, complete and accurate reports on Standard Form 100 (EEO-1) promulgated jointly by the Office of Federal Contract Compliance Programs, the Equal Employment Opportunity Commission and Plans for Progress or such form as may hereafter be promulgated in its place if such prime contractor or subcontractor (i) is not exempt from the provisions of these regulations in accordance with § 60-1.5; (ii) has 50 or more employees; (iii) is a prime contractor or first tier subcontractor; and (iv) has a contract, subcontract or purchase order amounting to \$50,000 or more or serves as a depository of Government funds in any amount, or is a financial institution which is an issuing and paying agent for U.S. savings bonds and savings notes: *Provided*, That any subcontractor below the first tier which performs construction work at the site of construction shall be required to file such a report if it meets requirements of paragraphs (a)(1) (i), (ii), and (iv) of this section.

2. Each person required by § 60-1.7(a)(1) to submit reports shall file such a report with the contracting or administering agency within 30 days after the award to him of a contract or subcontract, unless such person has submitted such a report within 12 months preceding the date of the award. Subsequent reports shall be submitted annually in accordance with § 60-1.7(a)(1), or at such other intervals as the Deputy Assistant

Secretary may require. The Deputy Assistant Secretary may extend the time for filing any report.

3. The Deputy Assistant Secretary or the applicant, on their own motions, may require a contractor to keep employment or other records and to furnish, in the form requested, within reasonable limits, such information as the Deputy Assistant Secretary or the applicant deems necessary for the administration of the order.

4. Failure to file timely, complete and accurate reports as required constitutes noncompliance with the prime contractor's or subcontractor's obligations under the equal opportunity clause and is ground for the imposition by the Deputy Assistant Secretary, an applicant, prime contractor or subcontractor, of any sanctions as authorized by the order and the regulations in this part.

B. Requirements for bidders or prospective contractors—

1. Certification of compliance with Part 60-2: Affirmative Action Programs. Each agency shall require each bidder or prospective prime contractor and proposed subcontractor, where appropriate, to state in the bid or in writing at the outset of negotiations for the contract: (i) Whether it has developed and has on file at each establishment affirmative action programs pursuant to Part 60-2 of this chapter; (ii) whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; (iii) whether it has filed with the Joint Reporting Committee, the Deputy Assistant Secretary or the Equal Employment Opportunity Commission all reports due under the applicable filing requirements.

2. Additional information. A bidder or prospective prime contractor or proposed subcontractor shall be required to submit such information as the Deputy Assistant Secretary requests prior to the award of the contract or subcontract. When a determination has been made to award the contract or subcontract to a specific contractor, such contractor shall be required, prior to award, or after the award, or both, to furnish such other information as the applicant or the Deputy Assistant Secretary requests.

C. Use of reports. Reports filed pursuant to this section shall be used only in connection with the administration of the order, the Civil Rights Act of 1964, or in furtherance of the purposes of the order and said Act.[43 FR 49240, Oct. 20, 1978, as amended at 62 FR 66971, Dec. 22, 1997]

3. RESERVED

4. CONTRACT WORK HOURS AND SAFETY STANDARDS (from FAR 52.222-4)

The term "Contracting Officer" herein shall refer to the City of Colorado Springs Contracting Specialist assigned to this contract.

The term "Government" herein shall refer to the City of Colorado Springs and any interested federal or state entity.

A. Overtime requirements. No Contractor or subcontractor employing laborers or mechanics (see Federal Acquisition Regulation 22.300) shall require or permit them to work over 40 hours

in any workweek unless they are paid at least 1 and 1/2 times the basic rate of pay for each hour worked over 40 hours.

B. Violation; liability for unpaid wages; liquidated damages. The responsible Contractor and subcontractor are liable for unpaid wages if they violate the terms in paragraph (a) of this clause. In addition, the Contractor and subcontractor are liable for liquidated damages payable to the Government. The Contracting Officer will assess liquidated damages at the rate of \$10 per affected employee for each calendar day on which the employer required or permitted the employee to work in excess of the standard workweek of 40 hours without paying overtime wages required by the Contract Work Hours and Safety Standards statute (found at 40 U.S.C. chapter 37).

C. Withholding for unpaid wages and liquidated damages. The Contracting Officer will withhold from payments due under the contract sufficient funds required to satisfy any Contractor or subcontractor liabilities for unpaid wages and liquidated damages. If amounts withheld under the contract are insufficient to satisfy Contractor or subcontractor liabilities, the Contracting Officer will withhold payments from other Federal or federally assisted contracts held by the same Contractor that are subject to the Contract Work Hours and Safety Standards statute

D. Payrolls and basic records.

1. The Contractor and its subcontractors shall maintain payrolls and basic payroll records for all laborers and mechanics working on the contract during the contract and shall make them available to the Government until 3 years after contract completion. The records shall contain the name and address of each employee, social security number, labor classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. The records need not duplicate those required for construction work by Department of Labor regulations at 29 CFR 5.5(a)(3) implementing the Construction Wage Rate Requirements statute.

2. The Contractor and its subcontractors shall allow authorized representatives of the Contracting Officer or the Department of Labor to inspect, copy, or transcribe records maintained under paragraph (d)(1) of this clause. The Contractor or subcontractor also shall allow authorized representatives of the Contracting Officer or Department of Labor to interview employees in the workplace during working hours.

E. Subcontracts. The Contractor shall insert the provisions set forth in paragraphs (a) through (d) of this clause in subcontracts that may require or involve the employment of laborers and mechanics and require subcontractors to include these provisions in any such lower tier subcontracts. The Contractor shall be responsible for compliance by any subcontractor or lower-tier subcontractor with the provisions set forth in paragraphs (a) through (d) of this clause.

5. CLEAN AIR ACT

By signing this Contract, the Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA). Further, the Contractor agrees to include this clause in all subcontracts in excess of \$150,000.

6. DEBARMENT AND SUSPENSION

By signing this Contract, the Contractor certifies to the best of its knowledge and belief that it and its principals:

- A. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- B. Have not within a three year period preceding this proposal 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, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, falsification or destruction of records, making false statements, or receiving stolen property;
- C. Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
- D. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

7. BYRD ANTI-LOBBYING AMENDMENT

By signing this Contract, the Contractor certifies that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Further, the Contractor certifies that it has not engaged in lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. The Contractor must require the same certification from all subcontractors with subcontracts valued in excess of \$100,000 under this Contract.

8. SMALL BUSINESS REQUIREMENTS

The Contractor must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible.

Affirmative steps must include:

- A. Placing qualified small and minority businesses and women's business enterprises on subcontract solicitation lists.
- B. Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources for subcontracting.
- C. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises.

D. Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises.

E. Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

9. PROCUREMENT OF RECOVERED MATERIALS

The Contractor must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired by the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

10. ANTI-KICKBACK PROCEDURES

A. Definitions.

1. "Kickback," as used in this clause, means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided to any prime Contractor, prime Contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a subcontract relating to a prime contract.
2. "Person," as used in this clause, means a corporation, partnership, business association of any kind, trust, joint-stock company, or individual.
3. "Prime contract," as used in this clause, means a contract or contractual action entered into by the United States for the purpose of obtaining supplies, materials, equipment, or services of any kind.
4. "Prime Contractor" as used in this clause, means a person who has entered into a prime contract with the United States.
5. "Prime Contractor employee," as used in this clause, means any officer, partner, employee, or agent of a prime Contractor.
6. "Subcontract," as used in this clause, means a contract or contractual action entered into by a prime Contractor or subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind under a prime contract.
7. "Subcontractor," as used in this clause,
 - a. Means any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a

prime contract or a subcontract entered into in connection with such prime contract, and

b. Includes any person who offers to furnish or furnishes general supplies to the prime Contractor or a higher tier subcontractor.

8. "Subcontractor employee," as used in this clause, means any officer, partner, employee, or agent of a subcontractor.

B. The 41 U.S.C. chapter 87, Kickbacks, prohibits any person from --

1. Providing or attempting to provide or offering to provide any kickback;
2. Soliciting, accepting, or attempting to accept any kickback; or
3. Including, directly or indirectly, the amount of any kickback in the contract price charged by a prime Contractor to the United States or in the contract price charged by a subcontractor to a prime Contractor or higher tier subcontractor.

C. The Contractor shall have in place and follow reasonable procedures designed to prevent and detect possible violations described in paragraph (b) of this clause in its own operations and direct business relationships.

When the Contractor has reasonable grounds to believe that a violation described in paragraph (b) of this clause may have occurred, the Contractor shall promptly report in writing the possible violation. Such reports shall be made to the inspector general of the contracting agency, the head of the contracting agency if the agency does not have an inspector general, or the Attorney General.

The Contractor shall cooperate fully with any Federal agency investigating a possible violation described in paragraph (b) of this clause.

The Contracting Officer may

1. offset the amount of the kickback against any monies owed by the United States under the prime contract and/or
2. direct that the Prime Contractor withhold from sums owed a subcontractor under the prime contract the amount of the kickback. The Contracting Officer may order that monies withheld under subdivision (c)(4)(ii) of this clause be paid over to the Government unless the Government has already offset those monies under subdivision (c)(4)(i) of this clause. In either case, the Prime Contractor shall notify the Contracting Officer when the monies are withheld.

The Contractor agrees to incorporate the substance of this clause, including subparagraph (c)(5) but excepting subparagraph (c)(1), in all subcontracts under this contract which exceed \$150,000.

11. ENERGY EFFICIENCY IN ENERGY CONSUMING PRODUCTS

A. Definition. As used in this clause--

1. “Energy-efficient product”—

a. Means a product that—

- i. Meets Department of Energy and Environmental Protection Agency criteria for use of the Energy Star trademark label; or
- ii. Is in the upper 25 percent of efficiency for all similar products as designated by the Department of Energy’s Federal Energy Management Program.

2. The term “product” does not include any energy-consuming product or system designed or procured for combat or combat-related missions (42 U.S.C. 8259b).

B. The Contractor shall ensure that energy-consuming products are energy efficient products (i.e., ENERGY STAR® products or FEMP-designated products) at the time of contract award, for products that are—

1. Delivered.

2. Acquired by the Contractor for use in performing services at a Federally controlled facility.

3. Furnished by the Contractor for use by the Government.

4. Specified in the design of a building or work, or incorporated during its construction, renovation, or maintenance.

C. The requirements of paragraph (b) apply to the Contractor (including any subcontractor) unless:

1. The energy-consuming product is not listed in the ENERGY STAR® Program or FEMP; or

2. Otherwise approved in writing by the Contracting Officer.

D. Information about these products is available for—

1. ENERGY STAR® at <http://www.energystar.gov/products>; and

2. FEMP at http://www1.eere.energy.gov/femp/procurement/eep_requirements.html.

12. BUY AMERICAN—CONSTRUCTION MATERIALS

A. Definitions. As used in this clause—

1. “Commercially available off-the-shelf (COTS) item”—

a. Means any item of supply (including construction material) that is—

- i. A commercial item (as defined in paragraph (1) of the definition at FAR [2.101](#));
 - ii. Sold in substantial quantities in the commercial marketplace; and
 - iii. Offered to the Government, under a contract or subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace; and
 - b. Does not include bulk cargo, as defined in [46 U.S.C. 40102\(4\)](#), such as agricultural products and petroleum products.
- 2. “Component” means an article, material, or supply incorporated directly into a construction material.
- 3. “Construction material” means an article, material, or supply brought to the construction site by the Contractor or a subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.
- 4. “Cost of components” means—
 - a. For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the construction material (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or
 - b. For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the construction material.
- 5. “Domestic construction material” means—
 - a. An unmanufactured construction material mined or produced in the United States;
 - b. A construction material manufactured in the United States, if—
 - i. The cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic.
 - b. The construction material is a COTS item.

6. "Foreign construction material" means a construction material other than a domestic construction material.

7. "United States" means the 50 States, the District of Columbia, and outlying areas.

a. Domestic preference.

i. This clause implements [41 U.S.C. chapter 83](#), Buy American, by providing a preference for domestic construction material. In accordance with [41 U.S.C. 1907](#), the component test of the Buy American statute is waived for construction material that is a COTS item. (See FAR [12.505\(a\)\(2\)](#)). The Contractor shall use only domestic construction material in performing this contract, except as provided in paragraphs (b)(2) and (b)(3) of this clause.

ii. This requirement does not apply to information technology that is a commercial item or to the construction materials or components listed by the Government as follows:

b. The Contracting Officer may add other foreign construction material to the list in paragraph (b)(2) of this clause if the Government determines that—

i. The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the requirements of the Buy American statute is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;

ii. The application of the restriction of the Buy American statute to a particular construction material would be impracticable or inconsistent with the public interest; or

iii. The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

8. Request for determination of inapplicability of the Buy American statute.

a. Any Contractor request to use foreign construction material in accordance with paragraph (b)(3) of this clause shall include adequate information for Government evaluation of the request, including—

i. A description of the foreign and domestic construction materials

ii. Unit of measure

iii. Quantity

iv. Price

v. Time of delivery or availability

vi. Location of the construction project

vii. Name and address of the proposed supplier

viii. A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

b. A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.

(iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

(iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.

(2) If the Government determines after contract award that an exception to the Buy American statute applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(3)(i) of this clause.

(3) Unless the Government determines that an exception to the Buy American statute applies, use of foreign construction material is noncompliant with the Buy American statute.

(d) Data. To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

FOREIGN AND DOMESTIC CONSTRUCTION MATERIALS PRICE COMPARISON

Construction Material Description	Unit of Measure	Quantity	Price (Dollars)*
Item 1:			
Foreign construction material	_____	_____	_____
Domestic construction material	_____	_____	_____
Item 2:			
Foreign construction material	_____	_____	_____
Domestic construction material			

[List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.]

[Include other applicable supporting information.]

[* Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).]

13. INFRASTRUCTURE INVESTMENT AND JOBS ACT, BUILD AMERICA, BUY AMERICA

THIS SECTION ONLY APPLIES TO PROJECTS THAT HAVE A TOTAL COST OF \$250,000

OR MORE AND THAT INCLUDE THE USE OF IRON OR STEEL.

Recipients of an award of Federal financial assistance from a program for infrastructure are hereby notified that none of the funds provided under this Agreement may be used for a project for infrastructure unless:

A. All iron and steel used in the PROJECT are produced in the United States--this means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

B. All manufactured products used in the PROJECT are produced in the United States—this means the manufactured product was manufactured in the United States; and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation.

C. All construction materials (excludes cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives) are manufactured in the United States—this means that all manufacturing processes for the construction material occurred in the United States.

D. The Buy America preference only applies to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does a Buy America preference apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project but are not an integral part of the structure or permanently affixed to the infrastructure project.

E. Definitions:

“Construction materials” includes an article, material, or supply—other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives 46—that is or consists primarily of:

1. Non-ferrous metals
2. Plastic and polymer-based products (including polyvinyl/chloride, composite building materials, and polymers used in fiber optic cables)
3. Glass (including optic glass)
4. Lumber; or drywall

F. Subrecipient Agreements

Contractors and their subcontractors who apply or bid for an award for an infrastructure project subject to the domestic preference requirement in the Build America, Buy America Act (BABAA) shall file the required certification to the City with each bid or offer for an infrastructure project, unless a domestic preference requirement is waived by the federal awarding agency. Contractors and subcontractors certify that no federal financial assistance funding for infrastructure projects will be provided unless all the iron, steel, manufactured projects, and construction materials used in the project are produced in the United States. BABAA, Pub. L. No. 117-58, §§ 70901-52. Contractors and subcontractors shall also disclose any use of federal financial assistance for infrastructure projects that do not ensure compliance with BABAA domestic preference requirement. Such disclosures shall be forwarded to City who in turn will forward the disclosures to the federal awarding agency; subrecipients will forward disclosures to the City, who will in turn forward the disclosures to the federal awarding agency.

**SCHEDULE H – CONSTRUCTION PLAN SET
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SCHEDULE I – UTILITY PLAN SET

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SCHEDULE J – GEC PLANS

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SCHEDULE K – DESIGN REPORT

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