City of Evans, Colorado

If you would like to address City Council, please place your name on the sign-up sheet located at the back of the council room. You will be recognized to speak during the "audience participation" portion of the agenda.

AGENDA

Regular Meeting

September 06, 2016 - 7:30 p.m.

City Council meeting packets are prepared several days prior to the meetings. This information is reviewed and studied by the Councilmembers, eliminating lengthy discussions to gain basic understanding. Timely action and short discussion on agenda items does not reflect lack of thought or analysis. An informational packet is available for public inspection on our website at www.cityofevans.org and posted immediately on the bulletin board adjacent to the Council Chambers.

1. CALL TO ORDER

2. PLEDGE

3. ROLL CALL

Mayor:	John Morris
Mayor Pro-Tem:	Brian Rudy
Council:	Mark Clark
	Sherri Finn
	Lance Homann
	Jay Schaffer
	Laura Speer

4. RECOGNITIONS
   A. Recognizing Evans City Manager Aden Hogan

5. AUDIENCE PARTICIPATION

   The City Council welcomes you here and thanks you for your time and concerns. If you wish to address the City Council, this is the time set on the agenda for you to do so. When you are recognized, please step to the podium, state your name and address then address City Council. Your comments will be limited to two (2) minutes. The City Council may not respond to your comments this evening, rather they may take your comments and suggestions under advisement and your questions may be directed to the appropriate staff person for follow-up. Thank you!

6. APPROVAL OF AGENDA

7. CONSENT AGENDA
   A. Approval of Minutes of the Regular Meeting of August 16, 2016
   B. Appointment of Evans City Council Member Laura Speer to the Citizens Transportation Advisory Board (CTAB)

8. NEW BUSINESS
    A. Lease Termination with Evans Fire Protection District
    B. Award of Bid – Flood Repairs to 49th Street, Brantner Road, and Industrial Parkway
    C. Award of Bid – 49th Street Resurfacing Project
    D. Award of Contract – Executive Search Firm for City Manager Recruitment

9. REPORTS
    A. City Manager
    B. City Attorney

10. AUDIENCE PARTICIPATION (general comments)
    Please review the Audience Participation section listed at the beginning of the agenda for procedures on addressing City Council.

11. EXECUTIVE SESSION
    A. To Determine Positions Relative to Matters that May Be Subject to Negotiations, Developing Strategy for Negotiations, and Instructing Negotiators, Pursuant to C.R.S. 24-6-402(4)(e)

12. ADJOURNMENT

CITY OF EVANS – MISSION STATEMENT

"To deliver sustainable, citizen-driven services for the health, safety, and welfare of the community."

It is the policy of the City of Evans that all programs and activities shall be accessible to, and usable by, persons with disabilities. Persons needing assistance shall contact the Safety & Risk Management Specialist at the City of Evans. Please provide three to five business day's advance notice so we can adequately meet your needs.

COUNCIL COMMUNICATION

DATE: September 06, 2016

AGENDA ITEM: **7.A**

SUBJECT: Approval of the Minutes August 16th City Council Meeting

PRESENTED BY: City Clerk

AGENDA ITEM DESCRIPTION:

Approval of minutes.

FINANCIAL SUMMARY:

N/A

RECOMMENDATION:

N/A

SUGGESTED MOTIONS:

"I move to approve the minutes as presented."

MINUTES
EVANS CITY COUNCIL
August 16, 2016

CALL TO ORDER

Mayor Morris called the meeting to order at 7:40 p.m.

PLEDGE

ROLL CALL

Present: Mayor Morris, Mayor Pro-Tem Rudy, Council Members: Finn, Homann, Schaffer, and Speer

Absent: Council Member Clark

RECOGNITIONS

A. City Manager Recognizing the A.C.E. Program Interns

Aden Hogan, City Manager, and Raul Rodriguez, Safety and Risk Management Specialist/ADA Coordinator, introduced the A.C.E Interns and presented them with awards. Mr. Hogan and Mr. Rodriguez discussed the program and presented an award to the Mayor on behalf of the City for excelling at the program. They also presented awards to the following staff for mentoring the interns: Dawn Anderson, Jacque Troudt, Kevin Aoki, Raegan Robb, and Scott Sandridge.

AUDIENCE PARTICIPATION

Steve Bernardo, from Grapevine Hollow, spoke about the City's Consolidated Waste Water Treatment Plant (WWTP) and urged the City to assist the City of Greeley with their plans to place a hospital in West Greeley, which may need to connect to the Evans WWTP.

Mr. Caldwell, from Greeley, thanked the City for hosting the ACE program and spoke to the personal and professional skills from the internship.

APPROVAL OF AGENDA

Mayor Pro-Tem Rudy made the motion, seconded by Council Member Homann, to approve the Agenda. The motion passed with all voting in favor thereof.

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CONSENT AGENDA

A. Approval of Minutes of the Regular Meeting of August 1, 2016

Mayor Pro-Tem Rudy made the motion, seconded by Council Member Finn, to approve the Consent Agenda. Council Members Homann and Schaffer recused themselves from the vote. The motion passed with all voting in favor thereof.

NEW BUSINESS

B. Public Hearing – New Retail Liquor License for Rico Industries Inc., dba "85 Liquor" – 3705 West Service Road

Mayor Morris opened the Public Hearing at 7:47 p.m.

Raegan Robb, Evans City Clerk, presenting an application for a new retail liquor license for Rico Industries Inc., doing business under "85 Liquor" at their building located at 3705 West Service Road, in Evans. The applicants for this license are:

- Maricela Ruiz, from Johnstown;
- Luis Carlos Rico, from Greeley; and
- Karen Rico, from Evans.

He reminded the City Council that they were acting as the Local Liquor Licensing Authority and the approval of a new liquor license must be based on findings regarding:

- The reasonable requirements of the neighborhood;
- The desires of the adult inhabitants of the neighborhood; and
- The moral character of the applicants.

The following findings from the report submitted by staff for this liquor license were entered into the record:

1) ***Notice of Public Hearing.*** That the Notice of Public Hearing on this matter was posted on the property and published in the Greeley Tribune on or before August 6, 2016.

2) ***Possession of the Premises.*** That the applicant is entitled to possession of the premises as evidenced by the attached lease of the property.

3) ***Local and State Licenses.*** That the applicants have a State Sales Tax License and City Business and Sales Tax License.

4) ***Local and State Zoning Codes.*** That selling liquor in the manner proposed

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in the application is not in violation of the zoning, fire, and other applicable laws of the City of Evans or the State of Colorado.

5) ***Proximity to Schools.*** That the building where selling or serving alcohol will be conducted does not appear to be within 500 feet of any public or parochial school or principal campus of any college, university or seminary school.

6) ***Previous Denial.*** That there has not, within two years preceding the date of the application, been a denial of an application for a Retail Liquor License application at the location for the reason that the reasonable requirements of the neighborhood and the desires of the inhabitants were satisfactory by the existing outlets.

7) ***Needs and Desires.*** Before granting any license, the Local Licensing Authority shall consider the reasonable requirements of the neighborhood and the desires of the adult inhabitants. The applicants, conducted a survey within a one-mile radius of the premises to convey the needs and desires of the neighborhood. The petitions returned 95 residences in favor of the proposed liquor license, with 17 residences opposed to the proposed liquor license. The petition conveying the needs and desires is attached.

Additionally, the City identified the following liquor licenses within a one-mile radius of 3705 West Service Road:

Hotel-Restaurant:	**3**
Beer and Wine:	**0**
Club:	**2**
Retail Liquor Store:	**1**
Drugstore:	**0**
Tavern:	**1**
3.2 Beer:	**2**

Due to the survey conducted and the low number of retail liquor licenses in this area, as shown by the display, staff feels that the reasonable requirements of the neighborhood and the desires of the adult inhabitants of the neighborhood are not currently being met by existing outlets.

8) ***Moral character.*** The Local Liquor Licensing Authority can consider moral character of the applicant and any other pertinent matters affecting the qualifications of the applicant. Attached is a memorandum from the Evans Police Department, which shows the information that was found when they conducted their background checks.

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A letter from Karen Rico was distributed to address the background conducted by the Evans Police Department. Plus the applicants were available for questions related to this background check.

When considering the qualifications of the applicants, both Maricela and Karen have already passed TIPs training, which is always strongly recommended for liquor license holders.

9) ***Site Improvement Agreement.*** The City requires a site plan to be submitted by businesses in the Highway 85 Corridor for business to be compliant with the Highway 85 Overlay design requirements.

In this case, staff requested that the applicant work with City to develop a Site Improvement Agreement which identifies the phasing of these types of improvements to satisfy the Highway 85 Overlay design requirements. This will allow the improvements to be implemented over the first few years of operation, but allow the City to review the agreement annually when the license is up for renewal.

Mayor Morris asked Mr. Krob, City Attorney about the Site Agreement, and whether is this common with liquor licenses.

Mr. Krob explained that it was not common, but it would help the owners get their business started while allowing improvements to be implemented over the first few years of operation, with annual reviews when the license is up for renewal.

Mayor Morris asked the applicants to step forward.

Karen Rico introduced herself and thanked City staff for their help in submitting the application.

Maricela Ruiz introduced herself and talked about the businesses she owns in the community.

Mayor Morris thanked the applicants.

Mayor Morris asked for public comment for or against the application—there was none.

Council Member Homann, asked that the letter from Karen Rico be attached to the meeting materials.

Council Member Speer asked about the length of the license.

Mr. Robb explained that the licenses last one year, with the chance for renewal for

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the following year.

Mayor Morris closed the public hearing.

The Council discussed their support for the application.

Council Member Homann made the motion, seconded by Council Member Finn, for the approval of the Retail Liquor License for Rico Industries Inc., dba 85 Liquor, located at 3705 West Service Road, pending a Site Improvement Agreement be entered into between the City and the applicant within 60 days of their hearing for liquor license. The motion passed with all voting in favor thereof.

C. Resolution No. 32-2016 Approving a Memorandum of Understand Between the Colorado Department of Transportation (CDOT) and the City of Evans, Colorado, Transferring Real Property from CDOT to Evans, and Waiving Certain Landscaping Requirements at the CDOT Park & Ride

Dawn Anderson, City Engineer, spoke to the need for the Resolution No. 32-2016 to formalize an agreement between CDOT and the City in order for CDOT to transfer title of real property located at 3939 Riverside Parkway to the City in exchange for the City waiving landscaping requirements at the CDOT owned park-n-ride located at 1004 42nd Street.

According to Ms. Anderson, entering into a memorandum of understanding (MOU) would allow the City to complete the land exchange for CDOT property in the floodplain adjacent to the City's Riverside Park, at 3939 Riverside Parkway. The City is interested in incorporating the property into the new Riverside Park re-design plans.

Mr. Hogan, discussed the MOU with CDOT and explained that CDOT would have to complete landscaping in the park-n-ride property, but not on the edges of the property. He also spoke about the value of the agreement to achieve improvements to Riverside Park and to the park-n-ride location along the Highway 85 Corridor.

Council Member Speer asked about maintaining the property acquired from CDOT.

Mr. Hogan discussed the responsibility for maintenance and landscaping would now become the City's responsibility.

Council Member Speer asked about the building on the property.

Mr. Hogan and Ms. Anderson explained that the property and the building would become the responsibility of the City.

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Council Member Homann and Mayor Morris discussed their support for the project.

Council Member Homann made the motion, seconded by Mayor Pro-Tem Rudy, to adopt Resolution No. 32-2016 and authorize the Mayor's signature on the MOU. The motion passed with all voting in favor thereof.

D. Approval of Grant Contract and Preliminary Budget Revision for Lower Latham Feasibility Study

Chad Reischl, City Planner, addressed Council and introduced Chloe Lewis, who will be taking over Chad's responsibilities as the Watershed Coordinator for the South Platte River Alliance.

Mr. Reischl, discussed the grant for the Middle South Platte River Alliance (MSPRA) in the amount of $125,000 for a feasibility study for the Lower Latham Diversion structure on November 17th 2015. According to Mr. Reischl, the Grant was awarded to MSPRA earlier this year and the contract between the state and MSPRA/City of Evans has been executed. After a full RFP process conducted with the support of the Lower Latham Board of Directors and members of MSPRA, the team selected Anderson Consulting Engineers (ACE) out of Fort Collins to prepare the study. Mr. Reischl clarified that staff was asking Council to approve the contract with ACE and a preliminary budget amendment in the amount of $125,000 for the study, which will be fully reimbursed by the CDBG-DR program, with no matching requirement to the City.

Mr. Reischl, spoke about the benefits of the project and the support from the MSPRA and the state for the project.

Mayor Morris voiced his support for the Lower Latham Diversion Project.

City Council Member Homann made the motion, seconded by Mayor Pro-Tem Rudy, to approve the contract with Anderson Consulting Engineers and preliminary budget amendment for the Lower Latham Diversion Feasibility Study.
The motion passed with all voting in favor thereof.

REPORTS

E. City Manager

Mr. Hogan spoke to Council about the 2017 budget and minimal health insurance increases, due to a low loss-ratio for insurance. He spoke about the new Kum & Go gas station and the current construction progress at the site. Lastly, he spoke about the ground breaking for the Waste Water Treatment Plant and the low interest on the

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bonds for the project.

F. City Attorney

Mr. Krob updated the Council about Assistant City Attorney being selected to jury duty for the next couple of days.

AUDIENCE PARTICIPATION

There was no audience participation.

EXECUTIVE SESSION

G. To Determine Positions Relative to Matters that May Be Subject to Negotiations, Developing Strategy for Negotiations, and Instructing Negotiators, Pursuant to C.R.S. 24-6-402(4)(e)

Council Member Schaffer made the motion, seconded by Mayor Pro-Tem Rudy, to adjourn in executive session to determine positions relative to matters that may be subject to negotiations, developing strategy for negotiations, and instructing negotiators, pursuant to C.R.S. 24-6-402(4)(e).
The motion passed with all voting in favor thereof.

The City Council adjourned into executive session at 8:26 p.m.

The executive session concluded at 8:40 p.m.

Scott Krob, City Attorney, entered into the record that the matters discussed in executive session were subject to attorney-client privilege and within the scope of the referenced state statutes.

ADJOURNMENT

The meeting adjourned at 8:42 p.m.

Raegan Robb, City Clerk

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COUNCIL COMMUNICATION

DATE: September 6, 2016

AGENDA ITEM: **7.B**

SUBJECT: Appointment of Evans City Council Member Laura Speer to the Citizens Transportation Advisory Board

PRESENTED BY: Raegan Robb, City Clerk

AGENDA ITEM DESCRIPTION:

The Citizen Transportation Advisory Board (CTAB) is a citizen board created and steered by the City of Greeley. This board is charged with studying and making recommendations to the Greeley City Council concerning all matters affecting the City of Greeley's transportation services, traffic, and transportation-related activities. According to the guidelines of CTAB, the Evans City Council gets to appoint 1 of the 7 members on the board.

Kathy Van Soest was previously appointed by the Evans City Council, but resigned in December of 2013. Due to this vacancy, the Mayor and Mayor Pro-Tem recommended appointing Council Member Laura Speer to fill the vacancy on the Citizens Transportation Advisory Board.

Below is the information and guidelines of this board and the current members of the board are attached.

- ***Mission:*** *The board shall study and make recommendations in all matters affecting the City's transportation services, traffic, and transportation-related activities.*
- ***Qualifications:*** *Must be a Greeley resident except for Evans position*
- ***Structure:*** *Seven members – six appointed by the Greeley City Council and one appointed by the Evans City Council.*
- ***Terms:*** *Three years, two terms maximum*
- ***Meeting Schedule:*** *4th Monday of each month, beginning at 4:00 p.m., at the Recreation Center, 651 10th Avenue*
- ***Time Requirement:*** *Approximately five hours per month*
- ***Staff Contact:*** *Joel Hemesath, Public Works Director, 350-9795*

FINANCIAL SUMMARY:

N/A

RECOMMENDATION:

Appoint Evans City Council Member Laura Speer to the Citizens Transportation Advisory Board

SUGGESTED MOTIONS:

* *I move to appoint Council Member Laura Speer to the Citizens Transportation Advisory Board.*

COUNCIL COMMUNICATION

DATE: September 6, 2016

AGENDA ITEM: **8.A**

SUBJECT: CONSIDERATION BY CITY COUNCIL OF A LETTER FROM EVANS FIRE PROTECTION DISTRICT REGARDING TERMINATION OF OFFICE LEASE WITH THE CITY OF EVANS AND DISTRIBUTION OF FIRE IMPACT FEES TO THE DISTRICT

PRESENTED BY: Scott Krob, City Attorney; and
Jessica Gonifas, Interim City Manager

AGENDA ITEM DESCRIPTION:

This item affects two related matters – the City's lease of space to the Fire District and the Fire Impact Fee collected by the City to provide capital improvements for fire protection purposes.

As explained in the correspondence from the Evans Fire District and as Council may be aware, the City of Evans currently leases space within the Evans Community Complex to the Fire District to use as an administrative office. Pursuant to the Lease, the City can terminate the lease upon proper notice to the Fire District if the City needs the space for business reasons. If the City terminates the Lease, it is obligated to provide other office space to the Fire District.

In addition, several years ago the City enacted a fire impact fee and has been collecting that fee. As an impact fee, it may be used by the City only to provide capital improvements, as that term is defined under the impact fee statute, for the purpose of fire protection.

At a joint meeting of the Fire District Board and the City Council earlier this year, the parties outlined an agreement that the City would terminate the lease of the office space at the City's Community Complex, and in place of such office space, the City would provide fire impact fees to assist the Fire District in construction of new administrative offices at Fire Station 2 that the District needs in order to accommodate demands created by growth within the City.

The letter that is before Council is intended to implement the agreement that was outlined between City Council and the Fire District.

FINANCIAL SUMMARY:

The transaction contemplated by the letter will not impact the City's budget as the funding will come solely from the fire impact fee fund, which is a restricted fund and cannot be used for purposes other than capital improvements for fire protection.

RECOMMENDATION:

Staff recommends that the City Council accept the letter from the Fire District and authorize the Interim City Manager to sign the letter indicating such acceptance.

SUGGESTED MOTIONS:

"I move to accept the letter dated August 22, 2016 from the Evans Fire Protection District regarding confirmation of termination of office lease and authorize the Interim City Manager to sign the letter reflecting the City's acceptance and approval."

"I move not to accept the letter dated August 22, 2016 from the Evans Fire Protection District regarding confirmation of termination of office lease."

Evans Fire Protection District

EST. 2011

August 22, 2016

Via Hand Delivery
City of Evans
Attn: Jessica Gonifas, Interim City Manager
1100 37th Street
Evans, Colorado 80620

Re: Confirmation of Termination of Office Lease (Fire Administration Office)

Dear Ms. Gonifas:

Effective June 5, 2012, the City of Evans ("City") and the Evans Fire Protection District ("District") entered into that certain Office Lease (Fire Administration Office) ("Lease"), pursuant to which the City leased to the District: (a) a minimum of 350 square feet of administrative office space within the structure located at 1100 37th Street, Evans, Colorado 80620, to be used as District administrative offices; and (b) one parking space in the adjacent parking lot on a "first come" basis (collectively, the "Leased Premises"). The Lease term is 99 years; however, Section 1 of the Lease authorizes the City to terminate the Lease for any business reason if the City offers the District comparable alternative space on the same terms and conditions for the balance of the 99-year term, which alternative space is acceptable to the District and from which the District can provide its administrative functions.

This letter confirms the discussion between the City Council and the District Board of Directors at their annual joint meeting held on May 23, 2016, at which time the City Council affirmed its intent to terminate the Lease for business reasons pursuant to Section 1, and to satisfy its obligation to provide comparable alternative space to the District by assisting in funding a remodel of the District's Fire Station 2 ("Station Remodel"), which Station Remodel will include the addition of one or more offices from which the District can provide its administrative functions. Specifically, it is the District's understanding that:

1) The District acknowledges the City is terminating the lease for valid business reasons, specifically because of the City's need for additional office and administrative space for City purposes.

2) The City irrevocably pledges to contribute to the District all funds then existing in the City's Fire Impact Fund as of December 31, 2016 ("Impact Funds"), for the sole purpose of applying the Impact Funds toward the costs of the Station Remodel. The District represents and confirms that the Station Remodel is a capital improvement of the District that is needed due to growth and development experienced within the District's boundaries subsequent to the City's establishment of the fire impact fee, and that the Impact Funds are not being used to remedy defects in existing infrastructure. The City will contribute the Impact Funds to the District on or before January 31, 2017.

3) The District will be responsible for all aspects of the Station Remodel, including, without limitation, architecture and construction contract bidding; selection of, and payments to, vendors and contractors; contracting; and project management.

4) Upon completion of the Station Remodel, the District will vacate the Leased Premises within 90 days following receipt of a Certificate of Occupancy for Fire Station 2, or such shorter or longer time period as the City and District may agree. In any event the District will vacate the Leased Premises no later than December 31, 2018.

5) The Lease will terminate automatically upon the District's vacation of the Leased Premises within the time period set forth in paragraph (4) above, and its return to the City of all access mechanisms, including, without limitation, any access keys, cards, or codes. Pursuant to Section 16 of the Lease, this paragraph (5) constitutes a written modification to the effective date of the City's Lease termination as set forth in Section 1 of the Lease.

6) The District acknowledges and agrees that by contributing the Impact Funds to the District as provided herein, the City will have fully and completely satisfied any and all of its obligations under the Lease.

Please advise if the City's understanding of the terms of the Lease termination differ from the above. Otherwise, please keep one copy of this letter for the City's records, and sign and return one copy of this letter to the District's Fire Chief, Ron Pristera. The District Board greatly values the District's relationship with the City, and looks forward to continuing to work together on additional projects in the future.

Sincerely,

Mary Achziger, President
Board of Directors, Evans Fire Protection District

_____
Jessica Gonifas, Interim City Manager
City of Evans

CITY COUNCIL COMMUNICATION

DATE: September 6, 2016

AGENDA ITEM: **8.B**

SUBJECT: Award of Contract for 49th Street, Brantner Road, Industrial Parkway Flood Repair to Naranjo Civil Constructors

PRESENTED BY: Gary Wilson, Project Manager

PROJECT DESCRIPTION

This report presents the bid results for reconstruction of flood damaged sections of 49th Street, Brantner Road and Industrial Parkway to Naranjo Civil Constructors. This project was advertised on July 26, 2016. Five bids were received on August 22, 2016. Naranjo Civil Constructors was the lowest bid and their proposal included all required information. The City followed FEMA's procurement requirements and the proposed contract includes all FEMA requirements. Below are the bid results:

49th Street, Brantner Road, Industrial Parkway Bid Results		
Company	**Bid Price**	**Submittal Package***
Naranjo Civil Constructors	$589,000.00	Complete
Mountain Constructors, Inc.	$619,854.00	Complete
Duran Excavating, Inc.	$620,926.10	Complete
J-2 Contracting Company	$672,220.00	Complete
Colt and Steel Corporation	$692,301.28	Complete

*****Non-Collusion Statement, receipt of addendums, bid bond and power of attorney

Background & FEMA PW 302

Temporary repairs were made to 49th Street, Brantner Road, and Industrial Parkway after the 2013 flood. The City was preparing to make permanent repairs, when flooding in May 2015 washed the temporary repairs out and caused additional damage. It was determined that an engineered design was needed to protect against on-going flood damage.

In November 2015, the City retained RockSol Engineers to prepare a flood resilient design. Several alternatives were evaluated and a hydraulic analysis was prepared to determine the effect of alternatives on flood conditions. The recommended approach was to reconstruct the damaged area with concrete and install embankment reinforcement. This approach will harden the road against future flood damage and did not negatively affect flood conditions.

In December 2015 a change of scope was submitted to FEMA for PW 302. It was hoped that FEMA would approve the scope change during the first half of 2016. Staff did not move forward without FEMA approval of the scope change because it included a different approach than described in the original PW and proposed mitigation costs. Mitigation costs, as well as any changes to the scope, are subject to FEMA approval. The use of concrete instead of asphalt and the embankment reinforcement are mitigation costs.

During the spring of 2015, City staff had several discussions with DHSEM in an effort to prioritize FEMA's review of the scope change. It was explained that the scope change was not moving forward because FEMA staffing in Colorado had been reduced for a variety of reasons. Staff has been informed that a new version of PW 302 is being reviewed by FEMA and that it is 8th in priority of 43 scope changes, however, there is no definite timeframe for FEMA's review.

A DOLA EIAF grant was awarded for this project in early 2016 to fund the City's 12.5% share of the 2013 damage ($58,304) and the cost of flood damage from the May 2015 flood ($86,280). EIAF funds must be spent by May 31, 2017.

Following a status report on July 5, 2016, Council directed staff to advertise for construction bids so that Council could evaluate whether to move forward with the project.

PROJECT SCOPE

The scope of work includes repaving the full extent of the area damaged by the flood with concrete. A turf reinforcement mat will be installed on the river side of the road embankment to protect against undercutting, a primary cause of flood damage. The mat is a synthetic grid material filled with earth and seeded. A sketch of the project extent is attached. The total project cost is:

Engineering (up to):	$168,407
Construction:	$589,000
	$757,407

FINANCIAL SUMMARY:

The cost to the City will depend on whether the PW 302 scope change is approved, and how much of the costs will be reimbursed by FEMA. Two results are presented, one without any FEMA reimbursement and one assuming approval of the scope change and reimbursement of all eligible costs. A result somewhere between these two scenarios is also possible.

No FEMA Reimbursement: If the City moves forward with the project now, there is a risk that the PW scope change will not be approved and the City would be responsible for a substantial portion of the project costs. If the City does not receive FEMA funds, the City would only be reimbursed from DOLA for the 2015 damage and 12.5 percent of the estimated 2013 construction cost, or $144,584. The cost to the City for construction would be $444,416, plus the engineering expense of up to $168,407, **or a total of $612,823**.

FEMA Reimbursement: If the PW 302 scope change is approved, and the City is reimbursed by FEMA for all eligible costs, the City will pay for some of the construction and a share of the engineering. The bid price is higher than the estimate used in the DOLA grant application. Based on the bid price, the City would have an expense of approximately $4,500 from its 12.5% share of the construction cost not reimbursed by DOLA.

The engineering for the 2015 damage, 15 percent of the total or $25,261, and the City's 12.5 percent share of the engineering for the 2013 damage will not be reimbursed. The City's 12.5% share of the engineering for the 2013 damage is $17,893. The total City engineering cost would be $43,154. (DOLA does not award grants for services retained before the grant award.) Including the construction and engineering cost, the total cost to the City **would be approximately $47,654.** This cost could vary depending on the final PW 302 scope change and what FEMA agrees to reimburse.

STAFF RECOMMENDATION:

Staff recommends that Council evaluate the results of the bidding and potential costs and make a decision whether to award the contract to Naranjo Civil Constructors.

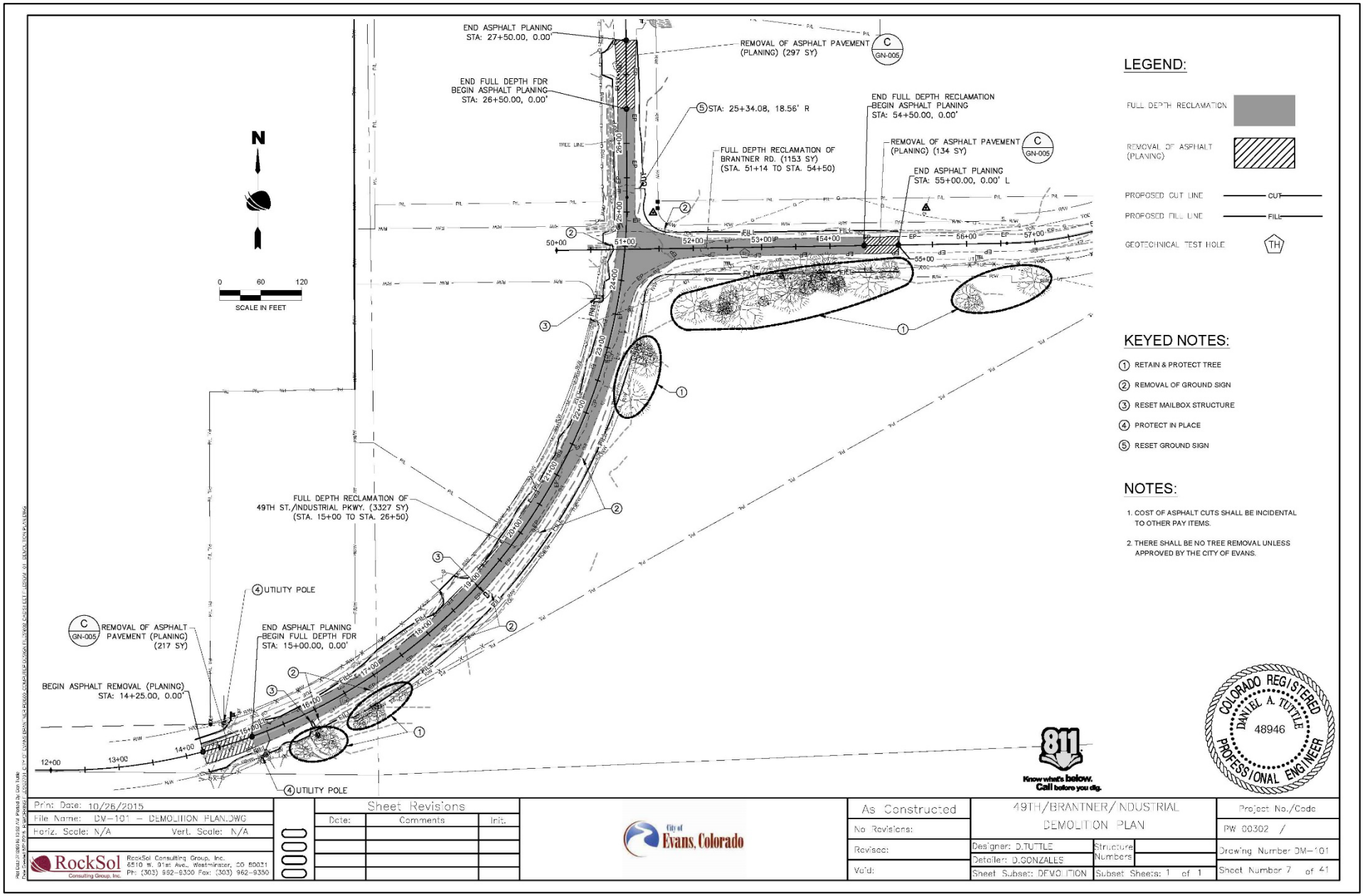
SUGGESTED MOTIONS:

"I move to approve the contract for the 49th Street, Brantner Road and Industrial Parkway Project with Naranjo Civil Constructors."

"I move to deny approval of the contract for the 49th Street Brantner Road and Industrial Parkway Project with Naranjo Civil Constructors."

ATTACHMENTS:

Diagram of Project Improvements
Construction Contract Agreement



49th Street, Brantner Road, Industrial Parkway Flood Repairs

City of
Evans, Colorado

Contract Documents, Project Specifications and Bid Plans for

49th Street, Brantner Road and Industrial Parkway Project

July 26, 2016

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1.1 ADVERTISEMENT FOR BIDS

The City of Evans, Colorado will receive sealed bids for the following project:

49th Street, Brantner Road and Industrial Parkway Project

Bids will be received by the City Clerk at 1100 37th Street, Evans, Colorado, until 2:00 P.M. on August 17, 2016 at which time said bids will be publicly opened at the City municipal building, 1100 37th St, Evans, CO 80620.

Summary: This project consists of the reconstruction of flood damaged segments of Brantner Road, 49th Street and Industrial Parkway in the City of Evans as described by the attached bid plan set. The project includes, but is not limited to, the reconstruction of damaged asphalt roads with concrete pavement and installation of embankment reinforcement, including all related work as described in the Contract Documents and bid plans and specifications.

Pre-Bid Meeting: A mandatory pre-bid meeting will be held for this project at the City municipal building in the Council Chambers located at 1100 37th Street, Evans, Colorado on August 8, 2016 at 10:00 A.M.

Plans and Contract: Copies of the construction plans and contract documents may be obtained at the City of Evans by calling Gary Wilson at 970-475-1198 or email gwilson@evanscolorado.gov and can be downloaded at Rocky Mountain E-Purchasing (http://www.rockymountainbidsystem.com).

Bid Bond: A certified check or bank draft, payable to the order of City of Evans, Colorado, a satisfactory Bid Bond executed by the Bidder and an acceptable surety in an amount equal to five percent (5%) of the total Bid shall be submitted with each Bid.

FEMA Requirements: This project is funded with State of Colorado and Federal Emergency Management Agency funds. All bids and work completed under this contract must be in accordance with FEMA and all applicable federal regulations. FEMA requirements are described in Article 3 of the Contract Documents. The City encourages small, woman, and/or minority owned businesses to submit a bid in response to this invitation.

The Evans City Manager reserves the right to reject any or all bids, to waive any informalities or irregularities in bids, and to accept the bid that is in the best interests of the City of Evans, Colorado.

CITY OF EVANS, COLORADO

Published in the Greeley Tribune on **July 26, 2016**.
Dated: July 21, 2016

1.2 INFORMATION FOR BIDDERS

1.2.1 OWNER
The OWNER of this project is the City of Evans, 1100 37th Street, Evans, Colorado 80620; phone number (970) 475-1113 and fax number (970) 330-3472.

1.2.2 ENGINEER
The ENGINEER is City of Evans or its appointed representative, 1100 37th Street, Evans, Colorado 80620. The City of Evans Project Manager is Gary Wilson, phone number (970) 475-1198, email gwilson@evanscolorado.gov.

1.2.3 BID SUBMITTAL
Bids will be received by the City Clerk of Evans, Colorado (herein called the "CITY"), at Evans Community Complex, 1100 37th Street, Evans, CO 80620 until 2:00P.M. on August 17, 2016 and then at said place publicly opened and read aloud.

Each Bid must be submitted in a sealed envelope, addressed to:

City Clerk
City of Evans
1100 37th Street
Evans, CO 80620

Each sealed envelope containing a bid must be plainly marked on the outside as bid for:

49th Street, Brantner Road and Industrial Parkway Project

The envelope should bear on the outside the name of the bidder, bidder's address, and the name of the project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the Bid must be enclosed in another envelope addressed to: City Clerk, City of Evans, 1100 37th Street, Evans, CO 80620.

All bids must be made on the required bid sheet. All blank spaces for bid prices must be filled in, in ink or typewritten, and the bid sheet must be fully completed and executed when submitted. Only one copy of the bid sheet is required.

1.2.4 INFORMALITIES
The CITY may waive any informalities, minor defects, or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. In the event of strikes, wars, acts of God or other good cause as determined by the City Manager, bid openings may be extended for a reasonable time not to exceed thirty calendar days. No bidder may withdraw a bid within 60 days after the actual date of the opening thereof. Should there be reasons why the contract cannot be awarded within the specified period; the time may be extended by mutual agreement between the CITY and the bidder.

1.2.5 CONDITIONS OF WORK
Bidders must satisfy themselves of the accuracy of the estimated quantities in the Bid Schedule(s) by examination of the site. After bids have been submitted, the bidder shall not assert that there was a misunderstanding concerning the quantities of work or of the nature of the work to be done.

The CITY shall provide to any and all bidders, prior to bidding, all information that is pertinent to and delineates and describes the land owned and rights-of-way acquired upon request.

The Contract Documents contain the provisions required for the construction of the project. Information otherwise obtained from an officer, agent or employee of the CITY or any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve him from fulfilling any of the conditions of the contract.

1.2.6 BID SECURITY

Each bid must be accompanied by a Bid Bond payable to the City for five percent of the total amount of the bid. As soon as the bid prices have been compared, the CITY will return the bonds of all except the three lowest responsible bidders within three days after the date of the bid opening. When the Agreement is executed, the Bid Bonds of the two remaining unsuccessful bidders will be returned. The Bid Bond of the successful bidder will be retained until the Agreement, Payment Bond and Performance Bond have been executed and approved, after which it will be returned.

A Performance Bond and Payment Bond, each in the amount of 100 percent of the Contract Price, with a corporate surety approved by the CITY, will be required for the faithful performance of the contract.

1.2.7 POWER OF ATTORNEY

Attorneys-in-fact who sign the Bid Bonds or Payment Bonds and Performance Bonds must file with each bond a certificate and effective dated copy of their Power of Attorney.

1.3 AWARD OF CONTRACT

The party to whom the contract is awarded will be required to execute the Agreement and obtain the Performance Bond, Payment Bond, and Certificates of Insurance within ten (10) calendar days from the date when Notice of Award is delivered to the bidder. The Notice of Award shall be accompanied by the necessary Agreement. In case of failure of the bidder to execute the Agreement and to furnish said Bonds and Certificates, the CITY may at its option, consider the bidder in default, in which case the Bid Bond accompanying the proposal shall become the property of the CITY. The CITY will be entitled to such other rights as may be granted by law.

The CITY within ten (10) days of receipt of acceptable Performance Bond, Payment Bond Certificates of Insurance and Agreement signed by the party to whom the Agreement was awarded, shall sign the Agreement and return to such party an executed duplicate of the Agreement. Should the CITY not execute the Agreement within such period, the bidder may, by written notice, withdraw their signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the CITY.

The Notice to Proceed shall be issued within ten (10) days of the execution of the Agreement by the CITY or as otherwise stated in the Special Conditions. Should there be reasons why the Notice to Proceed cannot be issued within such period; the time may be extended by mutual agreement between the CITY and the CONTRACTOR. If the Notice to Proceed has not been issued within the ten (10) day period or within the period mutually agreed upon, the CONTRACTOR may terminate the Agreement without further liability on the part of either party.

The CITY may make such investigations as deemed necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the CITY all such information and data for this purpose as the CITY may request. The CITY reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the CITY that such bidder is qualified to carry out the obligations of the Agreement and to complete the work contemplated therein. The CITY reserves the right to reject any conditional or qualified bid.

The CONTRACTOR shall commence work not later than fifteen (15) calendar days after date of the

Notice to Proceed issued by the CITY to the CONTRACTOR and shall complete the work as specified, within the time specified in the contract. In the event no written Notice to Proceed is issued by the CITY, the contract time as specified in the contract shall be counted from the first day of actual work on the project. All work shall be prosecuted in an orderly and diligent manner. The CONTRACTOR shall cooperate with, and conform to, the request of the CITY to expedite particular portions of the work or to suspend or transfer operations on any portion of the work where such alteration of the CONTRACTOR's operations is deemed advisable by the CITY.

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout.

Each bidder is responsible for inspecting the site and informing himself of the conditions under which the work is to be performed and for reading and being thoroughly familiar with the contract documents. The bidder's inspection shall cover the ground structure, obstacles which may be encountered, location of water tables, and other matters relevant to the work both above and below ground. Where test boring logs, indicating underground conditions, are shown on the drawings, this data is for the bidder's information and to reflect the conditions observed at the time and place of drilling. Neither the CITY nor the ENGINEER shall be held responsible for any variance or deviation from the data shown on the drawings, as encountered during actual construction. The failure or omission of any bidder to do any of the foregoing shall in no way relieve any bidder from any obligation in respect to their bid. The successful bidder will not be allowed any extra compensation in the form of contract price or time by any matter or thing on which he could have fully informed the CITY of prior to the bidding.

The low bidder shall supply the names and addresses of major material suppliers and subcontractors when requested to do so by the CITY.

The successful bidder will provide the CITY of Evans with a current list of references of previous work performed in this field.

The OWNER reserves the right to reject any or all bids and to pass upon the regularity or waive any irregularities of the bidders and to determine the acceptability of the surety offered.

If Bid Schedules are set forth in the Proposals, the CONTRACTORS must bid on all the Schedules. The CONTRACTOR’S bid considered for award shall be for the combined low bid for the Base Bid.

Portions of any project may have been termed "Alternates or Contingent" and the OWNER reserves the right to include or remove any or all of these Alternates from the Contract at the OWNER’S sole option or discretion.

1.3.1 CONSIDERATION OF PROPOSALS:

After the proposals are opened and read, they will be compared on the basis of the summation of the products of the approximate quantities shown in the bid schedule by the unit bid prices. The results of such comparisons will be immediately available to the public. In the event of a discrepancy between unit bid prices and extensions, the unit bid price shall govern.

The right is reserved to reject any or all proposals, to waive technicalities or to advertise for new proposals, if in the judgment of the awarding authority the best interests of the CITY will be promoted thereby.

1.3.2 Condition of Award:

The award of contract, if it is awarded, will be made within 60 calendar days after the opening of proposals to the lowest responsible and qualified bidder whose proposal complies with all the requirements prescribed. The successful bidder will be notified, by letter mailed to the address shown on their proposal, that the bid has been accepted and that he has been awarded the contract.

1.3.3 CANCELLATION OF AWARD:

The CITY reserves the right to cancel the award of any contract at any time before the execution of said contract by all parties without any liability against the CITY.

1.3.4 EXECUTION AND APPROVAL OF CONTRACT:

The Contract shall be signed by the successful bidder and returned, together with requisite attachments outlined in Section 1.5.7. All documents will be executed in triplicate and shall be submitted to the CITY within 10 calendar days after the date of award. If the signed Contract and Bond is returned by the successful bidder within 10 calendar days after award and if the Contract is not executed by the CITY within 60 days from date of award, the bidder shall have the right to withdraw their bid without penalty. No Contract shall be considered effective until it has been fully executed by all of the parties thereto.

1.3.5 FAILURE TO EXECUTE CONTRACT:

Failure to execute the Contract and file acceptable bonds within 10 calendar days after the date of award shall be just cause for the cancellation of the award and the forfeiture of the proposal guaranty which shall become the property of the CITY. The CITY may elect to waive forfeiture of the proposal guaranty only if it is determined that the bidder has made a good faith remedial error and that no damages were sustained by the CITY as a result of the failure by the successful bidder to execute the contract and file acceptable bonds within the time prescribed. Award may then be made to the next lowest responsible bidder, or the work may be re-advertised and constructed under contract or otherwise, as the CITY may decide.

1.4 THE CONTRACT: FOLLOWING EXECUTION

1.4.1 MATERIALS:

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

1.4.2 PROGRESS SCHEDULE:

The CONTRACTOR shall submit, at such times as may reasonably be requested by the ENGINEER, schedules which shall show the order in which he proposes to carry on the work, with dates at which the CONTRACTOR will start the several parts of the work, and estimated dates of completion of the several parts. The Special Conditions or Drawings may require that certain phases or parts of the work be completed first or in a certain order. If the CONTRACTOR elects to use PERT or CPM charts, he shall furnish copies of them and all revisions thereto or amendments thereto as the work progresses to the ENGINEER upon request.

1.4.3 ASSIGNMENT OF CONTRACT:

No assignment 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 written approval of the CITY and the surety has been given due notice of such assignment and has furnished written consent thereto. Such written approval by the CITY shall not relieve the CONTRACTOR of the obligations incurred by him under the terms of this contract. In addition to the usual recitals in assignment contracts, the following language must be set forth:

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

1.4.4 SUBLETTING OF CONTRACT:

The CONTRACTOR shall as soon as practical after signing the contract, notify the ENGINEER in writing, giving the names and qualifications of all subcontractors proposed for work and shall not employ any that the ENGINEER may within a reasonable time object to. The CONTRACTOR will not be allowed to subcontract more than fifty percent (50%) of the total monetary value of the contract without prior approval of the OWNER. The CONTRACTOR shall notify the ENGINEER of each subcontract he awards, giving:

A. Name, address, and telephone number of the subcontractor

B. Branch of work covered

C. Total price of subcontract

D. Date of subcontract

Subcontractors, before commencing work, must file with the ENGINEER satisfactory certificates in duplicate showing insurance coverage. Failure of the subcontractor to provide such certificates shall not relieve the CONTRACTOR of the obligation to insure and to hold the CITY harmless. Subcontractors shall also file with the ENGINEER copies of applicable permits and licenses required to do the subcontracted work.

1.4.5 OTHER CONTRACTS:

The CITY may award other contracts for additional work, and the CONTRACTOR shall fully cooperate with such other contractors and carefully fit its work to that provided under the other contracts as may be directed by the ENGINEER. The CONTRACTOR shall not commit or permit any act that will interfere with the performance of work by any other contractor.

1.5 CONTRACT DOCUMENTS

1.5.1 NON-COLLUSION STATEMENT

_____, being first duly sworn, deposes and says that:

(1) He is the _____ of
(owner, partner, officer, representative or agent)

_____, the
(Company's Name)

bidder that has submitted the attached bid;

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

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

(4) Neither the said bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other bidder, firm or person to submit a collusive or sham bid in connection with the contract for which the attached bid has been submitted or to refrain from bidding in connection with such contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other bidder, firm or person to fix the price or prices in the attached bid or of any other bidder, or to fix any overhead, profit or cost element of the bid price or the bid price of any unlawful agreement any advantage against the City of Evans or any person interested in the proposed contract; and

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

Signed: _____

Title: _____

Subscribed and sworn to before me this ___ day of _____, A.D., 2016.

Notary Public_____

My Commission expires: _____

1.5.2 BID PROPOSAL

49th Street, Brantner Road and Industrial Parkway Project

Proposal of _____ (hereinafter called bidder), doing business as *_____organized and existing under the laws of the State of_____, to the City of Evans (hereinafter called CITY).

In compliance with your Advertisement for Bids, bidder hereby proposes to perform all work for the **49th Street, Brantner Road and Industrial Parkway Project** in strict accordance with contract documents, within the time set forth therein, and at prices stated below.

By submission of this bid, each bidder certifies, and in cases of a joint bid, each party hereto certifies as to its own organization, that this bid has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this bid with any other bidder or with any competitor.

Bidder hereby agrees to commence work under this contract on or before a date specified in the Special Conditions. Bidder further agrees to pay liquidated damages as provided in the Special Conditions.

Bidder acknowledges receipt of the following Addendum:

_____
_____
_____
_____

Bid shall include all applicable taxes and fees.

Bidder agrees to perform all work described in the contract documents in accordance with the attached Bid Schedule.

* **Insert "a Corporation", "a Partnership", or "an Individual" as applicable.**

BID SCHEDULE

PROJECT NAME:	BRANTNER RD, INDUSTRIAL PKWY, & 49TH ST ENGINEERING SERVICES	**CLIENT:**	CITY OF EVANS
PROJECT #	PW 00302	**DATE:**	22-Apr-16
DESCRIPTION:	49TH St., Industrial Pkwy, Brantner Rd. - 2013 POST FLOOD REPAIRS	**PHASE:**	Bid Schedule

ITEM NUMBER	ITEM DESCRIPTION	UNIT	PLAN QUANTITY	UNIT COST	TOTAL COST
201-00001	Clearing and Grubbing	LS	1		
202-00240	Removal of Asphalt Mat (Planing)	SY	648		
202-00810	Removal of Ground Sign	EACH	8		
203-00010	Unclassified Excavation (Complete In Place)	CY	716		
203-01500	Blading	HOUR	20		
203-01594	Combination Loader	HOUR	20		
203-01597	Potholing	HOUR	10		
203-02330	Laborer	HOUR	15		
207-00205	Topsoil	CY	753		
208-00002	Erosion Log (12inch)	LF	3110		
208-00035	Aggregate Bag	LF	100		
208-00045	Concrete Washout Structure	EACH	1		
208-00070	Vehicle Tracking Pad	EACH	3		
208-00103	Removal and Disposal of Sediment (Labor)	HOUR	20		
208-00105	Removal and Disposal of Sediment (Equipment)	HOUR	20		
208-00106	Sweeping (Sediment Removal)	HOUR	40		
208-00206	Erosion Control Supervisor	DAY	30		

BID SCHEDULE

PROJECT NAME:	BRANTNER RD, INDUSTRIAL PKWY, & 49TH ST ENGINEERING SERVICES	**CLIENT:**	CITY OF EVANS
PROJECT #	PW 00302	**DATE:**	22-Apr-16
DESCRIPTION:	49TH St., Industrial Pkwy, Brantner Rd. - 2013 POST FLOOD REPAIRS	**PHASE:**	Bid Schedule

210-00010	Reset Mailbox Structure	EACH	3		
210-00810	Reset Ground Sign	EACH	1		
212-00006	Seeding (Native)	ACRE	1.4		
212-00032	Soil Conditioning	ACRE	1.4		
213-00002	Mulching (Weed Free Hay)	ACRE	0.7		
213-00061	Mulch Tackifier	LB	140		
216-00201	Soil Retention Blanket (Straw/Coconut) (Biodegradable Class 1)	SY	3750		
216-00303	Turf Reinforcement Mat (Class III)	SY	3750		
304-06000	Aggregate Base Course (Class 6)	TON	247		
310-00610	Full Depth Reclamation of Hot Mix Asphalt Pavement (8-12 Inch)	SY	4480		
403-34751	Hot Mix Asphalt (Grading SX) (75) (PG 64-22)	TON	119		
412-00600	Concrete Pavement (6 Inch)	SY	4706		
607-11525	Fence (Plastic)	LF	3742		
612-00001	Delineator (Type I)	EACH	43		
614-00011	Sign Panel (Class I)	SF	66.75		
614-00012	Sign Panel (Class II)	SF	8		
614-00066	Timber Sign Post 6x6 Inch	LF	14		
614-00200	Steel Sign Post (U-2)	LF	132		

BID SCHEDULE

PROJECT NAME:	BRANTNER RD, INDUSTRIAL PKWY, & 49TH ST ENGINEERING SERVICES	**CLIENT:**	CITY OF EVANS
PROJECT #	PW 00302	**DATE:**	22-Apr-16
DESCRIPTION:	49TH St., Industrial Pkwy, Brantner Rd. - 2013 POST FLOOD REPAIRS	**PHASE:**	Bid Schedule

625-00000	Construction Surveying	LS	1		
626-00000	Mobilization	LS	1		
627-00005	Epoxy Pavement Marking	GALLON	23		
627-30210	Thermoplastic Pavement Marking (Xwalk-Stopline)	SF	50		
630-00000	Flagging	HOUR	100		
630-00007	Traffic Control Inspection	DAY	10		
630-00012	Traffic Control Management	DAY	30		
630-80335	Barricade (Type 3 M-A) (Temporary)	EACH	12		
630-80355	Portable Message Sign Panel	EACH	2		
630-80341	Construction Traffic Sign (Panel Size A)	EACH	27		
630-80342	Construction Traffic Sign (Panel Size B)	EACH	6		
630-80360	Drum Channelizing Device	EACH	20		
630-80363	Drum Channelizing Device (With Light) (Flashing)	EACH	20		
630-80380	Traffic Cone (36 Inch)	EACH	50		
				TOTAL	

- All materials shall be inspected upon arrival and any damage prior to delivery will be the responsibility of the manufacturer/seller.

Base Bid – Grand Total: **$_____**

The undersigned, if awarded the Contract, at the prices shown in the bid, agrees that the Work will

be substantially complete on or before November 15, 2016 and completed and ready for final payment on or before November 30, 2016.

Date _____

_____
Company

Official Address:

_____
_____
_____

_____
Signature

_____
Title

1.5.4 BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____ as Principal, and _____surety, are hereby held and firmly bound unto the City of Evans in the penal sum of ($_____) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed this ____day of _____, **2016**.

The condition of the above obligations is such that whereas the Principal has submitted to the City of Evans a certain bid, attached hereto and hereby made a part hereof, to enter into a contract in writing, for the

49th Street, Brantner Road and Industrial Parkway Project

NOW THEREFORE,

(A) If said bid shall be rejected, or in the alternate,

(B) If said bid shall be accepted and the Principal shall execute and deliver a contract in the form of contract attached hereto (properly) completed in accordance with said bid and shall furnish a bond for faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said bid,

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

The Surety, for value received, hereby stipulates and agrees that the obligations by any extension of the time within which the CITY may accept such bid; and said Surety does hereby waive notice of any such extension.

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

_____

Principal

_____

Surety

By**:** _____

1.5.5 NOTICE OF AWARD

TO: _____
_____
_____
_____

PROJECT DESCRIPTION: **49th Street, Brantner Road and Industrial Parkway Project**

The CITY, represented by the undersigned, has considered the bid submitted by you for the above described work in response to its Advertisement for Bids dated August 17, 2016.

You are hereby notified that your bid has been accepted for **49th Street, Brantner Road and Industrial Parkway Project** in the amount of **{Bid Amount}**.

You are required by the Information for Bidders to execute the Agreement and furnish the required Contractor's Performance Bond, Payment Bond, and Certificates of Insurance within ten (10) calendar days from the date of this Notice to you. If you fail to execute said Agreement and to furnish said bonds and certificates within ten (10) days from the date of this Notice, said CITY will be entitled to consider all your rights arising out of the CITY's acceptance of your bid as abandoned and as a forfeiture of your Bid Bond. The CITY will be entitled to such other rights as may be granted by law.

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

Dated this __ day of _____2016.

The City of Evans
(CITY)

By: _____

Title: City Engineer

1.5.6 ACCEPTANCE OF NOTICE

Receipt of the above Notice of Award is hereby acknowledged on this, the ___ day of_____ _____ **{Year}**.

By: _____

Title: _____

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

1.5.7 AGREEMENT

THIS AGREEMENT, made this _____ day of _____, **2016**, by and between the City of Evans, hereinafter called "CITY", and _____ doing business as hereinafter called "CONTRACTOR".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR will commence and complete the phased construction of **49th Street, Brantner Road and Industrial Parkway Project.**

2. The CONTRACTOR shall furnish all material, supplies, tools, equipment, labor and other services necessary for the construction and completion of the project described herein.

3. The CONTRACTOR shall commence the work required by the Contract Documents in accordance with the date stated in the Special Conditions and shall complete the work within the time stated in the Special Conditions unless the period for completion is extended otherwise by the Contract Documents.

4. The CONTRACTOR agrees to perform all the work described in the Contract Documents and comply with the terms therein for the sum of **{Project Amount}** for the **49th Street, Brantner Road and Industrial Parkway Project**.

5. The term "Contract Documents" means and includes the following:
   (A) Advertisement for bids
   (B) Information for Bidders
   (C) Non-Collusion Statement
   (D) Bid Proposal
   (E) Bid Schedule
   (F) Bid Bond
   (G) Notice of Award
   (H) Acceptance of Notice
   (I) Agreement
   (J) Payment Bond
   (K) Performance Bond
   (L) Certificate of Incorporation
   (M) Certificates of Insurance
   (N) Notice to Proceed
   (O) Special Conditions
   (P) General Conditions
   (R) Project Specifications and Bid Plans and City of Evans Street Standards
   (S) Change Order
   (T) Addendum
   No._____, dated_____, **2016**
   No._____, dated_____, **2016**
   No._____, dated_____, **2016**
   (U) Notice of Contractor's Settlement
   (V) Final Receipt and Guarantee
   (W) Other

6. The CITY will pay the CONTRACTOR in the manner and at such time as set forth in the General Conditions, such amounts required by the Contract Documents.

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

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

THE CITY OF EVANS

BY _____
NAME John Morris
TITLE Mayor

(SEAL)

ATTEST:

NAME _____
TITLE _____

CONTRACTOR

BY _____
NAME _____
TITLE _____
ADDRESS _____
_____
_____

ATTEST:

NAME _____
TITLE _____

APPROVED AS TO FORM:

_____
Evans City Attorney

APPROVED AS TO SUBSTANCE

_____
Evans City Manager

1.5.8 PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

_____
(Name of Contractor)

_____
(Address of Contractor)

a _____, hereinafter called Principal, Corporation, Partnership or Individual

_____
(Name of Surety)

_____
(Address of Surety)

hereinafter called Surety, are held and firmly bound unto the City of Evans, 1100 37th Street, Evans, Colorado 80620, hereinafter called CITY, in the penal sum of $_____ in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly, severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas the Principal entered into a certain Contract with the CITY, dated the _____ day of _____, 2016, a copy of which is hereto attached and made a part hereof for the construction of:

49th Street, Brantner Road and Industrial Parkway Project

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

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to work to be performed thereunder or the specifications accompanying the same shall in any ways affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

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

IN WITNESS WHEREOF, this instrument is executed this _____ day of _____, 2016.

ATTEST:

_____
Principal

_____ By _____(S)
Principal Secretary

(SEAL)

_____
Witness as to Principal

_____
Address

ATTEST:

_____
Surety Secretary

(SEAL)

_____ By _____
Witness as to Surety Attorney-in-Fact

_____ _____
Address Address

_____ _____

NOTE: Date of bond must not be prior to date of contract. If CONTRACTOR is a partnership, all partners should execute bond.

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

1.5.9 PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

_____
Name of Contractor

_____
Address of Contractor

a _____ hereinafter called Principal, and Corporation, Partnership or Individual

_____
Name of Surety

_____
Address of Surety

hereinafter called Surety, are held and firmly bound unto the City of Evans, 1100 37th Street, Evans, Colorado 80620 hereinafter called "CITY", in the penal sum of $_____ in a lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the CITY, dated the _____ day of _____ 2016, a copy of which is hereto attached and made a part hereof for the construction of:

49th Street, Brantner Road and Industrial Parkway Project

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

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or to the work or to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on time, alteration or addition to the terms of the contract or to the work or to the specifications.

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

IN WITNESS WHEREOF, this instrument is executed in _____ (number) counterparts, each one of which shall be deemed an original, this the _____ day of _____ 2016.

ATTEST:

_____
Principal

_____ By _____ (S)
Principal Secretary

(SEAL)

_____
Witness as to Principal

_____
Address

ATTEST:

_____
Surety Secretary

(SEAL)

_____ By _____
Witness as to Surety Attorney-in-Fact

_____ _____
Address Address

_____ _____

\NOTE: Date of bond must not be prior to date of contract. If CONTRACTOR is a partnership, all partners should execute bond.

IMPORTANT: Surety companies executing bonds for must appear on the Treasury Department's most current list (circular 570, as amended) and be authorized to transact business in the state where the project is located.

1.5.10 NOTICE TO PROCEED

TO: _____ DATE: _____

_____

_____

_____

Project: **49th Street, Brantner Road and Industrial Parkway Project**

You are hereby notified to commence work in accordance with the Agreement dated **{Agreement Date}**, on or before **{Start Date}**, and the date of Substantial Completion is_____, and the date of readiness for final payment is _____ [(or) the number of days to achieve Substantial Completion is _____, and the number of days to achieve readiness for final payment is _____].

THE CITY OF EVANS

By _____

Title Director of Public Works

1.5.11 ACCEPTANCE OF NOTICE

Receipt of the above Notice to Proceed is hereby acknowledged by

_____

_____

this the __day of _____, 2016.

By _____

Title_____

1.5.12 CHANGE ORDER

CHANGE ORDER NO. _____
DATE: _____

PROJECT: **49th Street, Brantner Road and Industrial Parkway Project**

TO (CONTRACTOR): _____

JUSTIFICATION: _____

You are directed to make the following changes in the work. All other terms and conditions of the contract not expressly modified hereby shall remain in full force and effect.

The original contract sum was	$ _____
Net change by previous change orders	$_____
The contract sum prior to this Change Order was	$_____
The contract sum will be (increased) (decreased) or (unchanged) by this Change Order	$_____
The contract sum including this Change Order will be	$_____
The new contract time will be (increased) (decreased) or (unchanged) by (___) days.	

The date of completion as of the date of this Change Order is therefore _____, 2016.

ACCEPTED BY:

_____
Contractor

Address

By_____

Date_____

ORDERED BY:

The City of Evans
1100 37th Street
Evans, CO 80620

By _____

Date _____

1.5.13 NOTICE OF CONTRACTOR'S SETTLEMENT

This is to notify all persons interested that the City of Evans, Colorado will make final payment to **{Contractor's Name}** for work completed on **49th Street, Brantner Road and Industrial Parkway Project.**

Said final payment will be made on **{Final Payment Date}**.

Anyone having claims in conjunction with this project may file same with the undersigned no later than **{Wednesday Before Final Payment Date}**.

CITY OF EVANS

By _____

Dated: _____

The Greeley Tribune

1.5.14 FINAL RECEIPT AND GUARANTEE

CITY OF EVANS
Date: _____

Received this date of **{Final Payment Date}**, as full and final payment of the cost of improvements provided for in the Contract executed by **{Contractor's Name}** and Payee on or about **{Agreement Date}**, together with all amendments, change orders, and additions thereto, the sum of Dollars ($**{Final Payment Amount}**), by checking, being the remainder of the full amount accruing to the undersigned by virtue of said contract and extra work performed thereunder, said payment covering and including full payment for the cost of all extra work and material furnished by the undersigned in the construction of said improvements, and all incidentals thereto, for the additional consideration of One Dollar ($1.00) for the execution hereto, and the undersigned hereof releases the City of Evans from any claims whatsoever resulting from said contract and all work performed thereunder.

The undersigned by these present certifies that all persons doing work upon or furnishing materials for said improvements under the foregoing contract and all additions thereto have been paid in full. The undersigned further certifies that all work has been completed in a workmanlike manner in conformity with the plans and specifications. That should any portion of said work or material prove defective within **two (2) years** from the date of initial acceptance of the entire project by the CITY, the undersigned shall replace any such defective material and remedy any such defective work to the satisfaction of the City of Evans and shall defend, indemnify, expenses, and charge of every kind which may arise as a result of any such defective material and workmanship during said period. **The Performance and Payment Bonds for this contract shall remain in effect for the period of the guarantee.**

49th Street, Brantner Road and Industrial Parkway Project

Signature: _____

Name: _____

Title: _____

1.6 INSURANCE REQUIREMENTS

The CONTRACTOR shall secure and maintain such insurance policies as will protect itself, its subcontractors, and the City of Evans, from claims for bodily injuries, death or property damage, which may arise from operations under this contract whether such operations be by himself or by any subcontractor or anyone employed by them directly or indirectly. The following insurance policies are required:

(a) Statutory Worker's Compensation

(b) Commercial General Liability

General Aggregate	$1,200,000
Products/ (Completed Operations Aggregate)	$1,200,000
Each Occurrence	$ 600,000
Personal & Advertising Injury	$ 600,000
Fire Damage	$ 50,000
Medical Expense	$ 5,000

(c) Automobile Liability

Bodily Injury and Property Damage/ (Combined Single Limit)	$ 600,000

(d) Builders Risk/Installation Floater — Full Replacement Cost

Be written on a Builder's Risk "All-Risk" or on Peril or Special Causes of Loss policy form that shall at least include insurance for physical loss and damage to the Work, temporary buildings, false work, and Work in transit and shall insure against at least the following perils: fire, lightning, extended coverage, theft, vandalism and malicious mischief, collapse, debris removal, demolition occasioned by enforcement of laws and regulations, water damage.

The Certificate of Insurance must show the City of Evans, as Additional Insureds.

All policies shall be for not less than the amounts set forth above or as stated in the Special Conditions. Other forms of insurance shall also be provided if called for by the Special Conditions.

Certificates or copies of policy of such insurance shall be filed with the CITY and shall be subject to its approval as to adequacy of protection, within the requirements of the specifications. Said Certificates of Insurance shall contain a 30-day written notice of cancellation in favor of the CITY.

ARTICLE 2.0

GENERAL CONDITIONS

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2.1 DEFINITIONS

(a) The Contract Documents shall consist of the Advertisement for Bids, Information for Bidders, Non-Collusion Statement, Bid Proposal, Bid Bond, Notice of Award, Agreement, Performance Bond, Payment Bond, Insurance Requirements, Notice to Proceed, Change Order, Notice of Contractor's Settlement, Final Receipt and Guarantee, and Special and General Conditions, Project Specifications and Bid Plans including all modifications thereof incorporated in any of the documents before and after the execution of the Contract.

(b) The CITY and the CONTRACTOR are those named as such in the Agreement. They are treated through the Contract Document as if each were of singular number and masculine gender.

(c) Wherever in this Contract the word "ENGINEER" is used, it shall be understood as referring to the City Engineer, acting personally or through any assistants or assigns.

(d) Any written notice served pursuant to the terms of the Agreement shall be deemed to have been duly served as if delivered in person or by registered mail to the individual, or to a partner, or to an officer of the corporation for whom it is intended, or any authorized representative thereof.

(e) The term "subcontractor" shall mean anyone, other than the contractor, who furnished at the site, under an agreement with the CONTRACTOR, labor, or labor and materials, or labor and equipment, but shall not include any person who furnished services of a personal nature.

(f) Work shall mean the furnishing of all labor, materials, equipment, and other incidentals necessary to the successful completion of the Contract and the carrying out of all duties and obligations imposed by the Contract.

(g) Extra work shall mean such additional labor, materials, equipment, and other incidentals as are required to complete the Contract for the purpose for which it was intended, but was shown on the Drawings or called for in the Specifications, or is authorized by the CITY in addition to that work called for in the Project Specifications and Bid Plans.

(h) Dispute shall mean lack of agreement between any parties that have any obligations, duties, or responsibilities under the terms of the Project Specifications and Bid Plans.

(i) Mobilization shall consist 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 offices, buildings and other facilities necessary for work on the project; and for all other work land operations which must be performed in order to begin work on the various items on the project site.

2.1.1 ABBREVIATIONS

Wherever the following abbreviations are used in these general conditions, supplemental conditions, project specifications and bid plans, they are to be construed the same as the respective expressions represented.

AASHTO	American Association of State Highway and Transportation Officials
AAN	American Association of Nurserymen
AB	Aggregate Base
Aban	Abandon
ABC	Aggregate base course
AC	Asphalt cement or concrete
ACB	Asphalt concrete base
ACI	American Concrete Institute
ACP	Asbestos cement pipe
ACPA	American Concrete Pipe Association
ACWS	Asphalt concrete wearing surface
AGC	Associated General Contractors of America, Inc.
Agg	Aggregate
Ahd	Ahead
AIA	American Institute of Architects
AIEE	American Institute of Electrical Engineers
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute
APA	American Plywood Association
Approx	Approximate
APWA	American Public Works Association
AR	Aged residue
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
Asph	Asphalt
ASTM	American Society for Testing Materials
Ave	Avenue
AWPA	American Wood Preservers Association
AWSC	American Welding Society Code
AWWA	American Water Works Association
Bbl	Barrel
BC	Beginning of curve
BCR	Beginning of curb return
Beg	Beginning
Bk	Book or Back
Blvd	Boulevard
BM	Bench Mark or Board Measure
Brg	Bearing
BST	Bituminous Surface Treatment

BTB	Bituminous Treated Base
BTU	British Thermal Units
BVC	Beginning of vertical curve
BVCE	Beginning of vertical curve elevation
BVCS	Beginning of vertical curve station
C	Centigrade or Curb
CB	Catch Basin
CBF&C	Catch basin frame & cover
CC or C/C	Center to Center
CCA	Colorado Contractor's Association, Inc.
CDOT	Colorado Department of Transportation
CE	City or County Engineer
Cem	Cement
CF	Curb face
cfs	Cubic Feet per second
CIP	Cast Iron pipe
CIPP	Cast-in-place concrete pipe
CL or C	Centerline
Cm	Centimeter
CMP	Corrugated metal pipe
CO	Clean out
Col	Column
Conc	Concrete
Const	Construct
CP	Concrete pipe(non-reinforced)
CRS	Colorado Revised Statutes
CTB	Cement Treated Base
Cu	Cubic
CY	Cubic Yards
Deg	Degree
DF	Douglas Fir
DG	Decomposed granite
Dia	Diameter
Dim	Dimension
DIP	Ductile Iron Pipe
Div	Division
Dr	Drive
DRCOG	Denver Regional Council of Governments
Drwg	Drawing
Dwy	Driveway
Ea	Each
Ease	Easement
E	East
EC	End of curve

ECR	End of curb return
El or Elv	Elevation
Equa or Eq	Equation
EVC	End of vertical curve
EVCE	End of vertical curve elevation
EVCS	End of vertical curve station
Ex or Exist	Existing
F	Fahrenheit
FB	Field Book
F & C	Frame & cover
FH	Fire hydrant
FL or F	Floor line or flow line
FlEl	Floor Elevation
Fnd	Found
fps	Feet per second
FS	Finished surface
FSS	Federal Specifications and Standards
Ft	Foot or feet
G	Gutter
Ga	Gage
Galv	Galvanized
GL	Ground line
gpm	Gallons per minute
Gr	Grade
H	High or height
HC	House connection
Hdwl	Headwall
Horiz	Horizontal
Hwy	Highway
ID	Improvement District or inside diameter
IE	Invert Elevation
IEEE	Institute of Electrical and Electronic Engineers
In	Inch
Inv	Invert
IP	Iron Pipe
IPS	Iron Pipe Size
Irrig	Irrigation
Jt	Joint
JC	Junction Chamber
Jct	Junction
JS	Junction Structure

L	Length
Lb	Pound
L&T	Lead and tack
LD	Local depression
LF	Linear Feet
LH	Lamp hole
Lin	Linear
Long	Longitudinal
Lt	Left
M	Map or maps
Max	Maximum
Meas	Measured
MH	Manhole
MHF&C	Manhole frame and cover
Min	Minutes or minimum
Misc	Miscellaneous
MLorM	Monument line
Mm	Millimeter
Mon	Monolithic or monument
MTD	Multiple tile duct
MUTCD	Manual of Uniform Traffic Control Devices
N	North
NBS	National Bureau of Standards
NCPI	National Clay Pipe Institute
NE	Northeast
NEC	National Electric Code
NEMA	National Electrical Manufacturer's Association
NFPA	National Fire Protection Association
NP	Non-plastic
NPI	Non pay item
NSC	National Safety Council
NSF	National Sanitation Foundation
NW	Northwest
No	Number
OC	On center
OD	Outside diameter
Oz	Ounces
PC	Point of curvature
PCR	Point of curb return
PCC	Point of compound curve or Portland Cement Concrete
PI	Point of intersection or plastic index
PL	Property line
POC	Point of Curve

POS	Point of Spiral
PP	Power pole
ppm	Parts per million
PRC	Point of reverse curve
Prod	Proposed or property
psi	Pounds per square inch
psf	Pounds per square foot
PTorPOT	Point of Tangent
P&TP	Power and telephone pole
Pvmt	Pavement
Q	Rate of flow
R	Radius
RC	Reinforced concrete
RCP	Reinforced concrete pipe
Rd	Road
Rdwy	Roadway
Reinf	Reinforced, Reinforcing
Ret Wall	Retaining Wall
RGRCP	Rubber Gasket Reinforced Concrete Pipe
rpm	Revolutions Per Minute
Rt	Right
R/W or Row	Right-of-way
S	South or slope
SAE	Society of Automotive Engineers
San	Sanitary
SC	Spiral to Curve
SCCP	Steel cylinder concrete pipe
SD	Storm drain or Sewer District
SDDTC	Storm Drainage Design and Technical Criteria
Sdl	Saddle
Sec	Seconds
Sect	Section
SE	Southeast
SF	Square feet
Sht	Sheet
Spec	Specifications
SPR	Simplified Practice Recommendation
SpMH	Special manhole
Sq Ft Yd	Square Foot, Yard
SS	Sanitary sewer
St	Street
Sta	Station
Std	Standard
Str gr	Structural grade

Struct	Structure or structural
SW	Southwest
SY	Square Yard
T	Tangent Distance
Tel	Telephone
Temp	Temporary
TH	Test hole
TP	Telephone pole
Tr	Tract
Trans	Transition
TS	Traffic signal or Tangent to spiral
TSC	Traffic signal conduit
Typ	Typical
UD & FCD	Urban Drainage and Floor Control District
USDCM	Urban Storm Drainage Criteria Manual
UL	Underwriters Laboratories
USC&GS	United States Coast and Geodetic Survey
USGS	United States Geological Survey
V	Velocity of flow
VC	Vertical curve
VCP	Vitrified clay pipe
Vert	Vertical
W	West or width
WI	Wrought iron
WS	Wearing surface
Wt	Weight
Yd	Yard
'	feet or minutes
"	inches or seconds
o	degrees
%	percent
#	number or pound
@	at
/	per
=	equals

2.1.2 GENERAL DEFINITIONS AND TERMS:

Whenever in these specifications or in other contract documents the following terms or pronouns in place of them are used, the intent and meaning shall be interpreted as follows:

Addendum: A Supplement to any of the Contract Documents issued, in writing, after advertisement of but prior to the opening of bids for a contract.

Advertisement: The public announcement, as required by law, inviting bids for work to be performed or materials to be furnished.

Agency: The government agency for which the construction is being done, either by permit or contract.

Agreement: The written agreement between OWNER and CONTRACTOR covering the Work to be performed; other Contract Documents are made a part thereof as provided therein.

Application for Payment: The form accepted by the ENGINEER which is to be used by CONTRACTOR in requesting progress or final payment and which is to include such supporting documentation as required by the Contract Documents.

Award: The formal action of the governing body in accepting a proposal.

Backfill: Material placed in an excavated space to fill such space. For trenches this space will be the area from 1 foot above the top of the pipe or conduit to the existing or proposed finished grade of pavement.

Base Course: The upper course of the granular base of a pavement or the lower course of an asphalt concrete pavement structure.

Bedding: Is the material placed in the area from the bottom of the trench to 1 foot above the top of the pipe or conduit.

Bid: The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

Bidder: Any qualified individual, firm, partnership, corporation or combination thereof, acting directly or through a duly authorized representative who legally submits a proposal for the advertised work.

Bond Issue Project: A project financed from bonds issued by the CITY pledging credit or a revenue resource.

Bridge: A structure, including supports, erected over a depression or an

obstruction, as water, highway, or railway, and having a track or passageway for carrying traffic or other moving loads and having a length measured along the center of roadway of more than 20 feet between undercopings of abutments or extreme ends of openings for multiple boxes.

(Length) The length of a bridge structure is the over-all length measured along the line of survey stationing back to back of backwalls of abutments, if present, otherwise end to end of the bridge floor; but in no case less than the total clear opening of the structure.

(Roadway Width) The clear width measured at right angles to the longitudinal centerline of the bridge between the bottom of curbs or guard timbers or in the case of multiple height of curbs, between the bottom of the lower risers.

Budget Project: A project financed by funds from General Tax levies and shared revenue funds set aside in the annual budget adopted by the Evans City Council.

Building: Any structure built for the support, shelter, or enclosure of persons, animals, chattel or movable property.

Building Code: A regulation adopted by the governing body establishing minimum standards of construction for the protection of the public health, safety, and welfare in terms of measured performance rather than in terms of rigid specifications of materials and methods.

Calendar Day: Every day shown on the calendar.

Change Order: A written order issued by the ENGINEER to the CONTRACTOR to make changes in the work or to perform extra work, and setting forth conditions for payment and/or adjustment in time of completion.

City: A municipal corporation, organized and existing under and by virtue of the laws of the State of Colorado.

City Clerk: The duly authorized person who performs the duties of clerk for the Contracting Agency.

Completion Time: The number of calendar days for completion of an act, including authorized time extensions. In case a calendar date of completion is shown in the proposal in lieu of the number of calendar days, the contract shall be completed by that date. The time within which an act is to be done shall be computed by excluding the first and including the last day; and if the last day be Sunday or a legal holiday, that shall be excluded.

Conflicting Utility Line: An existing utility line, shown or not shown on the drawings, is a conflicting line when any part falls within the trench pay widths as listed or within the dimensions, as shown on the drawings, for appurtenant

structures.

Construction Project: The erection, installation, remodeling, alteration, of durable facilities upon, under, or over the ground. This shall include, but is not limited to buildings, roadways and utility pipes, lines, poles or other structures.

Contingent Bid Item: This is a minor bid item which is likely, but not certain, to occur during the course of work. If the ENGINEER determines that this work is required, the CONTRACTOR will accomplish the work and payment will be made based on the contingent unit bid price included in the proposal. Since the quantity listed in the proposal is primarily for bid comparison, the amount of work required by the ENGINEER may vary materially from this.

Contract: The written instrument executed by the CONTRACTOR and the Contracting Agency by which the CONTRACTOR is bound to furnish all labor, equipment, and materials and to perform the work specified, and by which the Contracting Agency is obligated to compensate the CONTRACTOR therefore at the prices set forth therein. The Contract Documents are herewith by reference made a part of the contract as if fully set forth therein.

Contract Documents: The Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR's Bid (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Bonds, these General Conditions, the Supplementary Conditions, the Project Specifications and Bid Plans, City of Evans Street Standards as the same are more specifically identified in the Agreement, together with all amendments, modifications and supplements issued on or after the Effective Date of the Agreement.

Contracting Agency: The legal entity that has contracted for the performance of the work or for whom the work is being performed.

Contractor: The individual, firm, partnership, corporation or combination thereof entering into a contract with the Contracting Agency to perform the advertised work.

Council: The City Council that by law constitutes the Legislative Department of the City organized and existing under and by virtue of the laws of the State of Colorado.

Culvert: Any structure not classified as a bridge, which provides an opening under or adjacent to the roadway.

Days: Unless otherwise designated, days will be understood to mean calendar days.

Emergency: Unforeseen occurrences and combinations of circumstances involving the public welfare or the protection of work already done under the Contract Documents, or which endanger life or property and call for immediate action or

remedy.

Engineer: The person, appointed as ENGINEER by the CITY acting directly or through his duly authorized representative.

Equipment: (Construction)-All machinery and equipment, together with the necessary supplies for upkeep and maintenance, and also tools and apparatus necessary for the proper construction and acceptable completion of work.

(Installed)-All material or articles used in equipping a facility as furnishings or apparatus to fulfill a functional design.

Extra Work: An item of work not provided for in the contract as awarded but found essential to the satisfactory completion of the contract within its intended scope.

Field Order: A written set of emergency instructions to the CONTRACTOR issued only where the time required for preparation and execution of a formal Change Order would result in a delay or a stoppage of work, or would allow a hazardous condition to exist.

Flooding: Flooding will consist of the inundation of the entire lift with water, puddled with poles or bars to insure saturation of the entire lift.

Foundation: For buildings or structures, this will be the substructure. For pipe this will be the native material or prepared material on which the pipe rests; normally, this is the bottom grade line of the trench.

Full Depth Pavement: An asphalt concrete pavement structure in which the granular base and sub-base are replaced by equivalent structural thickness of asphalt concrete.

General Conditions: Uniform general specifications adopted as standard specifications by the ENGINEER.

Holiday: Holidays recognized by collective bargaining agreements in the State of Colorado are:

New Year's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

Additional holidays recognizable by the State of Colorado Cities and Counties are:

Martin Luther King's Birthday
Presidents Day
Columbus Day

Veteran's Day
General Election Day in even-numbered years

When New Year's Day, Independence Day or Christmas Day fall on Sunday, the following Monday shall be considered a holiday.

Additional legal holidays, when designated by the State Governor or President of the United States, will also be recognized by the State, City and/or County.

Improvement District Project: A project financed by assessments against the property included in a special assessment district authorized under, or implemented by an act of the legislature of the State and/or a procedural ordinance of the City or County.

Inspector: The ENGINEER's authorized representative assigned to make detailed inspections of contract performance.

Jetting: Jetting is the densification of material, using a continuous supply of water, under pressure, transmitted to the material through a rigid pipe of sufficient length to reach the bottom of the lift being densified. In all cases, the entire lift will be completely saturated working from the top to the bottom.

Laboratory: The established materials testing laboratory of the Contracting Agency's Engineering Department, or other laboratories acceptable to and/or authorized by the ENGINEER to test materials and work involved in the Contract.

Liquidated Damages: A daily charge made against the CONTRACTOR for each working day, including free time, that any work shall remain uncompleted after elapse of Contract time.

Major Item: Any item of work and/or materials having an original contract value that exceeds ten percent of the amount of the original contract.

Materials: Any substance specified in the project, equipment and other material used or consumed in the performance of the work.

Median: The portion of a divided highway separating the roadways used by traffic going in opposite directions.

Method of Measurement: The manner in which a "Pay Item" is measured to conform to the "Pay Unit."

Non Pay Item: An item of work for which no separate payment will be made under the proposal, but which must be included as an incidental cost for payment on an associated pay item included in the proposal.

Notice of Award: A letter from the CITY advising the CONTRACTOR that he is the

successful Bidder and the Evans City Council has accepted his proposal.

Notice to Bidders: The standard forms inviting proposals or bids.

Notice to Proceed: A directive issued by the Engineer, authorizing the CONTRACTOR to start the work or improvements required in the Contract.

Obligee: One to whom another is obligated. For bonding purposes, the OWNER is the obligee.

Open Trench: The excavated area shall be considered as open trench until all the aggregate base course for pavement replacement has been placed and compacted or, if outside of a pavement area, until the excavated area is brought to finish grade or natural grade.

Owner: City of Evans, State of Colorado, acting through its legally constituted officials, officers or employees.

Pavement: Any surface of streets, alleys, sidewalks, courts, driveways, etc., consisting of mineral aggregate bound into a rigid or semi-rigid mass by a suitable binder such as, but not limited to, portland cement or asphalt cement.

Pavement Structure: The combination of sub-base, base course, and surface course placed on a sub-grade to support the traffic load and distribute it to the roadbed.

Pay Item: A detail of work for which individual payments are to be made under the Contract, as specified in the proposal.

Payment Bond: The security provided by the CONTRACTOR solely for the protection of claimants, supplying labor and materials to the CONTRACTOR or his Subcontractors.

Performance Bond: The security by the CONTRACTOR solely for the protection of the Contracting Agency and conditioned upon the faithful performance of the contract in accordance with the contract documents, drawings, specifications and conditions thereof.

Permit: The license to do construction in public rights-of-way and/or easements; issued by an Agency to a CONTRACTOR working for another party.

Plans: All approved drawings or reproductions thereof pertaining to the work and details therefor, which are made a part of the Project Manual and Contract Documents.

Plant: The Contractors' and/or subcontractors' facilities, including but not limited to small tools and mobile equipment, located on and/or offsite, necessary for

preparation of materials and prosecution of work for the project.

Principal: The individual, firm or corporation primarily liable on an obligation, as distinguished from a surety.

Profile Grade: The trace of a vertical plane intersecting the top surface of the proposed wearing surface, usually along the longitudinal centerline of the roadbed. Profile grade means either elevation or gradient of such trace according to the context.

Project: A specific coordinated construction or similar undertaking identified by a single project number and bid and awarded as one contract. On occasion two or more projects may be bid and awarded as a single contract.

Project Manual: All the integral documents of the contract including but not limited to, Contract Documents, General Conditions, Supplemental Conditions, Project Specifications and Bid Plans.

Project Supplemental Conditions: See definition for Supplemental Conditions.

Proposal: The offer of a bidder on the prescribed form, to perform the work and to furnish the labor and materials at the prices quoted.

Proposal Form: The approved form on which the Contracting Agency requires bids to be prepared and submitted for the work.

Proposal Guarantee: The security furnished with a bid to guarantee that the bidder will enter into the contract if his bid is accepted.

Proposal Pamphlet: The book or pamphlet pertaining to a specific project, containing proposal forms, special provisions and other information necessary for and pertinent to the preparation of the proposal or bid.

Referred Documents: On all work authorized by the Contracting Agency, any referenced documents in the specification, i.e., Bulletins, Standards, Rules, Methods of Analysis or test. Codes and Specifications of other Agencies, Engineering Societies or Industrial Associations, refer to the Latest Edition thereof, including Amendments, which are in effect and published at the time of Advertising for Bids or the issuing of a permit for the work, unless otherwise stated.

Resident Project Representative: The authorized representative of ENGINEER who may be assigned to the site or any part thereof. Also called the Inspector.

Reasonably Close Conformity: Compliance with reasonable and customary manufacturing and construction tolerances where working tolerances are not specified. Where working tolerances are specified, reasonably close conformity means compliance with such working tolerances.

Right-of-Way: A general term denoting, land, property or interest therein, usually in a strip, acquired for or devoted to a street, highway, or other public improvement.

Road: A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.

Roadside: A general term denoting the area adjoining the outer edge of the roadway. Extensive areas between the roadways of a divided highway may also be considered roadside.

Roadside Development: Those items necessary to the complete roadway that provide for the preservation of landscape materials and features; the rehabilitation and protection against erosion of all areas disturbed by construction through seeding, sodding, mulching and the placing of other ground covers; such suitable planting and other improvements as may increase the effectiveness and enhance the appearance of the roadway.

Roadway: The portion of the right-of-way intended primarily for vehicular traffic, and including all appurtenant structures and other features necessary for proper drainage and protection. Where curbs exist, it is that portion of roadway between the faces of the curbs.

Salvageable Material: Material that can be saved or salvaged. Unless designated or directed by the ENGINEER or shown on the drawings, all salvageable material shall remain the property of the CONTRACTOR.

Sewers: Conduits and related appurtenances employed to collect and carry off water and waste matter to a suitable point of final discharge.

Shop Drawings: Drawings or reproduction of drawings, detailing; fabrication and erection of structural elements, falsework and forming for structures, fabrication of reinforcing steel, installed equipment and installation of systems, or any other supplementary drawings or similar data, which the CONTRACTOR is required to submit for approval.

Shoulder: The portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of base and surface courses.

Sidewalk: That portion of the roadway primarily constructed for the use of pedestrians.

Supplemental Conditions: The special conditions, requirements, additions, and/or revisions to the General Conditions and Standard Specifications, applicable to the work, to cover conditions or requirements peculiar to the project under consideration. Supplemental Conditions fall within one of the two following

categories and take precedence over the General Conditions.

(a) Project Special Conditions. Special Conditions peculiar to the project and not otherwise thoroughly nor appropriately set forth in the general conditions or standard specifications or bid plans or drawings.

(b) Standard Special Conditions. Special directions or requirements not otherwise thoroughly or appropriately set forth in the standard specifications, and which are peculiar to a selected group of projects or which are intended for temporary use.

Specifications: The descriptions, directions, provisions, and requirement for performing the work as contained in the Contract Documents.

State: The State of Colorado.

Standard Details: Uniform detail drawings of structures or devices adopted as Standard Details by the ENGINEER.

Standard: Uniform general specifications adopted as Standard Specifications by the ENGINEER.

Storm Drain: Any conduit and appurtenance intended for the reception and transfer of stormwater.

Street: Streets, avenues, alleys, highways, crossings, lanes, intersections, courts, places, and grounds now open or dedicated or hereafter opened or dedicated to public use and public ways.

Structures: Bridges, culverts, catch basins, drop inlets, retaining walls, cribbing, manholes, endwalls, sewers, service pipes, underdrains, foundation drains, fences, swimming pools, and other features which may be encountered in the work and not otherwise classed herein.

Sub-base: The lower course of the base of a roadway, immediately above the sub-grade.

Subcontractors: Those having direct contracts with the CONTRACTOR and those who furnish material worked into a special design according to the Project Specifications and Bid Plans for the work, but not those who merely furnish material not so worked.

Sub-grade: The supporting structures on which the pavement and its special undercourses rest.

Substantial Completion: The work (or a specified part thereof) has progressed to the point where, in the opinion of ENGINEER and OWNER as evidenced by a letter

of Substantial Completion, it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it was intended. The terms "substantially complete" and "substantially completed" as applied to any work refer to Substantial Completion thereof. The work must meet the following criteria for Substantial Completion to apply:

- X At least 90% of all pay items have been completed and are eligible for payment.
- X The facilities constructed by CONTRACTOR are ready for use.
- X All traffic features have been completed.
- X A list of incomplete work items has been issued by the OWNER or ENGINEER to the CONTRACTOR and the CONTRACTOR has accepted and acknowledges the list.

Substructure: All of that part of the structure or building below the bearings of simple and continuous spans, skewbacks of arches and tops of footings of rigid frames, together with the backwalls, wingwalls, and wing protection railings.

Superintendent: The Contractor's authorized representative in responsible charge of the work.

Superstructure: The entire structure or building except the substructure.

Supplemental Specifications: Additions and revisions to the Standard Specifications that are adopted subsequent to issuance of the printed Project Manual.

Surety: The individual, firm or corporation, bound with and for the CONTRACTOR for the acceptable performance, execution, and completion of the work, and for the satisfaction of all obligations incurred.

Surface Course: The finish or wearing course of an asphalt concrete pavement structure.

Title or Headings: The titles or headings or the sections and subsections herein are intended for convenience of reference and shall not be considered as having any bearing on their interpretation.

Township, City, Town or District: A subdivision of the COUNTY used to designate or identify the location of the proposed work.

Traveled Way: The portion of the roadway for the movement of vehicles, exclusive of shoulders and auxiliary lanes.

Utility: Pipe lines, conduits, ducts, transmission lines, overhead or underground wires, railroads, storm drains, sanitary sewers, irrigation facilities, street lighting traffic signals, and fire alarm systems, and appurtenances of public utilities and

those of private industry, businesses or individuals solely for their own use or use of their customers which are operated or maintained in, on, under, over or across public right-of-way or public or private easement.

Waterworks (Water Supply System): The reservoirs, pipe lines, wells, pumping equipment, purification works, mains, service pipes, and all related appliances and appurtenances utilized in the procurement, transportation and delivery of an adequate, safe, and palatable water supply for the Contracting Agency.

Work: Any of all of the improvements mentioned and authorized to be made, and the construction, demolition, reconstruction, and repair of all or any portion of such improvements, and all labor, services, incidental expenses, and material necessary or incidental thereto.

Working Day: A calendar day, exclusive of Saturdays, Sundays and Contracting Agency recognized legal holidays, on which weather and other conditions not under the control of the CONTRACTOR will permit construction operations to proceed for the major part of the day with the normal working force engaged in performing the controlling item or items of work which would be in progress at that time.

2.2 GENERAL CONTRACT REQUIREMENTS

2.2.1 FAMILIARITY WITH WORK

The CITY has endeavored to ascertain all pertinent information regarding site conditions, and subsurface conditions, and has, to the best of his ability, furnished all such information to the CONTRACTOR. Such information is given, however, as being the best factual information available to the CITY, but is advisory only. The CONTRACTOR, by careful examination, shall satisfy himself as to the nature and location of the work, the character of equipment and facilities needed preliminary to and during the prosecution of the work, the general and local conditions, and all other matters that can in any way affect the work under this Contract.

Bidder shall examine the site of the proposed work and all documents pertaining to the work. It is mutually agreed that the submission of a proposal shall be considered prima facie evidence that the bidder has made such examination and is familiar with the character, quality and quantity of the work to be performed and material to be furnished.

Logs of test hole, ground water levels, and any accompanying soil reports as furnished by the Contracting Agency are furnished for general information only. The field condition so set forth shall not constitute a representation or warranty, expressed or implied, that such conditions are actually existent. Bidders shall make their own investigations and form their own estimates of the site conditions. After the submission of the proposal, no complaint or claim that there was any misunderstanding as to the quantities, conditions or nature of the work will be entertained.

2.2.2 CHANGED CONDITIONS

The CONTRACTOR shall promptly, and before such conditions are disturbed, except in the event of any emergency, notify the CITY in writing of: (1) Subsurface or latent physical conditions at the site differing materially from those indicated in this Contract; or (2), previously unknown physical or other conditions at the site, of an unusual nature, not generally recognized as inherent in work of the character provided for in this Contract. The ENGINEER shall promptly investigate the conditions, and if he finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or the time required for, performance of this Contract, an equitable adjustment shall be made and the Contract modified in writing accordingly. Any claim of the CONTRACTOR for adjustment hereunder shall not be allowed unless he has given notice as above required, provided that the ENGINEER may, if he determines the facts so justify, consider and adjust any such claims assessed before the date of final settlement of the Contract. If the parties fail to agree upon the adjustment to be made, the dispute shall be determined as provided in Paragraph 2.2.33 hereof.

2.2.3 ORDER OF COMPLETION

The CONTRACTOR shall submit, at such times as may reasonably be requested by the ENGINEER, schedules which shall show the order in which the CONTRACTOR proposes to carry on the work, with dates at which the CONTRACTOR will start the several parts. The special provisions or plans may require that certain phases or parts of the work be completed first or in a certain order. If the CONTRACTOR elects to use PERT or CPM charts, he shall furnish copies of them to the ENGINEER upon request.

2.2.4 DESIGN AND INSTRUCTIONS

It is agreed that the CITY will be responsible for the adequacy of design and Specifications. The CITY, through the ENGINEER, shall furnish Specifications, which adequately represent the requirements of the work to be performed under the Contract. All such instructions shall be consistent with the Contract Documents and shall be true developments thereof. Specifications that adequately represent the work to be done shall be furnished prior to the time of entering into the Contract. The ENGINEER may, during the life of the Contract, and in accordance with Paragraph 2.2.15, issue additional instructions, by means of drawings or other media, necessary to illustrate changes in the work.

2.2.5 SURVEYS

The CITY has provided a suitable number of bench marks adjacent to the work. From the information provided by the CITY, the CONTRACTOR shall develop and make all detail surveys needed for construction, such as slope stakes, batter boards, stakes for pile locations, and other working points, lines, and elevations. The CONTRACTOR shall be responsible for any mistakes made in his detail surveys.

The CONTRACTOR shall carefully preserve bench marks, reference points and stakes, and in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their necessary loss or disturbance.

2.2.6 CLAIMS

If the CONTRACTOR claims that any instructions by drawings or otherwise, issued after the date of the Contract, involve extra cost under the Contract, he shall give the ENGINEER written notice thereof within ten (10) days, after the receipt of such instruction, and in any event before proceeding to execute the work, except emergency endangering life or property, and the procedure shall than be as provided for changes in the work. No such claim shall be valid unless so made.

2.2.7 EXECUTION AND CORRELATION OF DOCUMENTS

The Agreement shall be signed in duplicate by the CITY and the CONTRACTOR.

The Contract Documents are complimentary and what is called for by anyone shall be as binding as if called for by all. In case of conflict between Bid Plans and Specifications, the

Specifications shall govern. Special Specifications shall govern over Standard Specifications. Materials or work described in words which so applied have a well-known technical or trade meaning shall be held to refer to such recognized standards.

2.2.8 MATERIALS AND APPLIANCES

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

2.2.9 EMPLOYEES

The CONTRACTOR shall, at all times, enforce strict discipline and good order among his employees, and shall seek to avoid employing, for the Contract, any unfit person or anyone not skilled in the work assigned to him.

Adequate sanitary facilities shall be provided by the CONTRACTOR.

Employees of the CONTRACTOR and/or any subcontractor working on the project shall not be considered as employees of the City of Evans, nor shall they be entitled to any of the benefits provided to City of Evans employees.

2.2.10 ROYALTIES AND PATENTS

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

2.2.11 PERMITS, LICENSES AND REGULATIONS

Permits and licenses of a temporary nature, necessary for the prosecution of the work, shall be secured and paid for by the CONTRACTOR. Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the CITY, unless otherwise specified. The CONTRACTOR shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the work as drawn and specified. If the CONTRACTOR observes that the Specifications are at variance therewith, he shall promptly notify the ENGINEER in writing, and any necessary changes shall be adjusted in the Contract for changes in the work.

2.2.12 INSPECTION OF WORK

All materials and equipment used in the construction of the project shall be subject to adequate testing in accordance with generally accepted standards as required by the Contract Documents.

The CITY shall provide sufficient competent personnel, working under qualified supervision for the inspection of the work, while such work is in progress, to ascertain that the completed work will comply in all respects with the standards and requirements set forth in the Specifications. The inspection of the Contract will be as it relates to the compliance with the Specifications, quality of workmanship, and material. Notwithstanding such inspection, the CONTRACTOR will be held responsible for the acceptability of the work.

The ENGINEER and his representatives shall at all times have access to work whenever it is in preparation or progress, and the CONTRACTOR shall provide proper facilities for such access and for inspection.

If the Specifications, the ENGINEER's instructions, laws, ordinances, or any public authority require any work to be specially tested or approved, the CONTRACTOR shall give the ENGINEER timely notice to its readiness for inspection, and if the inspection is by an authority other than the ENGINEER, a date shall be fixed for such an inspection. Inspections by the ENGINEER shall be promptly made, and where applicable, at the source of supply. Any work required by the ENGINEER to be uncovered for examination shall be properly restored at the CONTRACTOR's expense unless the ENGINEER has unreasonably delayed inspection.

Re-examination of any work may be ordered by the ENGINEER, and if so ordered, the work must be uncovered by the CONTRACTOR. If such work is found to be in accordance with the Contract Documents, the CITY shall pay the cost of re-examination. If such work is not in accordance with the Contract Document, the CONTRACTOR shall pay such cost.

2.2.13 SUPERINTENDENTS

The CONTRACTOR shall keep on his work at all times during its progress, competent superintendents and/or responsible assistants. The superintendent shall represent the CONTRACTOR and all directions given to him shall immediately be confirmed in writing to the CONTRACTOR. Superintendent shall be named in writing by CONTRACTOR at the beginning of the work.

2.2.14 PRECONTRACT EXAMINATION AND DISCOVERY OF DISCREPANCIES DURING WORK

Before submitting his proposal, the CONTRACTOR will examine all construction plans and the entire and complete specifications. The CONTRACTOR will become well and fully informed as to the materials and the character of the work required, the relationship of all of the particular parts of the work, and he will visit and inspect the site, observing and examining the conditions existing.

After the execution of the Contract, no consideration will be granted for any misunderstanding of the materials to be furnished or the work to be done, it being mutually understood that the tender of the proposal carried with it an agreement to this end and all other conditions mentioned in the Contract and the Specifications, and implied a full and complete understanding of them and all construction plans, drawings, notes, indications,

and requirements.

Should anything be omitted from the construction plans or specifications necessary to the proper completion of the work herein described, it shall be the duty of the CONTRACTOR to so notify the CITY before signing the Contract, and in the event of failure of the CONTRACTOR to give such notice, he shall make good any damage or defect in his work caused thereby without extra charge. No allowance will be made for lack of full knowledge of all conditions, except such underground conditions as are determined after commencement of the work and were unknown to the CONTRACTOR.

If the CONTRACTOR, in the course of the work, finds any discrepancy between the Specifications and the physical conditions of the locality, or any errors or omissions in the layout as given by survey points and instruction, he shall immediately inform the ENGINEER, in writing, and the ENGINEER shall promptly verify the same. Any work done after such discovery, until authorized, will be done at the CONTRACTOR's risk, except in the event of an emergency.

2.2.15 CHANGES IN THE WORK

At any time by written order, the CITY may make changes in the Specifications or scheduling of the Contract within the general scope. All such work shall be executed under the time constraints of the original contract except that any claim for extension of time caused thereby shall be allowed and adjusted at the time of ordering such change or at such time as it can be ascertained.

In giving instruction, the ENGINEER shall have authority to make minor changes in the work not involving extra cost, and not inconsistent with the purpose of the work. Except in an emergency endangering life and property, no claim for an addition to the contract sum shall be valid unless the additional work was so ordered by the ENGINEER.

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

The CITY may at any time, as the need arises, order changes within the scope of the work without invalidating the Agreement. If such changes increase or decrease the amount due under the Contract Documents, or in the time required for performance of the work, the CONTRACTOR shall perform the same at the unit prices or lump sum indicated in the bid. Changes may occur to a maximum of twenty-five percent (25%) of the contract price. After exceeding twenty-five percent (25%), the applicable unit price or lump sum may be negotiable and an equitable adjustment shall be authorized by change order.

2.2.16 EXTENSION OF TIME

a. Extension of time stipulated in the Contract for completion of the work will be made when changes in the work occur, as provided in Paragraph 2.2.15; when the work is suspended as provided in Paragraph 2.2.17; and when the work of the CONTRACTOR is delayed on account of conditions which could not have been foreseen, or which were beyond the control of the CONTRACTOR, his subcontractors or suppliers, and which were not the result of their fault or negligence.

Extension of time for completion shall also be allowed for any delays in the progress of the work that in the opinion of the ENGINEER entitles the CONTRACTOR to an extension of time.

b. The CONTRACTOR shall notify the ENGINEER promptly of any occurrence or condition which in the CONTRACTOR's opinion entitles him to an extension of time. Such notice shall be in writing and shall be submitted in ample time to permit full investigation and evaluation of the CONTRACTOR's claim. Failure to provide such notice shall constitute a waiver by the CONTRACTOR of any claim.

2.2.17 SUSPENSION OF WORK

The CITY may at any time suspend the work, or any part thereof, by giving three (3) days' notice to the CONTRACTOR in writing.

2.2.18 THE CITY'S RIGHT TO TERMINATE CONTRACT

If the CONTRACTOR should be adjudged bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed as a result of his insolvency, or if he should persistently or repeatedly refuse or should fail, except for cases in which extensions of time are provided, to supply enough properly-skilled workmen or materials, or if he should fail to make payments to subcontractors or for materials or labor so as to affect the progress of the work or persistently be guilty of a substantial violation of the Contract, then the CITY, upon written notice from the ENGINEER that sufficient cause exists to justify such action and without prejudice to any other right or remedy, and after giving the CONTRACTOR and his Surety seven (7) days' written notice, terminate the employment of the CONTRACTOR and take possession of the premises and of all materials, tools, equipment and other facilities installed on the work and paid for by the CITY, and finish the work by whatever method the ENGINEER may be deem expedient. In such case, the CONTRACTOR shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price shall exceed the expense of finishing the work, including compensation for additional managerial and administrative services, such excess shall be paid to the CONTRACTOR. If such expense shall exceed such unpaid balance, the CONTRACTOR shall pay the difference to the CITY. The expense incurred by the CITY as herein provided, and the damage incurred through the CONTRACTOR's default, shall be certified by the ENGINEER.

Where the Contract has been terminated by the CITY, said termination shall not affect or terminate any of the rights of the CITY then existing or which may thereafter accrue because of such default as against the CONTRACTOR or his Surety. Any retention or

payment of moneys by the CITY due to the CONTRACTOR under the terms of the Contract, shall not release the CONTRACTOR or his Surety from liability for the CONTRACTOR's default.

2.2.19 CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE CONTRACT

If the work should be stopped under an order of any court, or other public authority, for a period of more than three (3) months, through no act or fault of the CONTRACTOR of an undisputed sum with forty-five (45) days of its maturity and presentation, then the CONTRACTOR may, upon seven (7) days' written notice to the ENGINEER, stop work or terminate this Contract and recover from the CITY payment for all work executed, plus any loss sustained upon any plant or materials, plus reasonable profit and damages.

2.2.20 CANCELLATION OF CONTRACT

Failure of the CONTRACTOR to comply with any of the requirements of the Contract and the Specifications may be considered as evidence of the inability on the part of the CONTRACTOR to maintain the quality and service standards deemed necessary, and shall be sufficient cause for the cancellation of the Agreement and the initiating of legal action against the Performance Bond of the CONTRACTOR.

2.2.21 CORRECTION OF WORK BEFORE FINAL PAYMENT

The CONTRACTOR shall promptly remove from the premises all materials and work condemned by the ENGINEER as failing to meet contract requirements, whether incorporated in the work or not, and the CONTRACTOR shall promptly replace and re-execute his own work in accordance with the Contract and without expense to the CITY and shall bear the expense of making good all work of other CONTRACTORS destroyed or damaged by such removal or replacement.

All removal and replacement work shall be done at the CONTRACTOR's expense. If the CONTRACTOR does not take action to remove such condemned work and materials within ten (10) days after written notice, the CITY may remove them and store the material at the expense of the CONTRACTOR. If the CONTRACTOR does not pay the expense of such removal and storage within ten (10) days' time thereafter, the CITY may, upon ten (10) days' written notice, sell such materials at auction or at private sale and shall pay the CONTRACTOR any net proceeds thereof, after deducting all costs and expenses that should have been borne by the CONTRACTOR.

2.2.22 REMOVAL OF EQUIPMENT

In the case of termination of this Contract before completion for whatever cause, the CONTRACTOR, if notified to do so by the CITY, shall promptly remove any part or all of his equipment and supplies from the property of the CITY, failing which, the CITY shall have the right to exercise control over and to remove such equipment and supplies at the expense of, and without recourse, by the CONTRACTOR.

2.2.23 RESPONSIBILITY FOR WORK

The CONTRACTOR assumes full responsibility for the work. Until final acceptance, the CONTRACTOR shall be responsible for damage to or destruction of the work, except for any part covered by partial acceptance as set forth in Paragraph 2.2.24 and except such damage or destruction that is caused by the negligent or willful acts of the CITY.

2.2.24 PARTIAL COMPLETION AND ACCEPTANCE

If at any time prior to the issuance of the final certificate, referred to in Paragraph 2.2.34 hereinafter, any portion of the permanent construction has been satisfactorily completed to the ENGINEER's satisfaction, and if the ENGINEER determines that such portion of the permanent construction is not required for the operations of the CONTRACTOR, but is needed by the CITY, the ENGINEER shall issue to the CONTRACTOR a Certificate of Partial Completion, and thereupon or at any time thereafter, the CITY may take over and use the portion of the permanent construction described in such certificate.

The issuance of a Certificate of Partial Completion shall not be construed to constitute an extension of the CONTRACTOR's time to complete the portion of the permanent construction to which it relates, if he fails to complete it in accordance with the terms of this Contract. The issuance of such a certificate shall not operate to release the CONTRACTOR or his Sureties from any obligations under this Contract or the Performance Bond.

If such prior use increases the cost of or delays the work, the CONTRACTOR shall be entitled to extra compensation, or extension of time, or both, as the ENGINEER may determine, unless otherwise provided.

2.2.25 PAYMENT WITHHELD PRIOR TO FINAL ACCEPTANCE OF WORK

As a result of subsequently discovered evidence, the CITY may withhold or nullify the whole or part of any certificate of payment to such extent as may be necessary to protect himself from loss occasioned by:

(a) Defective work not remedied by the CONTRACTOR

(b) Claims filed or reasonable evidence indicating probable filing of claims by other parties against the CONTRACTOR for work done on the project

(c) Failure of the CONTRACTOR to make payments properly to subcontractors or for material or labor

(d) Damage by the CONTRACTOR to subcontractors or to another contractor

When the above grounds are removed, or the CONTRACTOR provides Surety Bond satisfactory to the CITY that will protect the CITY in the amount withheld, payment shall be made for amounts withheld because of them. No moneys may be withheld under (b) and

(c) if a Payment Bond is included in the Contract.

2.2.26 CONTRACTOR'S INSURANCE AND INDEMNIFICATION

The CONTRACTOR shall secure and maintain such insurance policies as will protect himself, his subcontractors, and City of Evans, its employees and agents, from claims for bodily injuries, death, or property damage, which may arise from operations under this Contract, whether such operations be by himself or by any subcontractor or anyone employed by them directly or indirectly. The following insurance policies are required and must be evidenced by Certificates of Insurance:

(a) Statutory Workers' Compensation

(b) Commercial General Liability

General Aggregate	$1,200,000
Products/ (Completed Operations Aggregate)	$1,200,000
Each Occurrence	$ 600,000
Personal & Advertising Injury	$ 600,000
Fire Damage	$ 50,000
Medical Expense	$ 5,000

(c) Automobile Liability

Bodily Injury and Property Damage (Combined Single Limit)	$ 600,000

Certificates of Insurance must show "City of Evans, its employees and agents" as an Additional Insured.

All policies shall be for not less than the amount set forth above or as stated in the Special Conditions. Other forms of insurance shall also be provided if called for by the Special Conditions.

All Certificates of Insurance must be filed with the ENGINEER along with the Performance and Payment Bonds and shall be subject to his approval as to adequacy of protection, within the requirements as stated herein. Said Certificates of Insurance shall contain a thirty (30) days' written notice of cancellation in favor of the CITY.

The CONTRACTOR shall indemnify and hold harmless the City of Evans, its employees and agents, from and against any and all claims, damages, losses, injuries and expenses, including attorney's fees, arising out of or resulting from the performance of work.

All insurance and bonding companies providing coverage or surety under this contract shall have a Best Insurance Rating of "A" or better.

2.2.27 SURETY BONDS

The CITY shall have the right, prior to the signing of the Contract, to require the CONTRACTOR to furnish Payment and Performance Bonds in such form as the CITY may prescribe in the bidding documents and executed by one or more financially responsible Sureties licensed to do business in the State of Colorado. The premiums for said Bonds shall be paid by the CONTRACTOR. Such Bonds shall cover the entire Contract amount, regardless of changes therein, shall remain in full effect for a period of one year from the date of issuance of a Certificate of Completion, and shall be filed with the ENGINEER prior to the commencement of any work on the project.

2.2.28 CONTRACTOR'S INSURANCE

The CONTRACTOR shall secure and maintain insurance to one hundred percent (100%) of the insurable value of the entire work in the Contract and any structures attached or adjacent thereto against fire, earthquake, flood, and other perils as he may deem necessary and shall name the CITY and subcontractors as Additional Insured.

All insurance and bonding companies providing coverage or surety under this contract shall have a Best Insurance rating of "A" or better.

2.2.29 ASSIGNMENT

Neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other and it's Surety, nor shall the CONTRACTOR assign any moneys due or to become due to him hereunder, except to a bank or financial institution acceptable to the CITY.

2.2.30 RIGHTS OF VARIOUS INTERESTS

Wherever work being done by the CITY's forces, utility companies, or by other CONTRACTOR's forces is contiguous to work covered by this Contract, the respective rights of the various interest invoiced shall be established by the ENGINEER, to secure the completion of the various portions of the work in general harmony.

(a) Before issuance of final payment, the CONTRACTOR, if required in the Special Conditions, shall certify in writing to the ENGINEER that all payrolls, material bills, and other indebtedness connected with the work, have been paid or otherwise satisfied. If the Contract does not include a payment Bond the CONTRACTOR may submit, in lieu of certification of payment, a Surety Bond in the amount of the disputed indebtedness or liens, guaranteeing payment of all such disputed amounts, including all related costs and interest in connection with said disputed indebtedness or liens, which the CITY may be compelled to pay upon adjudication.

(b) The making and acceptance of the final payment shall constitute a waiver of all claims by the CITY, other than those arising from unsettled liens, from faulty work appearing with the guarantee period, provided in the Special Conditions, from the requirements of the Project Specifications and Bid Plans, or from manufacturer's guarantees. It shall also constitute a waiver of all claims by the CONTRACTOR, except those previously made and

still unsettled.

(c) If after the work has been substantially completed, full completion thereof is materially delayed through no fault of the CONTRACTOR, and the ENGINEER so certifies, the CITY shall, upon certificate of the ENGINEER, and without terminating the Contract, make payment of the balance due for that portion of the work fully and completed and accepted. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

(d) If the CITY fails to make payment as herein provided, there shall be added to each payment daily interest at the rate of six percent (6%) per annum commencing on the first day after said payment is due and continuing until the payment is delivered or mailed to the CONTRACTOR.

2.2.31 ENGINEER'S STATUS

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

2.2.32 ENGINEER'S DECISIONS

The ENGINEER shall, within a reasonable time after their presentation to him, make decisions in writing on all claims of the CONTRACTOR and on all other matters relating to the execution and progress of the work or the interpretation of the Contract Documents.

2.2.33 ARBITRATION

Any controversy or claim arising out of or relating to this Contract, or the breach thereof, which cannot be resolved by mutual agreement, shall be settled by arbitration in accordance with the Rules of the American Arbitration Association, and judgment upon the award rendered by the Arbitrator(s) may be entered in any court having jurisdiction thereof.

2.2.34 ACCEPTANCE AND FINAL PAYMENT

Upon receipt of written notice that the work is substantially complete or ready for final inspection and acceptance, the ENGINEER will promptly make such inspection and when he finds the work acceptable under the Contract and the Contract fully performed or substantially completed, he shall promptly issue a certificate, over his own signature, stating that the work required by this Contract has been substantially completed and is accepted by him under the terms and conditions thereof, and the entire balance found to be due the CONTRACTOR, including the retained percentage, unless a retention based on the ENGINEER's estimate of the fair value of the claims against the CONTRACTOR and the cost of completing the uncompleted or unsatisfactory items of work with specified amounts for each incomplete or defective item of work, is due and payable. No final payment shall be made by the CITY unless and until the CONTRACTOR has certified in writing to the ENGINEER that all payroll, material bills, and other indebtedness connected with the work have been paid or otherwise satisfied.

The making and acceptance of the final payment shall constitute a waiver of all claims by the CITY, other than those arising from unsettled liens, from faulty work appearing within the guarantee period provided in the Special Conditions, from the requirements of the Project Specifications and Bid Plans, or from the manufacturer's guarantees. It shall also constitute a waiver of all claims by the CONTRACTOR, except those previously made and still unsettled.

If, after the work has been substantially completed, full completion thereof is materially delayed through no fault of the CONTRACTOR and the ENGINEER so certifies, the CITY shall, upon certificate of the ENGINEER, and without terminating the Contract, make payment of balance due for that portion of the work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

The CONTRACTOR shall cause appropriate provisions to be inserted in all subcontracts relative to the project to bind the subcontractors to the CONTRACTOR by the terms of the Contract Documents, and to give the CONTRACTOR the same power as regard to terminating any subcontract that the CITY may exercise over the CONTRACTOR under any provision of the Contract Documents.

Nothing contained in this Agreement shall create any contractual relationship between any subcontractor and the CITY.

Subcontracts, or transfer of Contract, shall not release the CONTRACTOR of his liability under the Contract and Bonds.

2.2.35 LIQUIDATED DAMAGES

The CONTRACTOR agrees that he can and will complete the project within the prescribed time limit as stated in Article 1.5.9 (Notice to Proceed) and within the time as may be extended. In the event the CONTRACTOR fails to complete the work within the allotted time limit, the following liquidated damages will be applied:

Original Contract Amount		
From More Than	To And Including	Daily Charge
$ 0	$ 25,000	$ 85
25,000	50,000	140
50,000	100,000	205
100,000	500,000	280
500,000	1,000,000	420
1,000,000	2,000,000	560
2,000,000	4,000,000	840
4,000,000	8,000,000	1,120
8,000,000	10,000,000	1,400

These rates will be assessed per calendar day for each day which the CONTRACTOR fails to finish the work in excess of the time period allotted. The parties agree that the liquidated

damages, as stated herein, are not a penalty and are reasonable, given the expected harm from a delay in completion, the difficulty of proving actual loss, and the inadequacy of any other remedy.

2.2.36 ADVANCE NOTICE

It shall be the responsibility of the CONTRACTOR to notify the ENGINEER or inspector sufficiently in advance of his operations to enable the ENGINEER or inspector to set the required control stakes and marks.

In order to assure proper availability of construction supervision or other personnel from the ENGINEER's staff, the following notices will be required as minimums:

(a) One (1) week notice for major additions or modifications to construction staking.

(b) Two (2) working days' notice for all staking except for emergencies.

(c) Two (2) days' written notice shall be delivered to the ENGINEER or inspector prior to any work done on Saturday, Sunday, nights, and legal holidays.

The failure of the CONTRACTOR to provide minimum notices will not be considered for time extensions or extra compensations.

2.2.37 WORK DONE WITHOUT LINES OR GRADES

Any work done without having been properly located and established as determined by the Engineer may be ordered removed and replaced at the CONTRACTOR's expense.

2.2.38 TAXES

Except as may be otherwise provided in this Contract, the contract price is to include all applicable taxes, but does not include any tax from which the CITY and the Contractor are exempt. Upon request by the CONTRACTOR, the CITY shall furnish a tax exemption certificate or similar evidence of exemption with respect to any such tax not included in the contract price, pursuant to this provision.

2.3 LEGAL RELATIONS & RESPONSIBILITIES TO PUBLIC

2.3.1 LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

Laws and Regulations: The CONTRACTOR shall keep himself fully informed of all city and county ordinances and regulations, and state and federal laws which in any manner affect the work herein specified. He shall at all times observe and comply with said ordinances, regulations, or laws, caused by the negligent actions of the CONTRACTOR, his agent, or employees.

2.3.2 PROJECT SAFETY

The CONTRACTOR is solely responsible for and shall take reasonable precautions in the performance of the work under this Contract to protect all persons from hazards to life and property. The CONTRACTOR shall comply with all health, safety and fire protection regulations and requirements.

2.3.3 PROTECTION OF THE PUBLIC AND OF WORK AND PROPERTY

The CONTRACTOR shall provide and maintain all necessary watchmen, barricades, warning lights, and signs in accordance with the Manual of Uniform Traffic Control Devices, and take all reasonable precautions for the protection and safety of the public. He shall continuously maintain reasonable protection of all work from damage, and shall take all reasonable precautions to protect the CITY's property from injury or loss arising in connection with this Contract. Streets and highways shall be kept free of dirt and litter from CONTRACTOR's handling operations. The CONTRACTOR shall take reasonable precautions to protect private property adjacent to the project from such nuisances as dust and dirt, rock, and excessive noise. He shall make good any damage, injury or loss to his work and to the property owner resulting from lack of reasonable protective precautions, except such as may be due to errors in the Contract Documents, or caused by agents of adjacent private and public property, as provided by law and the Contract Documents.

2.3.4 NON-DISCRIMINATION

In connection with the performance of work under this Contract, the CONTRACTOR agrees not to refuse to hire, discharge, promote, or demote, or discriminate in matters of compensation against any person otherwise qualified, solely because of race, creed, sex, color, national origin, handicap status or ancestry; and further agrees to inset the foregoing provision in all subcontracts hereunder.

2.4 MATERIALS & WORKMANSHIP

2.4.1 GUARANTEES

The CONTRACTOR shall guarantee his work against defective materials or workmanship for a period of two (2) years from the date of initial acceptance.

Contractor warrants and guarantees to the CITY that all equipment and materials furnished under this Contract are free from all defects in workmanship and materials.

Contractor shall remove from the project area all work or materials rejected by the CITY or its inspector for failure to comply with the Contract Documents, whether incorporated in the construction or not. The CONTRACTOR shall promptly replace the materials or re-execute the work in accordance the Contract Documents and without expense to the CITY which are or become defective due to such defects within two (2) years after the date of receipt by the CITY. The CONTRACTOR shall also bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement.

2.4.2 WARRANTIES

The CONTRACTOR shall guarantee his work against defective materials and workmanship for a period of two (2) years from the date of initial acceptance.

2.5 MEASUREMENT & PAYMENT

2.5.1 PAYMENT

Partial payment under the Contract shall be made at the request of the CONTRACTOR once each month, based upon partial estimates to be furnished by the CONTRACTOR and approved by the CONTRACTOR once each month, based upon partial estimates to be furnished by the CONTRACTOR and approved by the ENGINEER or inspector. In making such partial payment, there shall be retained three percent (3%) of the estimated amounts until final completion and acceptance of all work covered by the Contract; provided, however, that the ENGINEER, at any time after fifty percent (50%) of the work has been completed, finds that satisfactory progress is being made, shall recommend that the remaining partial payment be paid in full.

In preparing estimates for partial payments, the material delivered on the site and preparatory work done may be taken into consideration.

Payments for work under subcontracts of the CONTRACTOR shall be subject to the above conditions applying to the contract after the work under a subcontract has been fifty percent (50%) completed. In preparing estimates for partial payments, the material delivered on the site and preparatory work done may be taken into consideration.

Should the CONTRACTOR fail to proceed properly and in accordance with the Guarantee, the CITY may have such work performed at the expense of the CONTRACTOR.

2.5.2 PAY QUANTITIES

The CONTRACTOR shall be paid on a unit price basis as indicated by the proposal for the actual quantities installed. In the case of lump sum items, the contractor shall be paid based on the percent complete of the lump sum item.

2.6 SCOPE OF WORK

2.6.1 CHANGES IN THE WORK

At any time by written order, the CITY may make changes in the Project Specifications and Bid Plans or scheduling of the Contract within the general scope. All such work shall be executed under the time constraints of the original Contract, except that any claim for extension of time caused thereby shall be allowed and adjusted at the time of ordering such change or at such time as it can be ascertained.

(a) Unit prices previously approved

(b) An agreed lump sum

(c) The actual cost of labor, direct overhead, materials, supplies, equipment and other services necessary to complete the work. In addition, there shall be added on an amount to be agreed upon, but not to exceed fifteen percent (15%) of the actual cost of the work, to cover the cost of general overhead and profit.

2.6.2 SUBLETTING OF CONTRACT

The CONTRACTOR shall not sublet, sell, transfer, assign, or otherwise dispose of the Contract, or of his rights, title, or interest therein, without written consent of the CITY. The CONTRACTOR may utilize the services of specialty subcontractors on those parts of the project which, under normal contraction practices, are performed by specialty subcontractors.

The CONTRACTOR shall not award work to subcontractors in excess of fifty percent (50%) of the contract price without prior written approval of the CITY.

The CONTRACTOR shall be as fully responsible to the CITY for the acts and omissions of his subcontractors and of persons directly or indirectly employed by him, as he is for the acts and omissions of persons directly employed by him.

2.6.3 SEPARATE CONTRACTS

The CITY reserves the right to let other contracts in connection with this project. The CONTRACTOR shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs. If the proper execution or results of any part of the CONTRACTOR's work depends upon the work of any other contractor, the CONTRACTOR shall inspect and promptly report to the ENGINEER any defects in such work that render it unsuitable for such proper execution and results.

2.6.4 SUBCONTRACTS

The CONTRACTOR shall, as soon as practicable after signing the Contact, but in any event prior to the performance of any work by any subcontractor, notify the CITY, in writing, of the names of the subcontractors proposed for the work, designating the portions of work to be performed by each.

The CONTRACTOR agrees that he is as fully responsible to the CITY for the acts and omissions of his subcontractors and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

Nothing contained in the Contract Documents shall create any contractual relation between any subcontractor and the CITY.

2.6.5 UNDERGROUND OBSTRUCTIONS

The CONTRACTOR shall anticipate all underground obstructions, such as water lines, gas lines, sewer lines, concrete, debris, and all other types of utility lines. No extra payment will be allowed for the removal, protection, replacement, repair or possible increased cost caused by underground obstruction. Any such lines or obstructions indicated on the Drawings show only the approximate location from the information available and must be verified in the field by the CONTRACTOR. The ENGINEER will endeavor to familiarize the CONTRACTOR with all underground utilities and obstructions, but this will not relieve the CONTRACTOR from full responsibility for anticipating all underground obstructions.

In accordance with C.R.S. Section 9-1.5-103 (1973), the CONTRACTOR shall not make or begin excavation without first notifying the owners, operators or association of owners and operators having underground facilities in the area of such excavation. Notice may be given in person, by telephone, or in writing and shall be given at least two business days prior to beginning work.

The CONTRACTOR shall protect the existing utilities in a manner as requested by the respective utility owners at no extra compensation. The CONTRACTOR, by his signature on this proposal and subsequently on the Agreement, agrees to hold City of Evans, the agencies thereof, and their officers and employees, harmless from any and all losses, damages or claims which may arise out of, or be connected with, construction performed where said utilities are located.

Should it be necessary to relocate utilities in the area of construction, the CITY, at its own expense, will coordinate these relocations with the utility owner and the CONTRACTOR.

2.6.6 EMERGENCY WORK

In an emergency affecting the safety of life or of the work or of adjoining property, the CONTRACTOR is, without special instructions or authorization from the ENGINEER, hereby permitted to act at his discretion to prevent such threatening loss or injury. He shall also act, without appeal, if so authorized or instructed by the ENGINEER. Any compensation claimed by the CONTRACTOR as a result of emergency work, shall be determined by agreement or in accordance with Article 2.2.33.

2.6.7 CLEANING UP

The CONTRACTOR shall remove, at his own expense, from the CITY's property and from all public and private property, all temporary structures, rubbish and waste materials resulting from his operations. This requirement shall not apply to property used for permanent disposal of rubbish or waste materials in accordance with permission of such disposal granted to the CONTRACTOR by the CITY thereof where such disposal is in accordance with local ordinances and is approved by the ENGINEER.

ARTICLE 3.0

SPECIAL CONDITIONS

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GOVERNING DOCUMENTS
The governing documents for this Work are as follows:

- Contract Documents Articles 1.0 through 3.0
- Project Specifications and Bid Plans Article 4.0
- City of Evans Street Specifications, incorporated by reference
  http://www.evanscolorado.gov/sites/default/files/fileattachments/public_works/page/507/evans_street_specs.pdf

In the case of conflict, documents shall have the following priorities: (1) Contract Documents Article 3.0 – Special Conditions, (2) Contract Documents Article 2.0 – General Conditions, (3) Project Specifications and Bid Plans Article 4.0 and City of Evans Street Specifications.

3.1 SCOPE

3.1.1 DESCRIPTION OF WORK

The work covered under the scope of this project is as shown by the Project Specifications and Bid Plans, Article 4.0.

3.1.2 CONTRACT DRAWINGS

The contract drawings wherever referenced in the Contract Documents shall include the Bid Plans as set forth in Article 4.0 Project Specifications and Bid Plans.

3.2 GENERAL PROJECT SPECIFICATIONS

It is the intent of these Special Conditions to require a functionally complete project (or part thereof) to be constructed in accordance, and in conjunction with, all Contract Documents as defined within Article 1.0 – Contracting Procedures, Article 2.0 – General Conditions, Article 3.0 Special Conditions and Article 4.0 Specifications and Bid Plans. Any work, materials, or equipment that may be reasonable inferred, as being required to produce the intended result will be provided whether or not specifically called for. When words, which have a well-known technical or trade meaning, are used to describe work, materials, or equipment, such words shall be interpreted in accordance with that meaning.

Use of these Special Conditions in conjunction with related Contract Documents to establish the total requirements of the project. The CONTRACTOR shall obtain all required documents and have them available during the execution of work.

3.2.1 EXISTING CONDITIONS

Prior to starting work on the project, the CONTRACTOR shall walk the project site in the areas scheduled for work with the ENGINEER to discuss conditions that may affect the work being performed. These conditions may include: fencing, walls, berms, driveways, existing structures, buried utilities and other existing improvements (collectively surface improvements) that are to remain on both public and private property. The ENGINEER may record the existing conditions and/or features using a video camera for future reference and/or comparisons prior to final project acceptance.

If, in the opinion of the ENGINEER, there is sufficient operating space to perform the work in a reasonable manner without disturbing, destroying and/or removing existing improvements, the CONTRACTOR shall perform the work without disturbing, destroying and/or removing said improvements. In no event shall the CONTRACTOR remove trees, shrubs, vines, or other items without receiving prior approval (in writing) of the ENGINEER.

The CONTRACTOR shall make every effort to prevent or limit damage to surface improvements within or adjacent to the work area. The CONTRACTOR is responsible for protecting or

restoring all such surface improvements to their original or improved condition. Any of these surface improvements damaged by the CONTRACTOR shall be replaced by the CONTRACTOR at his/her own expense.

3.2.2 SALES TAX

Sales Tax shall not be paid for materials purchased for use on this project.

3.2.3 WORKING HOURS

The CONTRACTOR shall restrict working hours to between 7:00 A.M. and 7:00 P.M. on normal City of Evans business days unless prior approval has been obtained from the City.

3.2.4 PROJECT WARRANTY

The CONTRACTOR shall provide a two-year warranty for all construction beginning on the date of initial acceptance. All work that fails or deteriorates during the first or second year shall be replaced under this warranty. There will be no additional cost to the CITY for material, equipment, labor and/or traffic control for warranty work. Warranty work shall be completed in accordance with these contract specifications within 30 days of written notification by the CITY.

3.2.5 MATERIALS, MANUFACTURER'S CERTIFICATES & RECOMMENDATIONS

Shop drawings or samples required by these specifications shall be submitted before confirmation of orders.

Certifications by the manufacturer that the material or equipment conforms to all applicable requirements shall be submitted. These certifications shall reference the standard specifications with which compliance is required.

Shop drawings shall be submitted in triplicate to the ENGINEER and shall bear the CONTRACTOR's certification the he has reviewed, checked, and approved the shop drawings and that they are in conformance with the requirements of the Contract Documents.

The ENGINEER shall return shop drawings to the CONTRACTOR within 14 days from the time of receipt. If they are returned noted "disapproved," they shall be re-submitted with necessary revisions and the 14-day review period again shall be required.

The CONTRACTOR shall maintain a set of reviewed shop drawings in good order at the site of work. Said drawings shall be available to the ENGINEER.

3.2.6 EROSION AND DUST CONTROL

The CONTRACTOR is responsible for the control of erosion and dust within the project limits. The contractor will be solely responsible for executing the permit requirements and for all record keeping and reporting requirements. Dust shall be controlled at all times in accordance with applicable regulations and as directed by the Engineer.

3.2.7 CONSTRUCTION WATER

Construction water shall consist of providing a water supply sufficient for the needs of the project and the hauling and applying of all water required. The CONTRACTOR SHALL NOT use water from local residences for construction purposes or to provide water to laborers.

The CONTRACTOR is encouraged to use water obtained from the Evans Ditch whenever possible. Contact the City of Evans Public Works Department to arrange for use of Evan Ditch water. Evans Ditch water may not be available at the time of construction.

The CONTRACTOR shall make arrangements for and provide all necessary water for his construction operation and domestic use at his own expense. The CONTRACTOR shall secure

permission from the water utility and notify the ENGINEER and Fire Department/District before obtaining water from the fire hydrants.

If the CONTRACTOR purchases water from a water utility at a fire hydrant on or near the project, he shall make all arrangements at his own expense and payment made direct to the water utility as agreed upon. The CONTRACTOR shall follow all rules and regulations of the respective district. Use only special hydrant-operating wrenches to open hydrants. Make certain that the hydrant valve is open “full” since cracking the valve causes damaged to the hydrant. If any hydrants are damaged, the CONTRACTOR will be held responsible and shall immediately notify the appropriate agencies so that all damages can be repaired as quickly as possible. Fire hydrants shall be completely accessible to the Fire Department/District at all times. Upon completion of the work, the CONTACTOR shall remove all temporary piping from the facilities.

The CONTRACOR shall meet all applicable requirements of OSHA, state, and other governing agencies pertaining to sanitary facilities for workers. No separate payment will be made for construction water. All of the CONTRACTOR’s costs of whatsoever nature shall be included in all associated Bid Items on the bid schedule.

3.2.8 REMOVALS

The CONTRACTOR shall be responsible for locating sites and making arrangements for disposal of all materials removed from the site. The CONTRACTOR’s handling and disposition of excavation material shall be to a disposal site designated and/or approved by the ENGINEER. This includes concrete, asphalt, unsuitable or unstable sub-grade material, and any other trash, rubbish, or debris generated as a result of the construction. No trash, rubbish, or debris shall be allowed on the lawns of local residences by the CONTRACTOR’s work force. No separate payment will be made for disposal of excavation material generated. This disposal shall be considered incidental to the construction and all costs thereof shall be included in various unit CONTRACT process.

3.2.9 SAMPLES AND TESTING

All testing, if required, shall be completed by an independent testing laboratory selected or approved by the City and hired by the CONTRACTOR.

3.2.10 SUBCONTRACTORS

All subcontractors are subject to approval by the CITY.

3.2.11 MINOR ITEMS OF CONSTRUCTION

Minor items of construction that do not have a bid item provided will not be paid for separately. The costs of these items shall be merged with unit prices shown on the bid form.

3.2.12 CLEANING DURING CONSTRUCTION

During execution of work, the CONTRACTOR shall clean the sites, adjacent properties, and public access roadways on a daily basis at a minimum or as directed by the ENGINEER and shall dispose of waste materials, debris, and rubbish to assure that buildings, grounds, and public properties are maintained free from accumulations of waste materials and rubbish. The CONTRACTOR shall wet down dry materials and rubbish to lay dust and prevent blowing dust.

The CONTRACTOR shall provide containers for collection and disposal of waste materials, debris, and rubbish.

The CONTRACTOR shall cover or wet loads of excavated material leaving the site or of material being imported to prevent blowing dust. The CONTRACTOR shall also clean the public access roadways to the site of any material falling from the trucks or equipment.

The CONTRACTOR shall clean debris from pipelines and manhole structures, as necessary and as directed by the ENGINEER.

3.2.13 FINAL CLEANUP

At the completion of the work and immediately prior to final inspection, the CONTRACTOR shall remove from the Construction Site all temporary structures and all materials, equipment, and appurtenances not required a part of, or appurtenant to, the completed work. The CONTRACTOR shall notify the CITY when final cleanup is ready for inspection.

The CONTRACTOR shall repair, patch, and touch-up marred surfaces to specified finish to match adjacent surfaces.

The CONTRACTOR shall broom-clean paved surfaces and rake clean other surfaces of ground as necessary and as directed by the ENGINEER.

3.3 PROJECT SCHEDULE AND SEQUENCE

It is the intent of the CITY to award this project as soon as possible after receiving bids. After Notice to Proceed, the CONTRACTOR will complete the work within the timeframe as established in Section 1.5.2 Bid Proposal of these Contract Documents.

At the Pre-Construction Conference, the CONTRACTOR shall submit their baseline construction schedule for review and discussion. This schedule shall clearly present the key milestones of the project and outlining the overall sequencing of work. After acceptance, the CONTRACTOR will maintain the schedule and update the CITY as required throughout the project.

3.4 PROJECT COORDINATION

The CONTRACTOR is responsible for contracting and coordinating with all project affected stakeholders. These affected stakeholders may include:

- Property Owners
- Utility Companies (a listing of utilities within the project area is provided in the Project Specifications)
- Weld County

It is the responsibility of the CONTRACTOR to field verify locations of utilities prior to initiating construction. In addition, any street closures must be properly coordinated with any and/or all the affected stakeholders listed above.

3.5 MEASUREMENT AND PAYMENT

3.5.1 GENERAL

All materials will be measured and paid for in accordance with the Contract Documents. All material shall arrive at the job site with load or batch tickets indicating time loaded or batched, material type, material quantity, and date. A copy of the tickets shall be given to the ENGINEER on site the day the material arrives. Material delivered and placed without a load ticket will not be paid for. The CITY will not pay for any material if the load ticket indicates that the vehicle and its load exceeded the legal weight limit for the vehicle type.

All work performed and all materials furnished shall conform to the requirements, including tolerances, provided within the Contract Documents.

The CONTRACTOR is responsible for providing a product to be in conformance with the Governing Document. The suitability of the finished product will be determined by the ENGINEER. A finished product that is not found suitable by the ENGINEER may be subject to:

1. Disapproval and subsequent removal and replacement of the material/product at the CONTRACTOR'S expense.

2. A reduction in pay as discussed with the ENGINEER. Only the ENGINEER will determine suitability for material/products related to this project.

3. The ENGINEER allows questionable material/product to remain in place with the CONTRACTOR providing some type of remedial action to make the material/product suitable. The type of remedial action to be used will be determined by the ENGINEER and paid for by the CONTRACTOR.

4. The addition of an extended warranty for questionable material/product to allow further review to determine suitability and any further action by CONTRACTOR at end of warranty period.

The measurement and payment for this project shall be as written specifically for this project and included in this Article of the Contract Document and the Measurement and Payment specification section 01025.

The work performed under this Agreement shall be paid for on a unit price basis as outlined in Article 1.0 – Bid Schedule. The quantities provided on the Article 1.0 – Bid Schedule are only estimates of the actual quantities of the work to be performed, and are only included for informational purposes. The CITY reserves the right to alter and/or eliminate any item of work. Modifications, if any, will be made by Change Order.

Unless otherwise provided for specifically in this section, all lump sum bid items will be paid for upon completion of all work associated with the lump sum bid item.

All costs incurred shall comply with the provisions of the Contract Documents and shall be included in the lump sum price bid for the associated items in the proposal. Except as may be otherwise stipulated, no material, labor, or equipment will be furnished by the CITY.

3.5.2 MEASUREMENTS

A. Refer to Section 01025 MEASUREMENT AND PAYMENT

B. No measurement for payment shall be made for any of the work, materials and equipment required for mobilization. A lump sum payment will be made.

C. The work to be paid will be as identified within Article 1.0 – Bid Proposal to perform work, including but not limited to, the furnishing and installation of all components and accessories, in accordance with the Contract Documents.

D. No separate measurement shall be made for fittings and accessories necessary to install bid items.

E. No measurement for payment shall be made for removal or replacement of materials and/or existing features damaged by the CONTRACTOR in his operation.

3.5.3 PAYMENTS

A. The work covered by the Contract Documents is as follows:

See Section 3.1.1 DESCRIPTION OF WORK

B. Refer to Section 01025 MEASUREMENT AND PAYMENT

C. No separate payment shall be made for fittings and accessories necessary to install bid item.

D. Mobilization & demobilization payment will be made as the work progresses. Fifty percent (50%) of the lump sum bid price will be paid at the time of the first monthly progress payment. An additional thirty percent (30%) will be paid when one-half the original contract is earned separately on each of the bid schedules. The remaining twenty percent (20%) will be paid upon final acceptance of the project. The total amount for mobilization shall not exceed five percent (5%) of the total bid.

E. Payment for the Bid Item other than mobilization & demobilization shall include full compensation for, but is not limited to, all materials, labor, supplies, transportation, disposal, equipment required to complete the work in accordance with the Contract Documents.

F. No separate payment shall be made for fittings and accessories necessary to install bid item.

G. CONTRACTOR will not be reimbursed for the retesting of any materials that fail, or due to inclement weather, or for any other reason. All samples required for testing will be provided by the CONTRACTOR and at no cost to the OWNER.

H. Excess excavation shall be disposed of off-site and shall not be paid for separately.

I. All samples required for testing will be provided by the CONTRACTOR and at no cost to the OWNER.

3.6 FEMA REQUIREMENTS

3.6.1 PROVISION FOR TERMINATION OF CAUSE AND CONVENIENCE

Termination for convenience" is the exercise of a subgrantee's right to completely or partially terminate the contractor's performance of work under a contract when it is in the subgrantee's interest. On the other hand, "termination for cause" (or "default") is the exercise of a party's right to completely or partially terminate a contract because of the other party's actual or anticipated failure to perform its contractual obligations.

3.6.2 EQUAL OPPORTUNITY

During the performance of this contract, the contractor agrees as follows:

A. The contractor will not discriminate against any employee or applicant for employment because of race, 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 (A) and the provisions of paragraphs (1) through (G) 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 a 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."

3.6.3 ANTIE-KICKBACK ACT

A. Contractor. The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.

B. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as the FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

C. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12."

3.6.4 DAVIS-BACON ACT

Davis-Bacon Act wage rates are not required for this project.

3.6.5 CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Compliance with the Contract Work Hours and Safety Standards Act

A. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

B. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

C. Withholding for unpaid wages and liquidated damages. The (write in the name of the Federal agency or the loan or grant recipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.

D. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section."

3.6.6 FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) REPORTING REQUIREMENTS AND REGULATIONS

A. General. The City of Evans is using Public Assistance grant funding awarded by FEMA to the City of Evans to pay, in whole or in part, for the costs incurred under this contract. As a condition of Public Assistance funding under (major disaster or emergency) declaration FEMA-4145-PA-EVANS, FEMA requires the City of Evans to provide various financial and performance reporting.

1. It is important that the contractor is aware of these reporting requirements, as the City of Evans may require the contractor to provide certain information, documentation, and other reporting in order to satisfy reporting requirements to the City of Evans which, in turn, will enable the City of Evans to satisfy reporting requirements to FEMA.

2. Failure of the City of Evans to satisfy reporting requirements to FEMA is a material breach of the FEMA-State Agreement, and could result in loss of federal financial assistance awarded to fund this contract.

B. Applicable Regulations and Policy. The applicable regulations, FEMA policy, and other sources setting forth these reporting requirements are as follows:
   1. 44 C.F.R. § 13.40 (Monitoring and Reporting Program Performance)
   2. 44 C.F.R. § 13.41 (Financial Reporting)
   3. 44 C.F.R § 13.50(b) (Reports)
   4. 44 C.F.R. § 206.204(f) (Progress Reports)
   5. FEMA Standard Operating Procedure No. 9570.14, Public Assistance Program Management and Grant Closeout Standard Operating Procedure (Dec. 2013)
   6. FEMA-State (or Tribal) Agreement

C. Financial Reporting. The City of Evans is required to submit to the following financial reports to FEMA:
   1. Initial Report. An initial Federal Financial Report (SF 425) no later than 30 days after FEMA has approved the first Public Assistance project under FEMA-4145-PA-EVANS.
   2. Quarterly Reports. Following submission of the initial report, quarterly Federal Financial Reports until submission of the final report described in the following subparagraph. Reports are due on January 30, April 30, July 30, and October 30.
   3. Final Report. A final Federal Financial Report within 90 days of the end of the period of performance for the Public Assistance grant.

D. Performance Reporting. The City of Evans is required to submit to the following financial reports to FEMA:
   1. Initial Report. An initial performance report no later than 30 days after FEMA has approved the first Public Assistance project under FEMA-4145-PA-EVANS.
   2. Quarterly Reports. Following submission of the initial report, quarterly performance reports until submission of the final report described in the following subparagraph. Reports are due on January 30, April 30, July 30, and October 30.
   3. Final Report. A final performance report within 90 days of the end of the period of performance for the Public Assistance grant.

3.6.7 PATENT RIGHTS AND COPYRIGHTS AND RIGHTS IN DATA

Not applicable

3.6.8 ACCESS TO RECORDS

Access to Records. The following access to records requirements apply to this contract:

A. The contractor agrees to provide the City of Evans, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.

B. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

C. The contractor agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract.

3.6.9 RETENTION OF RECORDS

"Retention of Records. The contractor agrees to maintain all books, records, accounts and reports required under this contract for a period of not less than three years after the date of termination or expiration of this contract, except in the event of litigation or settlement of claims arising from the performance of this contract, in which case contractor agrees to maintain same until the City of Evans, the FEMA Administrator, the Comptroller General of the United States, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related to the litigation or settlement of claims."

3.6.10 COMPLIANCE WITH CLEAN AIR AND CLEAN WATER ACT

Clean Air Act

A. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.

B. The contractor agrees to report each violation to the City of Evans and understands and agrees that the City of Evans will, in turn, report each violation as required to assure notification to the City of Evans, Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.

C. The contractor agrees to include these requirements in each subcontract exceeding $100,000 financed in whole or in part with federal assistance provided by FEMA.

Federal Water Pollution Control Act

A. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.

B. The contractor agrees to report each violation to the (name of the state agency or local or Indian tribal government) and understands and agrees that the (name of the state agency or local or Indian tribal government) will, in turn, report each violation as required to assure notification to the city of Evans, Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office

C. The contractor agrees to include these requirements in each subcontract exceeding $100,000 financed in whole or in part with federal assistance provided by FEMA.

3.6.11 ENERGY EFFICIENCY

Energy Conservation. The contractor agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act."

ARTICLE 4.0 PROJECT SPECIFICATIONS AND BID PLANS (attached)

CITY OF EVANS
49TH/BRANTNER/INDUSTRIAL
SPECIAL PROVISIONS

The following document includes the applicable Project Special Provisions and Standard Special Provisions. The Project Special Provisions supplement or modify the 2011 CDOT Standard Specifications for Road and Bridge Construction, and take precedence over the Standard Specifications and plans.

Project Special Provisions	Date Written	Page
Revision of Section 216 – Turf Reinforcement Mat	December 2, 2015	1
Revision of Section 310 – Full Depth Reclamation of HMA Pavement	December 2, 2015	4
Revision of Section 403 – Hot Mix Asphalt	April 28, 2016	6
Traffic Control Plan – General	December 2, 2015	9
Utilities	May 2, 2016	10

Standard Special Provisions	Date Issued	Page
Revision of Sections 101 and 630 – Construction Zone Traffic Control	April 30, 2015	11
Revision of Section 106 – Buy America Requirements	November 6, 2014	13
Revision of Section 106 – Certificates of Compliance and Certified Test Reports	February 3, 2011	14
Revision of Section 106 – Material Sources	October 31, 2013	15
Revision of Section 106 – Supplier List	January 30, 2014	16
Revision of Sections 106 and 412 – Surface Texture of Portland Cement Concrete Pavement	October 29, 2015	17
Revision of Sections 106, 627, and 713 – Glass Beads for Pavement Marking	May 12, 2016	20
Revision of Section 107 – Responsibility for Damage Claims, Insurance Types, and Coverage Limits	February 3, 2011	22
Revision of Section 107 – Warning Lights for Work Vehicles and Equipment	January 30, 2014	23
Revision of Section 107 – Water Quality Control (Contractor Obtained Stormwater Permit)	March 29, 2016	24
Revision of Section 108 – Delay and Extension of Contract Time	April 30, 2015	30
Revision of Section 108 – Holiday Weekend	February 18, 2016	32
Revision of Section 108 – Liquidated Damages	October 29, 2015	33
Revision of Section 108 – Notice to Proceed	July 31, 2014	34
Revision of Section 108 – Project Schedule	July 31, 2014	35
Revision of Section 108 – Subletting of Contract	January 31, 2013	41
Revision of Section 109 – Compensation for Compensable Delays	May 5, 2011	42
Revision of Section 109 – Measurement of Quantities	February 3, 2011	43
Revision of Section 109 – Measurement of Water	January 6, 2012	44
Revision of Section 109 – Scales	October 29, 2015	45
Revision of Sections 202, 627, and 708 – Pavement Marking Paint	May 12, 2016	46
Revision of Sections 203, 206, 304, and 613 – Compaction	July 19, 2012	49
Revision of Sections 206 and 601 – Maturity Meters and Concrete Form and Falsework Removal	December 18, 2015	51
Revision of Section 208 – Erosion Control	March 29, 2016	54
Revision of Section 212 – Seed	April 26, 2012	77
Revision of Section 213 – Mulching	January 31, 2013	78
Revision of Section 401 – Compaction of Hot Mix Asphalt	April 26, 2012	82
Revision of Section 401 – Temperature Segregation	February 3, 2011	83
Revision of Section 412 – Portland Cement Concrete Pavement Finishing	February 3, 2011	84
Revision of Sections 412, 601, and 711 – Liquid Membrane-Forming Compounds for Curing Concrete	May 5, 2011	85
Revision of Section 601 – Class B, BZ, D DT, and P Concrete	February 18, 2016	86
Revision of Section 601 – Concrete Batching	February 3, 2011	88
Revision of Section 601 – Concrete Finishing	February 3, 2011	89
Revision of Section 601 – Concrete Slump Acceptance	October 29, 2015	90
Revision of Section 601 – Structural Concrete Strength Acceptance	April 30, 2015	91
Revision of Sections 601 and 701 – Cements and Pozzolans	November 6, 2014	92

Standard Special Provisions cntd.

Revision of Section 612 – Delineators	February 3, 2011	96
Revision of Section 630 – Retroreflective Sign Sheeting	May 8, 2014	97
Revision of Section 702 – Bituminous Materials	March 29, 2016	98
Revision of Section 703 – Aggregate for Bases	October 31, 2013	109
Revision of Section 703 – Aggregate for Hot Mix Asphalt	November 1, 2012	110
Revision of Section 703 – Concrete Aggregates	July 28, 2011	112
Revision of Section 709 – Epoxy Coated Reinforcing Bars	February 18, 2016	113
Revision of Section 712 – Water for Mixing or Curing Concrete	February 3, 2011	114
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1
REVISION OF SECTION 216
TURF REINFORCEMENT MAT

DESCRIPTION

216.01 This work consists of furnishing, preparing, applying, placing, and securing turf reinforcement mats for erosion control on roadway slopes as designated in the Contract.

MATERIALS

216.02 Turf reinforcement mat (TRM) shall conform to the following:

(a) *Turf Reinforcement Mat.* Turf reinforcement mat (TRM) shall be a rolled mat consisting of UV stabilized, corrosion resistant, non-degradable synthetic fibers, filaments, or nets processed into a permanent three-dimensional matrix of the thickness specified in Table 216-1 and 216-2. TRMs shall provide sufficient thickness, strength and void space to permit soil filling and retention, and the development of vegetation within the matrix. The class of TRM is defined by the physical and performance characteristics as specified in the following tables.

Table 216-1
PHYSICAL REQUIREMENTS[1] FOR TURF REINFORCEMENT MAT

Product Class	Minimum Roll Width	Minimum Thickness ASTM D 6525	Acceptable Matrix Fill Material[2]	Size of Net Opening[2]
1	6.5'	0.25"	Excelsior, Straw/Coconut, Coconut, or Polymer fibers	Minimum: 0.50"x0.50" Maximum: 0.75"x0.75"
2	6.5'	0.25"	100% UV Stabilized Synthetic or Coconut Fibers	0.50"x 0.50"
3	6.5'	0.25"	100% UV Stabilized Synthetic Fibers	0.50"x 0.50"

Notes:
1 For TRMs containing degradable components, all property values shall be obtained on the non-degradable portion of the matting alone.
2 For TRMs with nets and fill material. Netted TRMs shall be sewn together on 1.5 inch to 2 inch centers.

Table 216-2
PERFORMANCE REQUIREMENTS FOR TURF REINFORCEMENT MAT

Product Class	Tensile Strength MD ASTM D 6818	UV Stability @ 500 Hours ASTM D 4355	Maximum Permissible Shear Stress[1] (Vegetated) ASTM D 6460	Maximum Permissible Shear Stress[1] (Unvegetated) ASTM D 6460
1	125 lbs/ft	80%	6.0 lbs/sf	4.0 lbs/sf
2	150 lbs/ft	80%	8.0 lbs/sf	6.0 lbs/sf
3	175 lbs/ft	80%	10.0 lbs/sf	8.0 lbs/sf

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

TRMs shall be tested for physical properties and have published data from a pre-approved independent testing facility.

Large scale testing of Permissible Shear Stress will be performed by a pre-approved independent testing facility.

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

(b) *Staples.* Staples shall be made of ductile steel wire, 0.165 inches in diameter, 8 inches long and have a 1 inch crown. "T" shaped staples will not be permitted.

CONSTRUCTION REQUIREMENTS

216.03 The Contractor shall install TRMs using the following procedure:

1. Place 3 inches of topsoil or soil amended with soil conditioning.
2. Apply half of the specified seed at the broadcast rate and rake into soil.
3. Install TRM
4. Place 1 inch of topsoil or soil amended with soil conditioning into the matrix to fill the product thickness.
5. Apply the remaining half of the specified seed at the broadcast rate and rake into soil.
6. Install soil retention blanket (Class 1) over the seeded area and TRM.

When applicable, the covering shall be unrolled with the heavyweight polypropylene netting on top and the lightweight polypropylene netting shall be in contact with the soil.

216.04 Embankment Slope Protection. TRM shall be installed on slopes as follows:

(a) *Anchoring.* The upslope end shall be placed at a minimum of 2 feet under the road surface to form a tie-in. The TRM shall be extended out level from under the road surface until it intersects with the finished grade. The downslope end shall have a minimum 4 foot toe-in, with a slope no steeper than 2:1. See the typical section detail shown in the plans.
TRM will be anchored per the manufacturer's recommendations.

(b) *Slope Application.* The embankment side slope shall not be steeper than 3:1 in any location where TRM is being installed, except for the toe-in.
There shall be a minimum 6 inch overlap wherever one roll of fabric ends and another begins with the uphill covering placed on top of the downhill covering. Staples shall be installed in the overlap at 12 inches on center.
There shall be a minimum 4 inch overlap wherever two widths of covering are applied side by side. Staples shall be installed in the overlap at 18 inches on center.
Staple checks shall be applied on the slope every 35 feet. Each staple check shall have a 6 inch overlap and consist of two rows of staggered staples, 4 inches apart installed at 12 inches on center.
TRM shall be securely fastened to the soil by installing staples at the minimum rate shown on the plans. Staple spacing shall be reduced where required due to soil type or steepness of slope.

216.05 Maintenance. The Contractor shall maintain the TRM until all work on the Contract has been completed and accepted. Maintenance shall consist of the repair of areas where damage is due to the Contractor's operations. Maintenance shall be performed at the Contractor's expense. Repair of those areas damaged by causes not attributable to the Contractor's operations shall be repaired by the Contractor and will be paid for at the contract unit price. Areas shall be repaired to reestablish the condition and grade of the soil and seeding prior to application of the TRM.

3
REVISION OF SECTION 216
TURF REINFORCEMENT MAT

METHOD OF MEASUREMENT

216.06 TRMs, including staples, complete in place and accepted, will be measured by the square yard of finished surface. Allowance will not be made for overlap.

BASIS OF PAYMENT

216.07 The accepted quantities of TRM will be paid for at the contract unit price per square yard. Payment will be made under:

Turf Reinforcement Mat (Class III)	Square Yard

Preparation of seedbed, fertilizing, and seeding will be measured and paid for in accordance with Section 212. TRM and its associated blanket will be measured and paid for separately. Placing and preparation of seedbed, fertilizing, and seeding of soil under the TRM layer will be measured and paid for in accordance with Section 212. Topsoil or amended soil and seed placed on the TRM will be measured and paid for in accordance with Section 207 and 212.

1
REVISION OF SECTION 310
FULL DEPTH RECLAMATION OF HOT MIX ASPHALT PAVEMENT

DESCRIPTION

310.01 This work will be specified as a total processed depth up to 12 inches. This work consists of cutting the existing asphalt mat, pulverizing the full width of the existing asphalt mat, mixing the pulverized asphalt mat with the existing subgrade, existing base course, or combination thereof, to the specified depth, and grading and compacting the mixed material in accordance with and at locations as shown in the Contract.

CONSTRUCTION REQUIREMENTS

310.02 The Contractor shall develop a written method to maintain the centerline geometry, profile elevations, and cross slope of the existing roadway. The plan shall be submitted to the Engineer for approval a minimum of two weeks prior to starting work. The plan shall include, but is not limited to, the following:

1. Mobilization of equipment to haul and place material
2. The estimated length of roadway (both travel lanes) that can have existing pavement structure removed, embankment cut to new elevation, and placement of Aggregate Base Course material so that the difference in elevation between lanes is 1 inch or less at the end of the work shift
3. Contractor's plan to address repairs to soft spots

Reclamation of the existing asphalt pavement shall not commence until the Contractor has an approved design mix for Hot Mix Asphalt.

The existing asphalt mat shall be cut at neat lines as shown in the plans. The existing asphalt mat shall be pulverized, and mixed with the existing subgrade, base course, or combination thereof to a specified depth or as directed by the Engineer. A self-propelled rotary type mixing machine shall be used. Existing asphalt mat thicknesses and core information will be available upon request. The mixing machine shall make as many passes as required to uniformly mix the asphalt, subgrade, existing base course, or combination thereof to the required thickness. Mixing of the different materials shall create a homogenous mixture. The particle size of the pulverized asphalt mat shall be a minimum of 99 percent passing the 37.5 mm (1-1/2 inch) sieve. When the addition of water is necessary for initial compaction purposes, unless otherwise approved by the Engineer, it shall be added through the mixing machine with the capability to uniformly distribute water through the mixed materials to within 2 percent of the optimum moisture as determined in accordance with AASHTO T-180 Method D.

When proper mixing has been accomplished, the mixture shall then be bladed, shaped, wetted or dried, and rolled to meet a minimum of 95 percent of the maximum dry density determined in accordance with AASHTO T-180 Method D. Prior to placement of the Hot Mix Asphalt, the reclaimed material shall be trimmed to the correct elevation and slope by use of a trimmer with a 30-foot ski type device. Excess material generated from the trimming process shall be hauled and stockpiled at a location as designated in the plans or by the Engineer. Use of a motor grader for final trimming shall not be allowed. Trimming equipment used to establish the final surface elevations shall have automatic controls for transverse slope. The transverse slope controls shall be capable of maintaining the final surface within 0.1 percent of the specified slope. Variations from the subgrade plan shall not be more than ¼ inch. The work shall be maintained and tested for conformance to these requirements immediately prior to placing additional pavement layers. An application of diluted emulsified asphalt may be required before placement of the bottom layer of hot bituminous pavement.

Compaction will be measured for the top 8-inch lift of reclaimed materials, and if appropriate for any lift below the top 8-inch lift. Density testing and materials acceptance will apply to each lift of 8 inches or less that is reclaimed and placed on the project. Acceptance Testing will be based on a random schedule of a minimum of 1/2000 square yards of reclaimed material up to 8 inches and a minimum of 1/2000 square yards of reclaimed material 8 inches and greater in depth.

The maximum time a portion of the roadway will be unpaved is seven working days unless approved by the Engineer. Joint construction and maintenance shall conform to subsection 401.16.

2
REVISION OF SECTION 310
FULL DEPTH RECLAMATION OF HOT MIX ASPHALT PAVEMENT

METHOD OF MEASUREMENT

310.03 Full Depth Reclamation of Hot Mix Asphalt Pavement will be measured by the square yard of roadway treated, completed and accepted.

BASIS OF PAYMENT

310.04 The accepted quantities of Full Depth Reclamation of Hot Mix Asphalt Pavement will be paid for at the contract unit price per square yard for Full Depth Reclamation of Hot Mix Asphalt Pavement.

Pay Item	**Pay Unit**
Full Depth Reclamation of Hot Mix Asphalt Pavement (0-8 Inches)	Square Yard
Full Depth Reclamation of Hot Mix Asphalt Pavement (8-12 Inches)	Square Yard

Payment for Full Depth Reclamation of Hot Mix Asphalt Pavement will be full compensation for all work necessary to complete the item including cutting of the existing asphalt mat, pulverizing the existing asphalt mat, mixing the pulverized asphalt mat into existing subgrade or base course, wetting and compacting the mixed pulverized asphalt mat and subgrade and/or base course, blading, shaping, trimming, haul, and water.

1
REVISION OF SECTION 403
HOT MIX ASPHALT

Section 403 of the Standard Specifications is hereby revised for this project as follows:

Subsection 403.02 shall include the following:

The design mix for hot mix asphalt shall conform to the following:

Table 403-1

Property	Test Method	Value For Grading				
		SX(100)				
Air Voids, percent at: N (design)	CPL 5115	3.5 – 4.5				
Lab Compaction (Revolutions): N (design)	CPL 5115	50				
Stability, minimum	CPL 5106	28				
Aggregate Retained on the 4.75 mm (No. 4) Sieve for S, SX and SG, and on the 2.36mm (No. 8) Sieve for ST and SF with at least 2 Mechanically Induced fractured faces, % minimum*	CP 45	60%				
Accelerated Moisture Susceptibility Tensile Strength Ratio (Lottman), minimum	CPL 5109 Method B	80				
Minimum Dry Split Tensile Strength, kPa (psi)	CPL 5109 Method B	205 (30)				
Grade of Asphalt Cement, Top Layer		PG 64-28				
Voids in the Mineral Aggregate (VMA) % minimum	CP 48	See Table 403-2				
Voids Filled with Asphalt (VFA), %	AI MS-2	65 - 80				
Dust to Asphalt Ratio Fine Gradation Coarse Gradation	CP 50	0.6 – 1.2 0.8 – 1.6				

Note: AI MS-2 = Asphalt Institute Manual Series 2

Note: Mixes with gradations having less than 40% passing the 4.75 mm (No. 4) sieve shall be approached with caution because of constructability problems.

Note: Gradations for mixes with a nominal maximum aggregate size of one-inch or larger are considered a coarse gradation if they pass below the maximum density line at the #4 screen.
Gradations for mixes with a nominal maximum aggregate size of 3/4" to 3/8" are considered a coarse gradation if they pass below the maximum density line at the #8 screen.
Gradations for mixes with a nominal maximum aggregate size of #4 or smaller are considered a coarse gradation if they pass below the maximum density line at the #16 screen.

*Fractured face requirements for SF may be waived by RME depending on project conditions.

2
REVISION OF SECTION 403
HOT MIX ASPHALT

All mix designs shall be run with a gyratory compaction angle of 1.25 degrees and properties must satisfy Table 403-1. Form 43 will establish construction targets for Asphalt Cement and all mix properties at Air Voids up to 1.0 percent below the mix design optimum.

Table 403-2

	Minimum Voids in the Mineral Aggregate (VMA)			
Nominal Maximum Size*, mm (inches)	*****Design Air Voids ****			
	3.5%	**4.0%**	**4.5%**	**5.0%**
37.5 (1½)	11.6	11.7	11.8	N/A
25.0 (1)	12.6	12.7	12.8	
19.0 (¾)	13.6	13.7	13.8	
12.5 (½)	14.6	14.7	14.8	
9.5 (⅜)	15.6	15.7	15.8	
4.75 (No. 4)	16.6	16.7	16.8	16.9
	* The Nominal Maximum Size is defined as one sieve larger than the first sieve to retain more than 10%. ** Interpolate specified VMA values for design air voids between those listed. *** Extrapolate specified VMA values for production air voids beyond those listed.			

The Contractor shall prepare a quality control plan outlining the steps taken to minimize segregation of HMA. This plan shall be submitted to the Engineer and approved prior to beginning the paving operations. When the Engineer determines that segregation is unacceptable, the paving shall stop and the cause of segregation shall be corrected before paving operations will be allowed to resume.

A minimum of 1 percent hydrated lime by weight of the combined aggregate shall be added to the aggregate for all hot mix asphalt.

Delete subsection 403.05 and replace with the following:

403.05 The accepted quantities of hot mix asphalt will be paid for in accordance with subsection 401.22, at the contract unit price per ton for the bituminous mixture.

Payment will be made under:

Pay Item	**Pay Unit**
Hot Mix Asphalt (Grading SX)(75)(PG 64-28)	Ton

Aggregate, asphalt recycling agent, asphalt cement, additives, hydrated lime, and all other work and materials necessary to complete each hot mix asphalt item will not be paid for separately, but shall be included in the unit price bid. No additional compensation will be considered or paid for any additional asphalt cement, plant

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REVISION OF SECTION 403
HOT MIX ASPHALT

modifications and additional personnel required to produce the HMA as a result in a change to the mix design asphalt cement content.

When the pay item does not include the PG binder grade, asphalt cement will be measured and paid for in accordance with Section 411.

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

1
TRAFFIC CONTROL PLAN - GENERAL

The key elements of the Contractor's method of handling traffic (MHT) are outlined in subsection 630.10(a) of the Colorado Department of Transportation Standard Specifications for Road and Bridge Construction.

The components of the TCP for this project are included in the following:

(1) Subsection 104.04 and Section 630 of the specifications.
(2) Standard Plan S-630-1, Traffic Controls for Highway Construction
(3) Schedule of Construction Traffic Control Devices.
(4) Signing Plans.
(5) Construction phasing details.
(6) Detour Details.

Unless otherwise approved by the Engineer, the Contractor’s equipment shall follow normal and legal traffic movements. The Contractor’s ingress and egress of the work area shall be accomplished with as little disruption to traffic as possible. Traffic control devices shall be removed by picking up the devices in a reverse sequence to that used for installation. This may require moving backwards through the work zone. When located behind barrier or at other locations shown on approved traffic control plans, equipment may operate in a direction opposite to adjacent traffic.

The City of Evans may have entered into operating agreements with one or more law enforcement organizations for cooperative activities. Under such agreements, at the sole discretion of the City, law enforcement personnel may enter the work zone for enforcement purposes and may participate in the Contractor’s traffic control activities. The responsibility under the Contract for all traffic control resides with the Contractor and any such participation by law enforcement personnel in Contractor traffic control activities will be referenced in either the Special Provisions or General Notes of the plans depending on whether the Contractor is to hire local law enforcement or if the City is contracting with Colorado State Patrol for uniformed traffic control. Nothing in this Contract is intended to create an entitlement, on the part of the Contractor, to the services or participation of the law enforcement organization.

Special Traffic Control Plan requirements for this project are as follows:

During the construction of this project, traffic shall use the present traveled roadway unless identified on the plans or approved by the Engineer.

The Contractor shall not have construction equipment or materials in the lanes open to traffic at any time, unless approved by the Engineer.

At least one week prior to starting construction, the Contractor shall notify the City of Evans Project Engineer of the date the Contractor intends to start construction.

The Contractor shall place portable message sign panels 7 days in advance of construction operations commencing to notify the public of the closure date of the roadway.

All costs incidental to the foregoing requirements shall be included in the original contract prices for the project.

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UTILITIES

Known utilities within the limits of this project are:

- Atmos Energy
- Central Weld County Water District
- Century Link Communications*
- City of Evans
- DCP Midstream
- Noble Energy
- Xcel Energy
- Comcast Cable

* Century Link has an underground telephone line within the limits of work. The contractor shall investigate the horizontal and vertical alignment of the Century Link line before installing the Turf Reinforcement Mat. If it is determined that a conflict is present, the contractor shall immediately contact the engineer and shall not install Turf Reinforcement Mat until the conflict is resolved.

The following utilities are within the limits of this project but are not expected to be involved:

- Comcast Cable
- Atmos Energy
- Central Weld County Water District
- City of Evans
- DCP Midstream
- Noble Energy
- Xcel Energy

The work described in these plans and specifications requires coordination between the Contractor and the utility companies in accordance with subsection 105.11 in conducting their respective operations as necessary to complete the utility work with minimum delay to the project.

GENERAL:

The Contractor shall comply with Article 1.5 of Title 9, CRS ("Excavation Requirements") when excavation or grading is planned in the area of underground utility facilities. The Contractor shall notify all affected utilities at least two (2) business days, not including the day of notification, prior to commencing such operations. The Contractor shall contact the Utility Notification Center of Colorado (UNCC) at (8-1-1) or 1-800-922-1987 to have locations of UNCC registered lines marked by member companies. All other underground facilities shall be located by contacting the respective company. Utility service laterals shall also be located prior to beginning excavating or grading.

The location of utility facilities as shown on the plan and profile sheets, and herein described, were obtained from the best available information.

All costs incidental to the foregoing requirements will not be paid for separately but shall be included in the work.

REVISION OF SECTIONS 101 AND 630
CONSTRUCTION ZONE TRAFFIC CONTROL

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

In subsection 101.01 add the following:

MASH Manual for Assessing Safety Hardware

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

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

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

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

Subsection 630.02 shall include the following:

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

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

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

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

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

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

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

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

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

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

In subsection 630.16, delete the 5th paragraph.

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REVISION OF SECTION 106
BUY AMERICA REQUIREMENTS

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

Subsection 106.11 shall include the following:

The Contractor shall maintain a document summarizing the date and quantity of all steel and iron material delivered to the project. The document shall show the pay item, quantity of material delivered to the project, along with the quantity of material installed by the cutoff date for the monthly progress payment. The summary shall also reconcile the pay item quantities to the submitted Buy America certifications. The Contractor shall also maintain documentation of the project delivered cost of all foreign steel or iron permanently incorporated into the project. Both documents shall be submitted to the Engineer within five days of the cutoff date for the monthly progress payment. A monthly summary shall be required even if no steel or iron products are incorporated into the project during the month. The summary document does not relieve the Contractor of providing the necessary Buy America certifications of steel and or iron prior to permanent incorporation into the project.

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REVISION OF SECTION 106
CERTIFICATES OF COMPLIANCE AND
CERTIFIED TEST REPORTS

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

In subsection 106.12, delete the second paragraph and replace it with the following:

The original Certificate of Compliance shall include the Contractor's original signature as directed above. The original signature (including corporate title) on the Certificate of Compliance, under penalty of perjury, shall be of a person having legal authority to act for the manufacturer. It shall state that the product or assembly to be incorporated into the project has been sampled and passed all specified tests in conformity to the plans and specifications for this project. One legible copy of the fully signed Certificate of Compliance shall be furnished to the Engineer prior to installation of material. The original shall be provided to the Engineer before payment for the represented item will be made.

In subsection 106.13, delete the second paragraph and replace it with the following:

The Certified Test Report shall be a legible copy or an original document and shall include the Contractor's original signature as directed above. The signature (including corporate title) on the Certified Test Report, under penalty of perjury, shall be of a person having legal authority to act for the manufacturer or the independent testing laboratory. It shall state that the test results show that the product or assembly to be incorporated into the project has been sampled and passed all specified tests in conformity to the plans and specifications for this project. One legible copy or original document of the fully signed Certified Test Report shall be furnished to the Engineer prior to installation of material. Failure to comply may result in delays to the project or rejection of the materials.

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REVISION OF SECTION 106
MATERIAL SOURCES

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

In subsection 106.02 (a), delete the third paragraph and replace with the following:

The Contract will indicate whether the Department has or has not obtained the necessary County or City Zoning Clearance and the required permit from Colorado Department of Natural Resources needed to explore and remove materials from the available source. If the Department did not obtain the necessary clearances or permits, the Contractor shall obtain them. Any delays to the project or additional expenses that are incurred while these clearances or permits are being obtained shall be the responsibility of the Contractor. The Contractor shall ensure that the requirements of the permits do not conflict with the pit construction and reclamation requirements shown in the Contract for the available source.

In subsection 106.02 (b), delete the first paragraph and replace with the following:

(b) *Contractor Source.* Sources of sand, gravel, or borrow other than available sources will be known as contractor sources. The contractor source will be tested by the Department and approved by the Engineer prior to incorporation of the material into the project. If the submitted materials do not meet the contract specifications it will become the Contractor's responsibility to re-sample and test the material. The Contractor will supply the Department with passing test results from an AASHTO accredited laboratory and signed and sealed by a Professional Engineer. If requested by the Engineer, the Department will then re-sample and re-test the material for compliance to the contract specifications. The Contractor shall produce material which meets contract specifications throughout construction of the project.

The cost of sampling, testing, and corrective action by the Contractor will not be paid for separately but shall be included in the work.

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REVISION OF SECTION 106
SUPPLIER LIST

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

Subsection 106.01 shall include the following:

Prior to beginning any work the Contractor shall submit to the Engineer a completed Form 1425, Supplier List. During the performance of the Contract, the Contractor shall submit an updated Form 1425 when requested by the Engineer.

Failure to comply with the requirements of this subsection shall be grounds for withholding of progress payments.

REVISION OF SECTIONS 106 AND 412
SURFACE TEXTURE OF PORTLAND CEMENT CONCRETE PAVEMENT

Sections 106 and 412 of the Standard Specifications are hereby revised for this project as follows:

Subsection 106.06 (a) shall include the following:

The Contractor shall submit the proposed method of PCCP texturing at the Pre-Construction conference for approval by the Engineer. The Contractor shall perform process control (PC) testing for the pavement surface texture depth in accordance with CP 77 Method B. All PC results for surface texture depth measurements shall be included in the Contractor's QC notebook. The start of PC testing for texturing depth shall be completed within 24 hours after the first 500 linear feet of textured pavement is placed for each lane. Paving shall not proceed until results are accepted by the Engineer.

Surface texture will be considered acceptable when the average texture depth (ATD) of the panel is greater than 0.05 inch. When the ATD is less than 0.05 inches, the Contractor shall determine the area represented by this test. The area shall be determined by taking additional tests at 15 foot intervals parallel to the centerline in each direction from the affected location until two consecutive tests are found to be within the specified limits. Any surface with unacceptable texturing exceeding 25 linear feet in any lane or shoulder greater than 8 feet wide shall be diamond ground full width of the lane. Upon the second unacceptable test result, the Contractor shall notify the Engineer, in writing, the action taken to provide an acceptable surface texture.

Subsection 106.06 (b) shall include the following

The Department will perform surface texture acceptance testing in accordance with CP 77 Method B. The Department will determine the panel locations where acceptance test measurements are to be taken. One stratified random acceptance test per 2,500 linear feet or fraction thereof in each lane and shoulder wider than 8 feet shall be taken with a minimum of one test per day when the Contractor is paving.

When the Department locates areas of surface texture that do not meet the minimum ATD, the Contractor will be notified and the Contractor shall be responsible for identifying the limits of the deficient texture depth. After the Engineer approves the limits, the Contractor shall correct the deficient surface texture by diamond grinding full lane width to provide an ATD greater than 0.05 inch at no additional cost to the project. Correcting surface texture deficiencies shall occur prior to pavement smoothness testing and pavement thickness determinations.

In subsection 106.06, delete the Tining Depth element from Tables 106-2 and 106-3 and replace with the following:

Table 106-2

Element	Minimum Testing Frequency Contractor's Quality Control
Average Texture Depth	1 per 528 linear feet in each lane and shoulder wider than 8 feet.

Table 106-3

Element	Minimum Testing Frequency Contractor's Quality Control
Average Texture Depth	1 per 528 linear feet in each lane and shoulder wider than 8 feet.

Delete subsection 412.07 (c)

Delete subsection 412.12 (c) and (d) and replace with the following:

(c) *Final Finish and Stationing*. The final surface of the pavement shall be uniformly textured with a broom, burlap drag, artificial turf or diamond ground in order to obtain the specified texture depth. Surface imperfections resulting from the texturing operation shall be corrected by the Contractor at no additional cost.

Broom, burlap drag or artificial turf texture shall be installed within 15 minutes after strike-off, or as pavement conditions allow.

Diamond grinding shall be performed using diamond blades mounted on a self-propelled machine designed for diamond grinding and texturing concrete pavement. The equipment shall have a positive means of vacuuming the grinding residue from the pavement surface, leaving the surface in a clean, near-dry condition. Diamond grinding shall not occur until the concrete has attained strength of at least 2,500 psi.

The diamond grinding process shall produce a pavement surface that is true to grade and uniform in appearance. The grooves shall be evenly spaced. Any ridges on the outside edge next to the shoulder, auxiliary, or ramp lanes greater than 3/16 inch high shall be feathered out to the satisfaction of the Engineer in a separate, feather pass operation.

The pavement surface after diamond grinding shall have no depressions or misalignment of slope in the longitudinal direction exceeding 1/8 inch in 12 feet when measured with a 12 foot straightedge placed parallel to the centerline. All areas of deviation shall be reground at no additional cost.

Stationing shall be stamped into the outside edge of the pavement, as shown on the plans.

Delete subsection 412.14 and replace with the following:

412.14 Curing. Immediately after the finishing operations have been completed the entire surface and exposed sides of the newly placed concrete, shall be sprayed uniformly with a curing compound meeting the requirements of ASTM C309, Type 2. The ASTM C309 Type 2 curing compound shall be volatile organic content (VOC) compliant.

The curing compound shall be applied within 10 minutes after the final finish has been applied. Failure to cover the surface of the concrete within 10 minutes shall be cause for immediate suspension of the paving operations.

An initial application of curing compound shall be applied under pressure by mechanical sprayers at the rate of not less than 1 gallon per 180 square feet of pavement surface. A second application of curing compound shall be applied within 30 minutes after the initial application. The second application rate shall be not less than 1 gallon per 180 square feet of pavement surface. Alternatively, the Contractor may apply the curing compound in one application of not less than 1 gallon per 120 square feet. Additional curing compound shall be applied as needed to ensure that 100 percent of the pavement is covered. The spraying equipment shall be fully automated, equipped with a tank agitator, and a wind guard. During application, the compound shall be in a thoroughly mixed condition with the pigment uniformly dispersed throughout the vehicle and the compound shall be stirred continuously by effective mechanical means. Hand spraying of irregular widths or shapes and surfaces exposed by removal of forms will be permitted. Curing compounds shall not be applied to the inside faces of joints to be sealed.

Should the curing film become damaged from any cause, within 72 hours after concrete placement, except for Class E concrete open to traffic, the damaged portions shall be repaired immediately with additional curing compound, payment for which shall be at the Contractor's expense.

The sides of pavement slabs shall be immediately sprayed with curing compound when the forms are removed.

Delete subsection 412.18(2) and replace with the following:

(2) Corrective work for texturing.

Delete subsection 412.22 and replace with the following:

412.22 Opening to Traffic. The pavement shall not be opened to traffic until the concrete has achieved a compressive strength of 3000 psi. Concrete compressive strength shall be determined by maturity meters. Prior to opening the pavement to traffic the roadway shall be cleaned, as approved.

Prior to placement of concrete whose strength will be determined with maturity meters, the Contractor shall provide the Engineer a report of maturity relationships in accordance with CP 69. The Contractor shall provide maturity meters and all necessary wires and connectors. The Contractor shall be responsible for the placement and maintenance of the maturity meters and wires. At a minimum a maturity meter will be placed at a minimum of once per day and then once per 5,000 square yards. Placement shall be as directed by the Engineer.

For placements with multiple maturity meters, the lowest compressive strength shall determine when the pavement may be opened to traffic.

If a maturity meter fails, is tampered with, is destroyed or was not placed, the section of pavement represented by the maturity meter shall remain closed to traffic for a period of 28 days. The Contractor may choose at his own expense to core the section of pavement represented by the maturity meter. Cores will be obtained and tested according to CP 65. Cores will be a minimum of 4 inches in diameter. A minimum of three cores in a two square foot area will be obtained. If the compressive strength of any one core differs from the average by more than 10 percent that compressive strength will be deleted and the average strength will be determined using the compressive strength of the remaining two cores. If the compressive strength of more than one core differs from the average by more than 10 percent the average strength will be determined using all three compressive strengths of the cores. To open the section of pavement, the average compressive strength of the cores shall be a minimum of 3,000 psi.

In subsection 412.24 (a) delete the second paragraph and replace with the following:

The price per square yard of Concrete Pavement shall be full compensation for furnishing and placing all materials, including any dowels, tie bars, joint materials, texturing, sawing, finishing, and rumble strips.

REVISION OF SECTIONS 106, 627 AND 713
GLASS BEADS FOR PAVEMENT MARKING

Sections 106, 627, and 713 are hereby revised for this project as follows:

Subsection 106.11 shall include the following:

All post-consumer and industrial glass beads for pavement marking shall have been manufactured from North American glass waste streams in the United States of America. The bead manufacturer shall submit a COC in accordance with subsection 106.12 confirming that North American glass waste streams were used in the manufacture of the glass beads.

Subsection 627.06 (c) shall include the following:

Glass beads shall be applied into the thermoplastic pavement marking by means of a low pressure, gravity drop bead applicator.

In subsection 713.08, delete the first and third paragraphs and replace with the following:

713.08 Glass Beads for Pavement Marking. Glass beads for pavement marking shall conform to AASHTO M 247, except for the following:

(1) Gradation:

U.S. Mesh	Microns	% Passing	
		Epoxy and MMA	Waterborne, Low VOC and High Build
16	1180	90-100	100
18	1000	65-80	97-100
20	850		85-100
30	600	30-50	50-70
40	425		10-35
50	300	0-5	0-10
80	180		0-5

(2) Roundness: All beads shall meet a minimum of 80 percent true spheres in accordance with the Office of Federal Lands Highways FLH T520 or a computerized optical testing method.

(3) Color / Clarity: Beads shall be colorless, clear, and free of carbon residues.

(4) Refractive Index: Minimum 1.51 by oil immersion method.

(5) Air Inclusions: Less than 5 percent by visual count.

(6) Coatings: Per manufacturer's recommendation for optimum adhesion and embedment.

(7) Chemical Resistance: Beads shall be resistant to hydrochloric acid, water, calcium chloride, and sodium sulfide as tested per methods outlined in sections 4.3.6 to 4.3.9 of the TT-B Federal Spec.1325D.

(8) For Epoxy Pavement Marking, a minimum of 40 percent of the total weight shall be manufactured using a molten kiln direct melt method. For Waterborne and Low VOC Paint, a minimum of 15 percent of the total weight shall be manufactured using a molten kiln direct melt method. All molten kiln direct melt glass beads shall be above the 600 µm (#30) sieve.

(9) Glass beads used for any type of pavement marking shall not contain more than 75 parts per million (ppm) arsenic, 75 ppm antimony and 100 ppm lead, as tested in accordance with EPA methods 3052 and 6010C, or other approved testing method

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REVISION OF SECTIONS 107
RESPONSIBILITY FOR DAMAGE CLAIMS,
INSURANCE TYPES AND COVERAGE LIMITS

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

Delete subsection 107.15(c) and replace it with the following:

(c) Each insurance policy shall include provisions preventing cancellation or non-renewal without at least 30 days prior notice to Contractor. The Contractor shall forward to the Engineer any such notice received within seven days of the Contractor's receipt of such notice.

REVISION OF SECTIONS 107
WARNING LIGHTS FOR WORK VEHICLES AND EQUIPMENT

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

Subsection 107.06 (b) shall include the following:

All work vehicles and mobile equipment shall be equipped with one or more functioning warning lights mounted as high as practicable, which shall be capable of displaying in all directions one or more flashing, oscillating, or rotating lights for warning roadway traffic. The lights shall be amber in color. The warning lights shall be activated when the work vehicle or mobile equipment is operating within the roadway, right of way or both. All supplemental lights shall be SAE Class 1 certified.

REVISION OF SECTION 107
WATER QUALITY CONTROL
(CONTRACTOR OBTAINED STORMWATER PERMIT)

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

Delete subsection 107.25 and replace with the following:

107.25 Water Quality Control. The project work shall be performed using practices that minimize water pollution during construction. All the practices listed in (b) below shall be followed to minimize the pollution of any State waters, including wetlands.

(a) *Definitions.*

1. Areas of Disturbance (AD). Locations where any activity has altered the existing soil cover or topography, including vegetative and non-vegetative activities during construction.

2. Construction Site Boundary/Limits of Construction (LOC). The project area defined by the Stormwater Construction Permit.

3. Discharge of Pollutants. One or more pollutants leaving the LOC or entering State waters or other conveyances.

4. Limits of Disturbed Area (LDA). Proposed limits of ground disturbance as shown on the Plans.

5. Pollutant. Dredged spoil, dirt, slurry, solid waste, incinerator residue, sewage, sewage sludge, garbage, trash, chemical waste, biological nutrient, biological material, radioactive material, heat, wrecked or discarded equipment, rock, sand, or any industrial, municipal, or agricultural waste, as defined in the Colorado Code of Regulations (CCR) [5 CCR 1002-61, 2(76)]

6. Pollution. Man-made, man-induced, or natural alteration of the physical, chemical, biological, and radiological integrity of water. [25-8-103 (16), CRS]

7. State waters. Defined in subsection 101.77.

(b) *Construction Requirements.*

1. The Contractor shall comply with the "Colorado Water Quality Control Act" (Title 25, article 8, CRS), the "Protection of Fishing Streams" (Title 33, Article 5, CRS), the "Clean Water Act" (33 USC 1344), regulations promulgated, certifications or permits issued, and to the requirements listed below. In the event of conflicts between these requirements and water quality control laws, rules, or regulations of other Federal, or State agencies, the more restrictive laws, rules, or regulations shall apply.

2. If the Contractor determines construction of the project will result in a change to the permitted activities or LDA, the Contractor shall detail the changes in a written report to the Engineer. Within five days after receipt of the report, the Engineer, after coordination with Region Planning and Environmental Manager (RPEM), will approve or reject in writing the request for change, or detail a course of action including revision of existing permits or obtaining new permits.

3. If construction activities result in noncompliance of any permit requirement, the project will be suspended and the permitting agency notified, if required. The project will remain suspended until the Engineer receives written approval by the permitting agency.

4. The Contractor is legally required to obtain all permits associated with specific activities within, or off the Right of Way, such as borrow pits, concrete or asphalt plant sites, waste disposal sites, or other facilities. It is the Contractor's responsibility to obtain these permits. The Contractor shall consult with the Engineer,

and contact the Colorado Department of Public Health and Environment (CDPHE) or other appropriate federal, state, or local agency to determine the need for any permit.

5. The Contractor shall conduct the work in a manner that prevents pollution of any adjacent State waters. Erosion control work shall be performed in accordance with Section 208, this subsection, and all other applicable parts of the Contract.

6. Prior to the Environmental Pre-construction Conference the SWMP Administrator, identified in subsection 208.03(c), shall identify and describe all potential pollutant sources, including materials and activities, and evaluate them for the potential to contribute pollutants to stormwater discharges associated with construction activities. The list of potential pollutants shall be continuously updated during construction. At a minimum, each of the following shall be evaluated for the potential for contributing pollutants to stormwater discharges and identified in the SWMP, if found to have such potential:

   (1) All exposed and stored soils

   (2) Vehicle tracking of sediments

   (3) Management of contaminated soils

   (4) Vehicle and equipment maintenance and fueling

   (5) Outdoor storage activities (building materials, fertilizers, chemicals, etc.)

   (6) Significant dust or particle generating processes

   (7) Routine maintenance involving fertilizers, pesticides, detergents, fuels, solvents, oils, etc.

   (8) On site waste management practices (waste piles, dumpsters, etc.)

   (9) Dedicated asphalt and concrete batch plants

   (10) Concrete truck and equipment washing, including the concrete truck chute and associated fixtures and equipment

   (11) Concrete placement and finishing tool cleaning

   (12) Non-industrial waste sources that may be significant, such as worker trash and portable toilets

   (13) Loading and unloading operations

   (14) Other areas or procedures where spills could occur

   The SWMP Administrator shall record the location of potential pollutants on the site map. Descriptions of the potential pollutants shall be added to the SWMP notebook.

   At or prior to the Environmental Pre-construction Conference the Contractor shall submit a Spill Response Plan for any petroleum products, chemicals, solvents, or other hazardous materials in use, or in storage, at the work site. See subsection 208.06(c) for Spill Response Plan requirements. Work shall not be started until the plan has been submitted to and approved by the Engineer.

On site above ground bulk storage containers with a cumulative storage shell capacity greater than 1,320 U.S. gallons, or storage containers having a "reasonable expectation of an oil discharge" to State waters, are subject to the Spill Prevention, Control and Countermeasure Plan (SPCC) Rule. Oil of any type and in any form is covered, including, but not limited to: petroleum; fuel oil; sludge; oil refuse; oil mixed with wastes other than dredged spoil. EPA Region 8 is responsible for administering and enforcing the SPCC plan requirements in Colorado. Prior to start of work, the Contractor shall submit a SPCC Form which has been approved by the EPA for the project.

7. The Contractor shall obtain a Construction Dewatering (CDW) permit from CDPHE anytime uncontaminated groundwater, including groundwater that is commingled with stormwater or surface water, is encountered during construction activities and the groundwater or commingled water needs to be discharged to State waters. If contaminated groundwater is encountered, a Remediation permit may be needed from CDPHE in accordance with Section 250.

8. Water from dewatering operations shall not be directly discharged into any State waters, unless allowed by a permit. Water from dewatering shall not be discharged into a ditch unless:

   (1) Written permission is obtained from the owner of the ditch.
   (2) It is covered in the approved CDW or Remediation permit that allows the discharge.
   (3) A copy of this approval is submitted to the Engineer. A copy of the Permit shall be submitted to the Engineer prior to dewatering operations commencing.

   If the site is covered by a Colorado Discharge Permit System Stormwater Construction Permit (CDPS-SCP) and the following conditions are met, a separate CDW permit will not be required for discharge to the ground:

   (1) The source is identified in the Stormwater Management Plan (SWMP) as updated by the SWMP Administrator.

   (2) The SWMP describes and locates the practices implemented at the site to control stormwater pollution from the dewatering of groundwater or stormwater.

   (3) The SWMP describes and locates the practices to be used that will ensure that no groundwater from construction dewatering is discharged from the LOC as surface runoff or to surface waters or storm sewers.

   (4) Groundwater and groundwater combined with stormwater do not contain pollutants in concentrations exceeding the State groundwater standards in Regulations 5 CCR 1002-41 and 42.

   If surface water are diverted around a construction area and no pollutants are introduced during the diversion, a CDW Permit is not required. If the diverted water enters the construction area and contacts pollutant sources (e.g. disturbed soil, concrete washout, etc.), the Contractor shall obtain a CDW permit for the discharge of this water to State waters or to the ground.

   Construction Dewatering may be discharged to the ground on projects that are not covered by a CDPS-SCP if the conditions of the CDPHE's low risk guidance document for Discharges of Uncontaminated Groundwater to Land are met. The conditions of this guidance are:

   (1) The source of the discharge is solely uncontaminated groundwater or uncontaminated groundwater combined with stormwater and does not contain pollutants in concentrations that exceed water quality standards for groundwater referenced above.

(2) Discharges from vaults or similar structures shall not be contaminated. Potential sources of contamination include process materials used, stored, or conveyed in the structures, or introduced surface water runoff from outside environments that may contain oil, grease, and corrosives.

(3) The groundwater discharge does not leave the project boundary limits where construction is occurring.

(4) Land application is conducted at a rate and location that does not allow for any runoff into State waters or other drainage conveyance systems, including but not limited to streets, curb and gutter, inlets, borrow ditches, open channels, etc.

(5) Land application is conducted at a rate that does not allow for any ponding of the groundwater on the surface, unless the ponding is a result of implementing BMPs that are designed to reduce velocity flow. If the BMPs used result in ponding, the land application shall be done in an area with a constructed containment, such as an excavation or berm area with no outfall. The constructed containment shall prevent the discharge of the ponding water offsite as runoff.

(6) A visible sheen is not evident in the discharge.

(7) BMPs are implemented to prevent any sediment deposited during land application from being transported by stormwater runoff to surface waters or other conveyances.

(8) All BMPs used shall be selected, installed, implemented, and maintained according to good Engineering, hydrologic and pollution control practices. The selected BMPs shall provide control for all potential pollutant sources associated with the discharge of uncontaminated groundwater to land. The discharge shall be routed in such a way that it will not cause erosion to land surface. Energy dissipation devices designed to protect downstream areas from erosion by reducing the velocity of flow (such as hose attachments, sediment and erosion controls) shall be used when necessary to prevent erosion.

Discharged water shall be drained slowly so that it soaks into the ground without running outside the project boundary or causing flooding issues. The discharge shall be routed in such a way that it will not contact petroleum products or waste.

9. At least 15 days prior to commencing dredging or fill operations in a watercourse, the Contractor shall provide written notification to owners or operators of domestic or public water supply intakes or diversion facilities, if these facilities are within 20 miles downstream from the dredging or fill operations. Notification shall also be given to Owners or operators of other intakes or diversions that are located within five miles downstream from the site of the project. Identities of downstream owners and operators can be obtained from Colorado Division of Water Resources, Office of the State Engineer.

10. Temporary fill into wetlands or streams will not be allowed, except as specified in the Contract and permits. If such work is allowed, upon completion of the work all temporary fills shall be removed in their entirety and disposed of in an upland location outside of flood plains unless otherwise specified in the Contract.

11. Construction operations in waters of the United States as defined in 33 CFR Part 328.3, including wetlands, shall be restricted to areas and activities authorized by the U.S. Army Corps of Engineers as shown in the Contract. Fording waters will be allowed only as authorized by the U.S. Army Corps of Engineers 404 Permit.

12. Wetland areas outside of the permitted limits of disturbance shall not be used for storage, parking, waste disposal, access, borrow material, or any other construction support activity.

13. Pollutant byproducts of highway construction, such as concrete, asphalt, solids, sludges, pollutants removed in the course of treatment of wastewater, excavation or excess fill material, and material from sediment traps shall be handled, stockpiled, and disposed of in a manner that prevents entry into State waters, including wetlands. Removal of concrete waste and washout water from mixer trucks, concrete finishing tools, concrete saw and all concrete material removed in the course of construction operations or cleaning shall be performed in a manner that prevents waste material from entering State waters. A minimum of ten days prior to the start of the construction activity, the Contractor shall submit in writing a Method Statement for Containing Pollutant Byproducts to the Engineer for approval.

14. The use of chemicals such as soil stabilizers, dust palliatives, herbicides, growth inhibitors, fertilizers, deicing salts, etc., shall be in accordance with the manufacturer's recommended application rates, frequency, and instructions.

15. All materials stored on-site shall be stored in a neat, orderly manner, in their original containers, with the original manufacturer's label. Materials shall not be stored in a location where they may be carried into State waters at any time.

16. Spill prevention and containment measures conforming to subsection 208.06 shall be used at storage, and equipment fueling and servicing areas to prevent the pollution of any State waters, including wetlands. All spills shall be cleaned up immediately after discovery, or contained until appropriate cleanup methods can be employed. Manufacturer's recommended methods for spill cleanup shall be followed, along with proper disposal methods. When required by the Colorado Water Quality Control Act, Regulation 5 CCR 1002-61, spills shall be reported to the Engineer and CDPHE in writing.

17. The Contractor shall prevent construction activities from causing grass or brush fires.

18. The construction activities shall not impair Indian tribal rights, including, but not limited to, water rights, and treaty fishing and hunting rights.

19. Prior to start of work, the Contractor shall certify in writing to the Engineer that construction equipment has been cleaned prior to initial site arrival. Vehicles and equipment shall be free of soil and debris capable of transporting noxious weed seeds or invasive species onto the site. Additional equipment required for construction shall also be certified prior to being brought onto the project site.

20. Vehicles which have been certified by the Contractor as having been cleaned prior to arrival on site may be cleaned on site at an approved area where wash water can be properly contained. Vehicles leaving and reentering the project site shall be recertified.

21. At the end of each day the Contractor shall collect all trash and dispose of it in appropriate containers.

22. Construction waste that is considered a pollutant or contaminant shall be collected and disposed of in appropriate containers. This material may be stockpiled on the project when it is contained or protected by an appropriate BMP.

(c) *Measurement and Payment.*

1. All the work listed in (b) above, including but not limited to dewatering, erosion control for dewatering, and disposal of water resulting from dewatering operations, including all costs for CDPHE concurrences and permits, will not be measured and paid for separately, but shall be included in the work.

2. The Contractor shall be liable for any penalty (including monetary fines) applied to the Department caused by the Contractor's noncompliance with any water quality permit or certification. Monetary fines shall be

deducted from any money due to the Contractor. If the monetary fine is in excess of all the money due to the Contractor, then the Contractor shall pay to the Department the amount of such excess.

3. 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.

4. If a spill occurs as a direct result of the Contractor's actions or negligence, the clean-up of such spill shall be performed by the Contractor at the Contractor's expense.

5. Areas exposed to erosion by fire resulting from the Contractor's operations shall be stabilized in accordance with Section 208 by the Contractor and at the Contractor's expense.

(d) *Contractor Obtained Stormwater Construction Permit.* The Contractor shall obtain a Colorado Discharge Permit System Stormwater Construction Permit (CDPS-SCP) for any project work that disturbs at least 1 acre of land. The Contractor shall apply for and obtain the permit upon award of the Contract. The Contractor shall provide a copy of permit certification or the submitted CDPS-SCP application to the Engineer prior to or at Pre-construction Conference. No work shall begin until the CDPS-SCP permit has been approved from CDPHE, unless otherwise directed. A copy of the Permit and application to obtain a permit shall be placed in the project SWMP notebook.

If a Utility Company has pulled a permit for the area prior to the Contractor being on site, then the Contractor shall coordinate with the Utility Company to transfer those areas over to the Contractor prior to work commencing. The Contractor shall not commence construction until Application for Transfer of Ownership for All Permits, Certifications and Authorizations has been approved by CDPHE and submitted to the Engineer.

To initiate Partial Acceptance of the stormwater construction work (including seeding and planting required for erosion control), the Contractor shall request in writing a Stormwater Completion Walkthrough. The Engineer will set up the walkthrough and will include: the Engineer or designated representative, Superintendent or designated representative, Stormwater Management Plan (SWMP) Administrator, Region Water Pollution Control Manager (RWPCM) and Landscape Architect representing the region. Unsatisfactory and incomplete erosion control work will be identified in this walkthrough, and will be summarized by the Engineer in a punch list. The Water Quality Permit Transfer to Maintenance Punch List may be used as a template in creating the Engineer's punch list.

The Engineer will coordinate with CDOT Maintenance on regular inspections of the corrective work. The completed action items associated with the corrective work shall be shown as completed on the Punch List. Upon completion of all items shown, the Contractor shall submit the completed Punch List to the Engineer for review. Upon written approval of the Punch List, the Contractor shall submit the "Application for Transfer of Ownership for All Permits, Certifications and Authorizations" to the CDPHE requesting transfer of ownership of the CDPS-SCP to CDOT Maintenance. When requested by CDOT Maintenance and approved by the Engineer, the Permit may be transferred by the Contractor to the Resident Engineer instead of CDOT Maintenance.

Until the transfer of the permit has been approved by the CDPHE the Contractor shall continue to adhere to all permit requirements. Requirements shall include erosion control inspections, BMP installation, BMP maintenance, BMP repair, including seeded areas, and temporary BMP removal. All documentation shall be submitted to the Engineer and placed in the SWMP notebook.

All costs associated with the Contractor applying for, holding, and transferring the CDPS-SCP permit between parties will not be measured and paid for separately, but shall be included in the work in accordance with subsection 107.02.

1

REVISION OF SECTION 108
DELAY AND EXTENSION OF CONTRACT TIME

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

In subsection 108.08, delete (c) and (d) and replace with the following:

(c) Delay. Any event, action or factor that extends the performance period of the Contract.

1. *Excusable Delay:* A delay that was beyond the Contractor's control and was not due to the Contractor's fault or negligence. The Department may grant a contract time extension for an excusable delay.

   A. *Compensable Delay*: A delay that the Department, not the Contractor, is responsible for entitling the *Contractor* to a time extension and monetary compensation. Monetary compensation for compensable delays will be made in accordance with Subsection 109.10.

   B. *Noncompensable Delay:* An excusable delay that neither the Contractor nor the Department is responsible for that may entitle the Contractor to a contract time extension but no additional monetary compensation. Contract time allowed for the performance of the work may be extended for delays due to force majeure (i.e. acts of God, acts of the public enemy, terrorist acts, fires, floods, area wide strikes, embargoes, or unusually severe weather).

2. *Nonexcusable Delay*: A delay that was reasonably foreseeable or within the control of the Contractor for which the Department will not grant monetary compensation or a contract time extension.

3. *Concurrent Delay.* Independent delays to critical activities occurring at the same time.

   A. The *Department* will not grant a time extension or additional compensation for the period of time that a non-excusable delay is concurrent with an excusable delay.

   B. The Department may grant time but no compensation for the period of time that a non-compensable delay is concurrent with a compensable delay.

Delays in delivery of materials or fabrication scheduling resulting from late ordering, financial considerations, or other causes that could have been foreseen or prevented will be considered nonexcusable delays. However, delays caused by fuel shortage or delay in delivery of materials to the Contractor due to some unusual market condition caused by industry-wide strike, national disaster, area-wide shortage, or other reasons beyond the control of the Contractor which prevent procurement of materials or fuel within the allowable contract time limits will be considered excusable delays.

(d) Extension of Contract Time. The Contractor's assertion that insufficient contract time was specified is not a valid reason for an extension of contract time. For time extension requests, the Contractor shall provide a two-part submittal: part one shall consist of a written notice of the delay and part two shall consist of the Contractor's delay documentation and supporting analysis.

Part 1: The Contractor shall provide the written notice of delay within seven days of the delay occurrence. The notice shall describe the delay and include documentation substantiating the nature and cause of the delay. Failure to submit the written notice constitutes a waiver of entitlement to additional time or compensation.

Part 2: This shall be submitted within 30 days of the written notice. The Contractor shall include all documentation needed to support the time extension request. In order to request additional contract time for an unexpected delay, the Contractor shall provide a contemporaneous schedule analysis in accordance with subsection 108.03. The schedule analysis shall show that the delayed activity or activities were on the critical path or became critical due to the delay.

REVISION OF SECTION 108
DELAY AND EXTENSION OF CONTRACT TIME

The Engineer will base a determination of an allowable contract time extension on:

(1) The current Schedule in effect at the time of the alleged delay;
(2) The supporting documentation submitted by the Contractor;
(3) The contemporaneous schedule analysis; and
(4) Any other relevant information available to the Engineer.

For a time extension request resulting from a change order, the Contractor shall demonstrate the delay to the project completion date by:

(1) Inserting a fragnet containing the change order activities into an unprogressed copy of the schedule that is current at the time of the change order;
(2) tying the fragnet into the schedule logic; and
(3) Recalculating the schedule.

The Department will not consider delays to activities which do not affect the performance period of the Contract as a basis for a Contract time extension. If the Engineer grants a contract time extension, the revised Contract Completion date will be in effect as though it were the original contract date.

A Contractor's failure to have an approved, or approved with comments, current project schedule in place will preclude the Department from considering a Contractor's a time extension request.

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REVISION OF SECTION 108
HOLIDAY WEEKEND

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

In subsection 108.08, delete the second paragraph and replace with the following:

The Contractor shall not carry on construction operations on Saturdays, Sundays or holidays unless previously arranged and approved. The Contractor shall not perform work on any day of a three or four day holiday weekend when the holiday is New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, or Christmas Day. Construction operations shall stop at 12:00 Noon the day before the start of the holiday weekend and shall commence the day after the three or four days have passed. The Contractor shall only make emergency repairs, and provide proper protection of the work and traveling public on these days.

1

REVISION OF SECTION 108
LIQUIDATED DAMAGES

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

In subsection 108.09, delete the Schedule of Liquidated Damages and replace with the following:

Original Contract Amount ($)		**Liquidated Damages per Calendar Day ($)**
From More Than	**To And Including**	
0	150,000	500
150,000	500,000	1,000
500,000	1,000,000	1,600
1,000,000	2,000,000	2,300
2,000,000	4,000,000	4,100
4,000,000	10,000,000	5,800
10,000,000	----	7,000

1

REVISION OF SECTION 108
NOTICE TO PROCEED

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

Delete subsection 108.02 and replace with the following:

108.02 Notice to Proceed. The Contractor shall not commence work prior to the issuance of a Notice to Proceed. The "Notice to Proceed" will stipulate the date on which contract time commences. When the Contractor proceeds with work prior to that date, contract time will commence on the date work actually begins. The Contractor shall commence work under the Contract on or prior to the 15th day following Contract execution or the 30th day following the date of award, whichever comes later, or in accordance with the selected start date allowed in the special provisions.

REVISION OF SECTION 108
PROJECT SCHEDULE

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

Delete subsection 108.03 and replace with the following:

108.03 Project Schedule.

(a) *Definitions.*

Activity. An activity is a project element on a schedule that affects completion of the project. An activity has a description, start date, finish date, duration, and one or more logic ties.

Activity ID. A unique, alphanumeric, identification code assigned to an activity and remains constant throughout the project.

Bar Chart. A simple depiction of a Project Schedule without relationships or supporting logic of the schedule.

Calendar. Defined work periods and no work periods that determine when project activities can occur. Multiple calendars may be used for different activities; e.g., a 5-day work-week and a 7-day work-week calendar.

Constraint. A restriction imposed in a schedule, which fixes a value that would otherwise be calculated within the schedule. Examples of values that can be fixed by a constraint include start date, end date, and completion date.

Critical Path. The sequence of activities that determines the duration of the project.

Critical Path Method Scheduling. (CPM Scheduling) is a logic-based planning technique using activity durations and relationships between activities to calculate a schedule determining the minimum total project duration.

Data Date. The starting point from which to schedule all remaining work.

Duration. The estimated amount of time needed to complete an activity.

Float. The amount of time between the earliest date an activity can start and the latest date when an activity must start ,or the earliest date an activity can finish and latest date when an activity can finish before the activity becomes critical. The time between the Project Schedule completion date and the Contract completion date is not considered float.

Gantt Chart. A time-scaled graphical display of the project's schedule.

Lag. A time-value assigned to a relationship.

Logic. Relationships between activities defining the sequence of work (See also predecessor activity and successor activity).

Milestone. An activity, with no duration used to represent an event.

Open-Ended Activity. An activity that does not have both a predecessor activity and a successor activity.

Predecessor Activity. An activity that is defined by schedule logic to precede another activity.

Relationship. The interdependence between activities.

Salient Feature. An item of work that is of special interest for CDOT in coordinating the project schedule but may not affect the overall completion of the project.

Successor Activity. An activity that is defined by schedule logic to follow another activity.

Time-Scaled Logic Diagram. Gantt chart that illustrates logic links depicting both schedule logic and the time at which activities are performed.

(b) *Project Schedule* **-** *General*

The Contractor shall use either Microsoft Project or Primavera Scheduling software to develop and manage a CPM Project Schedule to plan, schedule, and report the progress of the work. Prior to, or at the Pre-construction Conference, the Contractor shall notify the Engineer in writing, which scheduling software the Contractor shall use to manage the project. The Contractor's selection and use of particular scheduling software cannot be changed after the first schedule submittal. If the Contractor selects Primavera, the Contractor shall calculate the schedule using the Retained Logic scheduling option. The Department will not allow use of bar charts for the Project Schedule.

The Contractor shall submit schedules for approval by the Engineer. The purpose of these schedules is to allow the Contractor and the Department to jointly manage the work and evaluate progress. The schedules also serve to evaluate the affect of changes and delays to the scheduled project completion. Either party may require a formal schedule review meeting.

The Contractor's schedule shall consist of a time-scaled logic diagram and shall show the logical progression of all activities required to complete the work.

The Contractor shall use activity descriptions that ensure the work is easily identifiable. The Contractor shall show the no-work days in the schedule calendars.

The Contractor shall use durations for individual construction activities that do not exceed 15 calendar days unless approved by the Engineer. The Contractor may group a series of activities with an aggregate duration of five days or less into a single activity. Non-construction activities may have durations exceeding 15 working days, as approved by the Engineer.

The Contractor may include summary bars in the schedule as long as the detailed activities to complete the work are displayed.

The Contractor shall not use the following:

(1) Negative lags
(2) Lags in excess of 10 working days without approval by the Engineer. The Contractor's written request shall justify the need for the lag. Lags shall be identified.
(3) Start-to-finish relationships.
(4) Open-ended activities - every activity shall have at least one predecessor activity and at least one successor activity, except for the first and last activities in the network. If the contractor uses a start-to-start relationship to link two activities, then both of those two activities should also have successor activities linked by either a finish-to-start or a finish-to-finish relationship.
(5) Constraints without approval by the Engineer. The Contractor's written request shall explain why the use of constraints in the schedule is necessary.

The Project Schedule shall show all activities required by all parties to complete the work. The Project Schedule shall include subcontracted work, delivery dates for critical material, submittal and review periods, permits and governmental approvals, milestone requirements, utility work by others and no work periods. The Contractor, its subcontractors, suppliers, and engineers, at any tier, shall perform the work according to the approved Project Schedule.

Float within the Baseline Schedule or any other Project Schedule is not for the exclusive use or benefit of either party, but is a project resource available to both parties as needed until it is depleted.

For any schedule submittal that shows completion in less than 85 percent of the Contract Time, the Contractor shall submit planned production rates in the schedule for all activities with float of 10 days or less. The Engineer may require additional methods statements for activities with float of 10 days or less.

The Engineer's review of the schedule will not exceed 10 calendar days. The Engineer will provide the Contractor with one of the following responses within 10 days after receipt of the Project Schedule:

(1) Approved, no exceptions taken;
(2) Approved-as-Noted; or
(3) Revise and Resubmit within 10 days.

The Contractor shall not assume that approval of the Project Schedule relieves the Contractor of its obligation to complete all work within the Contract Time.

(c) *Schedule Submittals.* The Contractor shall include a time-scaled logic diagram with all schedule submittals that:

(1) Is plotted on a horizontal time-scale in accordance with the project calendar.

(2) Uses color to clearly identify the critical path.

(3) Is based on early start and early finish dates of activities.

(4) For Schedule Updates and Schedule Revisions, shows actual completion dates up to but not including the data date.

(5) Clearly shows the sequence and relationships of all activities necessary to complete the contract work.

(6) Includes an activity block for each activity with the following information:

Activity ID	Activity Description
Original Duration	Total Float
Early start date	Early finish date
Late start date*	Late finish date*
Actual Start date^	Actual Finish date^
Calendar used on the activity	Activity Responsibility
Remaining Duration^	Duration Percent Complete^
Gantt chart (time-scaled logic diagram)	

*Required with the Preliminary and Baseline Schedule.
^Required with the Project Schedule Update and Schedule Revision.

The Contractor shall include the following with all schedule submittals:

(1) A Job Progress Narrative Report that includes the following:
- (i) A description of the work performed since the previous month's schedule update.
- (ii) A description of problems encountered or anticipated since the previous month's schedule submission.
- (iii) A description of unusual labor, shift, equipment, or material conditions or restrictions encountered or anticipated.
- (iv) The status of all pending items that could affect the schedule.
- (v) Explanations for milestones forecasted to occur late.
- (vi) Scheduled completion date status and any change from the previous month's submission.
- (vii) An explanation for a scheduled completion date forecasted to occur before or after the contract completion date or contract time.
- (viii) Schedule Delays:
  1. A description of current and anticipated delays including: Identification of the delayed activity or activities by Activity ID(s) and description(s).
  2. Delay type with reference to the relevant specification subsection.
  3. Delay cause or causes.
  4. Effect of the delay on other activities, milestones, and completion dates.
  5. Identification of the actions needed to avoid a potential or mitigate an actual delay.
  6. A description of the critical path impact and effect on the scheduled completion date in the previous month's schedule update.
- (ix) A list of all added and deleted activities along with an explanation for the change.
- (x) All logic and duration changes along with an explanation for the change.

(2) A Predecessor Activity and Successor Activity report that defines all schedule logic and clearly indicates all logical relationships and constraints.

(3) An Early Start report listing all activities, sorted by actual start/early start date.

(4) A Float report listing all activities sorted in ascending order of available float.

(5) A Critical Path report listing all activities not yet complete with the percent complete, sorted by float and then by early start.

(6) A listing of all non-work days.

For all required schedule submittals, the Contractor shall submit two electronic copies on two compact disk, USB flash drive, or other media as directed by the Engineer. Electronic copies of CPM schedules shall be submitted both in the native schedule format and in "PDF" format. The Contractor shall also provide two printed copies of the CPM Schedule and all reports.

Each schedule submittal shall be appropriately labeled as a Preliminary Schedule, Baseline Schedule, Project Schedule Update, or Schedule Revision. The title bar shall include the CDOT project number, subaccount, project name, contractor name, schedule data date. If an originally submitted schedule is revised during review, the title bar shall also include a revision number (REV1, REV2, etc.) and revision date.

(d) *Preliminary Schedule.* Within 14 days of award of the Contract, the Contractor may submit a Preliminary Schedule showing all planned activities from the Notice to Proceed through the first 60 days of the project. If the Contractor elects not to submit a Preliminary Schedule, then the Contractor shall submit a complete Baseline Schedule within 14 days of award of the Contract, which will be subject to all requirements of a Baseline submittal. The Preliminary Schedule shall not show any progress and it will be approved by the Engineer before work can commence. The Preliminary Schedule shall be used as the basis for the Baseline Schedule.

(e) *Baseline Schedule.* If the Contractor elects to submit a Preliminary Schedule, within 45 days of the award of Contract, the Contractor shall submit a Baseline Schedule that includes all work activities completed within Contract Time. The Contractor shall not show progress in the Baseline Schedule. Further partial payments will not be made beyond 60 days after the start of Contract Time unless the Baseline Schedule is approved. When approved, the Baseline Schedule shall become the Project Schedule.
The Contractor shall use all information known by the Contractor at the time of bid submittal to develop the Baseline Schedule.

If the Contractor elects to submit a Baseline Schedule in lieu of a Preliminary Schedule, the Baseline Schedule shall be approved before work can commence.

(f) *Methods Statements.* The Contractor shall submit a Methods Statement for each salient feature or as directed by the Engineer that describes all work necessary to complete the feature. The Contractor shall include the following information in the Methods Statement:
(1) Salient feature name;
(2) Responsibility for the salient feature work;
(3) Planned work procedures;
(4) The planned quantity of work per day for each salient feature using the same units of measure as the applicable pay item;
(5) The anticipated labor force by labor type;
(6) The number, types, and capacities of equipment planned for the work;
(7) The planned time for the work including the number of work days per week, number of shifts per day, and the number of hours per shift.

(g) *Project Schedule Update.* The Contractor shall submit a monthly update of the Project Schedule updated through the cut-off date for the monthly progress pay estimate, and a projection for completing all remaining activities. A schedule update may show a completion date that is different than the Contract completion date, after the baseline schedule is approved. Approval of this schedule shall not relieve the Contractor of its obligation to complete the work within the Contract Time. In this case, the Contractor shall provide an explanation for a late scheduled completion date in the Job Progress Narrative Report included with the schedule submittal.
When approved, the Project Schedule Update will become the Project Schedule. The Engineer will not issue a monthly progress payment if the Engineer has not received the Project Schedule Update. The Engineer will not make monthly progress payments for the months following the Project Schedule Update submission until the Engineer approves the Project Schedule Update.

When the project has a maintenance or landscape establishment period, the Engineer may waive the monthly update requirement. The Contractor shall submit a final Project Schedule Update that shows all work through the final acceptance date.

(h) *Weekly Planning Schedule.* The Contractor shall submit, in writing, a Weekly Planning Schedule that shows the Contractor's and all Subcontractor's planned activities for a minimum of two weeks immediately following the date of submittal and actual days worked versus planned for the week prior to the date of submittal. This schedule shall include the description, duration and sequence of work activities and anticipated lane closures for the upcoming two weeks. The Weekly Planning Schedule may be a time-scaled logic diagram or other standard

format as approved by the Engineer. subsection 108.03(c) Schedule Submittal requirements for reports do not apply to the Weekly Planning Schedule.

(i) *Schedule Revision.* A Schedule Revision is required in the event of any major change to the work. Examples of major changes are:
(1) Significant changes in logic or methods of construction or changes to the critical path;
(2) Addition, deletion, or revision of activities required by contract modification order;
(3) Approval of a Contractor submitted Value Engineering Change Proposal;
(4) Delays in milestones or project completion;
(5) Phasing revisions, or;
(6) If the Engineer determines that the schedule does not reflect the actual work.

This revision shall include a description of the measures necessary to achieve completion of the work within the Contract Time. The Contractor may also need to submit revised Methods Statements. The Contractor shall provide a Schedule Revision within 10 days of written notification and shall include the diagrams and reports as described in subsection 108.03 (b) Schedule - General and (c) Schedule Submittals. In this case, the Contractor shall provide an explanation for a late scheduled completion date in the Job Progress Narrative Report included with the schedule.

Once approved, the Schedule Revision becomes the Project Schedule.

(j) *Payment.* All costs relating to the requirements of this subsection will not be paid for separately, but shall be included in the work.

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REVISION OF SECTION 108
SUBLETTING OF CONTRACT

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

Delete subsection 108.01 and replace with the following:

108.01 Subletting of Contract. The Contractor shall not sublet, sell, transfer, assign, or dispose of the Contract or Contracts, or any portion thereof without written permission of the Engineer. Prior to beginning any work by subcontractor, the Contractor shall request permission from the Engineer by submitting a completed Sublet Permit Application, CDOT Form No. 205. The subcontract work shall not begin until the Contractor has received the Engineer's written permission. The Contractor shall make all project related written subcontracts, agreements, and purchase orders available to the Engineer for viewing, upon request and at a location convenient to the Engineer.

The Contractor will be permitted to sublet a portion of the Contract, however, the Contractor's organization shall perform work amounting to 30 percent or more of the total original contract amount. Any items designated in the contract as "specialty items" may be performed by subcontract. The cost of "specialty items" so performed by subcontract may be deducted from the total original contract amount before computing the amount of work required to be performed by the Contractor's own organization. The original contract amount includes the cost of material and manufactured products which are to be purchased or produced by the Contractor and the actual agreement amounts between the Contractor and a subcontractor. Proportional value of a subcontracted partial contract item will be verified by the Engineer. When a firm both sells material to a prime contractor and performs the work of incorporating the materials into the project, these two phases shall be considered in combination and as constituting a single subcontract.

The calculation of the percentage of subcontracted work shall be based on subcontract unit prices.

Subcontracts or transfer of Contract shall not release the Contractor of liability under the Contract and Bond.

REVISION OF SECTION 109
COMPENSATION FOR COMPENSABLE DELAYS

In subsection 109.10, delete the first two paragraphs and replace with the following:

109.10 Compensation for Compensable Delays. If the Engineer determines that a delay is compensable in accordance with either subsection 105.22, 105.23, 105.24, or 108.08, monetary compensation will be determined in accordance with this subsection.

(a) These categories represent the only costs that are recoverable by the Contractor. All other costs or categories of costs are not recoverable:

(1) Actual wages and benefits, including FICA, paid for additional labor not otherwise included in (5) below;
(2) Costs for additional bond, insurance and tax;
(3) Increased costs for materials;
(4) Equipment costs calculated in accordance with subsection 109.04(c) for Contractor owned equipment and based on invoice costs for rented equipment;
(5) Costs of extended job site overhead;
(6) Costs of salaried employees not otherwise included in (1) or (5) above incurred as a direct result of the delay;
(7) Claims from subcontractors and suppliers at any level (the same level of detail as specified herein is required for all such claims);
(8) An additional 16 percent will be added to the total of items (1) through (7) as compensation for items for which no specific allowance is provided, including profit and home office overhead.

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REVISION OF SECTION 109
MEASUREMENT OF QUANTITIES

Section 109 of the Standard Specifications is hereby revised for this project as follows:

In subsection 109.01, delete the 17th paragraph and replace it with the following:

Vehicles used to haul material being paid for by weight shall bear a plainly legible identification mark. Each of these vehicles shall be weighed empty daily at times directed by the Engineer. The Contractor shall furnish to the Engineer, in writing, a vehicle identification sheet that lists the following for each delivery vehicle to be used on the project:

(1) identification mark
(2) vehicle length
(3) tare weight
(4) number of axles
(5) the distance between extreme axles
(6) information related to legal weight, including the Permit No. and permitted weight of each vehicle for which the State has issued an overweight permit.

This information shall be furnished prior to time of delivery of the material and at any subsequent time the Contractor changes vehicles, combination vehicles, axle length relationships, or overweight permitting of vehicles.

1

REVISION OF SECTION 109
MEASUREMENT OF WATER

Section 109 of the Standard Specifications is hereby revised for this project as follows:

In subsection 109.01, delete the twenty-sixth paragraph and replace with the following:

Water may be measured either by volume or weight. Water meters shall be accurate within a range of ± 3 percent. When water is metered, the Contractor shall use an approved metering device and shall furnish the Engineer a certificate showing the meter has been accurately calibrated within the time allowed in the following schedule:

2 inch	4 years
4 inch to 6 inch	2 years
8 inch to 10 inch	1 year

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REVISION OF SECTION 109
SCALES

Section 109 of the Standard Specifications is hereby revised for this project as follows:

In subsection 109.01, delete the 11th paragraph and replace with the following:

Materials measured or proportioned by weight shall be weighed on accurate scales. Scales shall be accurate within the allowable tolerances as prescribed by State law. The scales shall be tested for accuracy by the Colorado Department of Agriculture or an approved Colorado Department of Agriculture vendor (https://www.colorado.gov/pacific/aginspection/scale-companies) as least once each year, each time the scales are relocated, and as often as the Engineer may deem necessary. Scales shall be furnished by the Contractor or the Contractor may utilize commercial scales.

REVISION OF SECTIONS 202, 627 AND 708
PAVEMENT MARKING PAINT

Sections 202, 627 and 708 of the Standard Specifications are hereby revised for this project as follows:

In subsection 202.05, delete the third paragraph and replace with the following:

(a) *Removal of temporary pavement marking on final alignment.* Temporary pavement marking paint on the approved final alignment shall be removed completely from the roadway surface at locations of permanent pavement markings as shown on the plans. The ground location shall be clean, dry and free of laitance, oil, dirt, grease, paint or other foreign contaminants prior to application of final pavement marking. The Contractor shall not remove more pavement marking paint than what can be replaced with permanent pavement marking during the same working day or working period. If an event occurs that precludes the contractor from completing the work during the placement of permanent marking, the Contractor shall halt the removal operation and raised flexible pavement markers shall be placed at locations that have been removed but not marked while the pavement is drying prior to the marking application. Marking application shall resume when pavement is dry and has had no moisture for a minimum of 24 hours. Raised flexible pavement markers shall be installed with one marker at 40-foot centers.

(b) *Removal of temporary pavement marking on transitions.* Removal of pavement marking paint on temporary transitional alignments shall be performed by grinding or water-blasting. The removal shall result in 100 percent removal of the paint and a wide swath of ground pavement surrounding the former location of the temporary paint. The width of the swath shall be as follows; the center of the swath shall be the location of the paint line:

Width of Pavement Marking to be removed	Width of Swath
$\leq$ 8 inches	12 inches
> 8 inches	15 inches

Subsection 202.11 shall include the following:

Removal of temporary pavement marking on transitions will be measured as the actual square feet of the swath constructed for the required width. Removal of pavement marking for the permanent alignment will be measured as the actual number of square feet removed.

Subsection 202.12 shall include the following:

Payment will be made under:

Pay Item	**Pay Unit**
Removal of Pavement Marking	Square Foot
Removal of Pavement Marking (12 Inch)	Square Foot
Removal of Pavement Marking (15 Inch)	Square Foot

Raised pavement markings shall be at the Contractor's expense.

In subsection 627.04, delete the first paragraph and replace with the following:

627.04 Pavement Marking with Low Temperature Acrylic Paint and High Build Acrylic Paint. Striping shall be applied when the air and pavement temperatures are no less than 45 °F for waterborne and high-build paint, and 35°F for low temperature waterborne paint on asphalt or portland cement concrete pavements. The pavement surface shall be dry and clean, and free of all latent materials, in accordance with manufacturer recommendations. Weather conditions shall be conducive to satisfactory results.

Glass beads shall be applied into the paint by means of a low pressure, gravity drop bead applicator.

In subsection 627.04 delete the table and replace it with the following:

Description		Pavement Marking Paint	
		Low Temp	High Build
Alignment	Lateral Deviation	2.0 inch per 200 foot Max	
Coverage Rate	Sq. Ft. per Gallon	89-93	67-70
Thickness	Mil	17-18	23-24
Width	Inches	Per Plans +/- 0.25	Per Plans +/- 0.25
Dry Time	Minutes	5-10	7-12
Beads	Application Rate, lbs./gal	7-8	9-10

Subsection 627.13 shall include the following:

Pay Item	**Pay Unit**
Pavement Marking Paint (High Build)	Gallon
Pavement Marking Paint (Low Temperature)	Gallon

Delete subsection 708.05 and replace with the following:

708.05 Pavement Marking Materials. All pavement marking materials shall be selected from the Department's Approved Products List (APL). Prior to start of work, a Certificate of Compliance (COC) for all pavement marking materials shall be submitted in accordance with subsection 106.13.

(a) *Color*. The pavement marking paint, without drop-on beads, shall correspond following requirements:
White – Federal Standard No. 595B-17925. The Yellowness Index (YI) of white shall not exceed 8.0 per ASTM E-313-10 initially. The color after drying shall be a flat-white, free from tint, and shall provide the maximum amount of opacity and visibility under both daylight and artificial light.

Yellow – Materials for pavement markings shall meet the initial daytime chromaticity that fall within the box created by the following corner points:

Initial Daytime Chromaticity Coordinates (Corner Points)

	1	**2**	**3**	**4**
x	0.530	0.510	0.455	0.472
y	0.456	0.485	0.444	0.400

(b) *Low Temperature Acrylic Waterborne Paint.* Low Temperature Acrylic Waterborne Paint binder (nonvolatile portion of vehicle) shall be 100 percent XSR acrylic polymer, by weight, as determined by infrared analysis or other chemical analysis available to the Department.

(c) *High Build Acrylic Waterborne Paint.* High build acrylic waterborne paint binder (nonvolatile portion of vehicle) shall be 100 percent HD 21 acrylic cross linking polymer, by weight, as determined by infrared analysis or other chemical analysis available to the Department.

Low Temperature Acrylic Waterborne Paint, and High Build Acrylic Waterborne paint shall meet the following requirements:

Performance Requirements: The paint shall be water resistant and shall show no softening or blistering.

Table 708-1
LOW TEMPERATURE WATERBORNE AND HIGH BUILD ACRYLIC WATERBORNE PAINT

Property	**White**	**Yellow**	**Test Method**
Nonvolatile portion of vehicle (white and yellow), %	43.0 (min)	43.0 (min)	ASTM D 2205
Pigment Composition			
Percent by weight♦	60.0	60.0	ASTM D 4451 ASTM D 3723
Paint			
Titanium Dioxide Content, lb./gal	1.0 (min)		ASTM D 5381
Properties of the Finished Paint			
Total Non-volatiles, (solids) % by weight	77.0 (min)	77.0 (min)	FTMS 141C - Method 4053.1, ASTM D 2369, or ASTM D 4758
Density, lbs./gal	14.0-14.6	13.7-14.3	ASTM D 2205
Consistency (Viscosity) White and Yellow, Krebs-Stormer Units	85-95	85-95	ASTM D 562
Freeze Thaw Stability	Shall complete 5 or more test cycles successfully		ASTM D 2243
Fineness of Grind, Cleanliness Rating B, minimum	3	3	ASTM D 1210
Scrub Resistance	800	800	ASTM D2486
Directional Reflectance: [15 mil Wet Film]	88 (min)	50 (min)	ASTM E 1347
Dry Opacity (Contrast Ratio): [5 mil Wet Film]	0.95 (min)	0.95 (min)	ASTM D 2805
♦Percent by weight shall include percent of organic yellow pigment.			

REVISION OF SECTIONS 203, 206, 304 AND 613
COMPACTION

Sections 203, 206, 304 and 613 of Standard Specifications are hereby revised for this project as follows:

In subsection 203.03 (a), delete the fifth paragraph and replace with the following:

1. *Soil Embankment.* Soil embankment consists of materials with 50 percent or more of the material passing the 4.75 mm (No. 4) sieve.

   A soil embankment may also have more than 50 percent of the material retained on the 4.75 mm (No. 4) sieve, but no more than 30 percent of the material retained on the 19 mm (3/4 inch) sieve.

   Soil embankment shall be constructed with moisture density control in accordance with the requirements of subsection 203.07.

2. *Rock Embankment.* Rock embankment consist of materials with 50 percent or more of the material retained on the 4.75 mm (No. 4) sieve and with more than 30 percent of the material retained on the 19 mm (3/4 inch) sieve. All material shall be smaller than 6 inches. Rock embankments shall be constructed without moisture density control in accordance with the requirements of subsection 203.08.

Delete Subsection 203.07 and replace with the following:

203.07 Construction of Embankment and Treatment of Cut Areas with Moisture and Density Control. Soil embankments shall be constructed with moisture and density control and the soil upon which the embankments are to be constructed shall be scarified to a depth of 6 inches and compacted with moisture and density control. The moisture content of the soil at the time of compaction shall be as specified or directed.

The material shall be removed from the full width of roadbed in all cut sections to the designated depth. The soil below the designated depth shall be thoroughly scarified to a depth of 6 inches and the moisture content increased or reduced, as necessary, to obtain the moisture content specified. This scarified layer shall then be compacted to the relative compaction specified.

All embankment material shall be compacted to not less than 95 percent relative compaction. Maximum dry density of all soil types encountered or used will be determined in accordance with AASHTO T 99 as modified by CP 23.

Soils shall be compacted at ± 2 percent of Optimum Moisture Content (OMC) as determined by AASTHO T 99. Soils having greater than 35 percent passing the 75 µm (No. 200) sieve shall be compacted to 0 to 3 percent above OMC. Soils which are unstable at the above moisture content shall be compacted at lower moisture content to the specified density.

Additional work involved in drying embankment material to the required moisture content shall be included in the contract price paid for excavating or furnishing the material with no additional compensation.

Density requirements will not apply to materials which cannot be tested in accordance with the above procedures for determining maximum dry density. Compaction for materials which cannot be tested shall be in accordance with subsection 203.08.

Claystone or soil-like non-durable shale shall be pulverized and compacted to the specified moisture and percent of relative compaction and shall be compacted with a heavy tamping foot roller, weighing at least 30 tons. Each tamping foot roller shall protrude from the drum a minimum of 4 inches. Each embankment layer shall receive a minimum of three or more coverages with the tamping foot roller to obtain density. One coverage consists of one pass over the entire surface designated. One pass consists of the passing of an acceptable tamping foot roller over a given spot. The roller shall be operated at a uniform speed not exceeding 3 miles per hour. No additional compensation will be made for additional roller coverages to achieve specified density requirements.

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

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

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

In subsection 304.06, delete the first paragraph and replace with the following:

304.06 Shaping and Compaction. Compaction of each layer shall continue until a density of not less than 95 percent of the maximum density determined in accordance with AASHTO T 180 as modified by CP 23 has been achieved. The moisture content shall be at +/-2 percent of optimum moisture content. The surface of each layer shall be maintained during the compaction operations so that a uniform texture is produced and the aggregates are firmly keyed. Moisture conditioning shall be performed uniformly during compaction.

In subsection 613.07, delete the 15th paragraph and replace with the following:

Trenching shall be backfilled and compacted as follows: Backfill shall be deposited in uniform layers. The thickness of each layer shall be 6 inches or less thick prior to compaction. The space under the conduit shall be completely filled. The remainder of the trench and excavation shall be backfilled to the finished grade. The backfill material shall be compacted to the density of not less than 95 percent of maximum dry density. The maximum dry density and optimum moisture content (OMC) for A-1, A-2-4. A-2-5 and A-3 materials will be determined in accordance with AASHTO T 180 as modified by CP 23. The maximum dry density and OMC for all other materials will determined in accordance with AASHTO T 99 as modified by CP 23. Materials shall be compacted at ± 2percent of Optimum Moisture Content (OMC). Materials having greater than 35 percent passing the 75 µm (No. 200) sieve shall be compacted at 0 to 3 percent above OMC. Each layer shall be mechanically compacted by tamping with power tools approved by the Engineer. Compaction methods or equipment that damage the conduit shall not be used.

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

Sections 206 and 601 of the Standard Specifications are hereby revised for this project as follows:

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

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

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

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

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

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

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

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

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

Acceptance cylinders shall not be used for determining compressive strength to remove forms.

When field operations are controlled by maturity meters, the removal of forms, supports and housing, and the discontinuance of heating and curing may begin when the concrete is found to have the required compressive strength.

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

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

In subsection 601.11, delete (e) and replace with the following:

(e) *Falsework Removal*. Unless specified in the plans or specifications, falsework shall remain in place until concrete has attained a minimum compressive strength of 0.80f'c.

Falsework supporting any span of a simple span bridge shall not be released until after all concrete, excluding concrete above the bridge deck, has attained a compressive strength of at least 0.80f'c.

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

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

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

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

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

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

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

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

Acceptance cylinders shall not be used for determining compressive strength to remove falsework.

Subsection 601.12 (I) shall include the following after the first paragraph:

Concrete compressive strength shall be determined by maturity meters.

Subsection 601.12 shall include the following:

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

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

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

Subsection 601.17 shall include the following:

(f) *Maturity Meter Strength*. When maturity meters are specified for determining strength for removing forms, removing false work, backfilling against structures or loading the structure, the Contractor shall provide the Engineer a report of maturity relationships in accordance with CP 69 prior to placement of concrete.

If a maturity meter fails, is tampered with, is destroyed or was not placed, the following shall apply:

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

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

REVISION OF SECTION 208
EROSION CONTROL

Section 208 is hereby deleted from the Standard Specifications for this project and replaced with the following:

DESCRIPTION

208.01 This work consists of constructing, installing, maintaining, and removing when required, Best Management Practices (BMPs) during the life of the Contract to prevent or minimize erosion, sedimentation, and pollution of any State waters as defined in subsection 107.25, including wetlands.

The Contractor shall coordinate the construction of temporary BMPs with the construction of permanent BMPs to assure economical, effective, and continuous erosion and sediment control throughout the construction period.

When a provision of Section 208 or an order by the Engineer requires that an action be immediate or taken immediately, it shall be understood that the Contractor shall at once begin effecting completion of the action and pursue it to completion in a manner acceptable to the Engineer, and in accordance with the Colorado Discharge Permit System Stormwater Construction Permit (CDPS-SCP) requirements.

MATERIALS

208.02 Erosion control materials are subject to acceptance in accordance with subsection 106.01. Erosion control materials shall be subject to the following approval process:

Material	Approval Process	Notes:
Erosion Bales (Weed Free)	COC	The Contractor shall provide a transit certificate number or a copy of the transit certificate as supplied from the producer.
Silt Fence	COC	
Silt Berm	APL	
Erosion Log (Type 1 and 2)	COC	
Silt Dikes	COC	
Pre-fabricated Concrete Washout Structures (above ground)	APL	
Pre-fabricated Vehicle Tracking Pad	APL	
Aggregate Bag	COC	
Storm Drain Inlet Protection (Type I, II and III)	APL	

The material for BMPs shall conform to the following:

(a) *Erosion Bales.* Material for erosion bales shall consist of Certified Weed Free hay or straw. The hay or straw shall be certified under the Colorado Department of Agriculture Weed Free Forage Certification Program and inspected as regulated by the Weed Free Forage Act, Title 35, Article 27.5, CRS. Each certified weed free erosion bale shall be identified by blue and orange twine binding the bales.
The Contractor shall not place certified weed free erosion bales or remove their identifying twine until the Engineer has inspected and accepted them.

The Contractor may obtain a current list of Colorado Weed Free Forage Crop Producers who have completed certification by contacting the Colorado Department of Agriculture, Weed Free Forage Program, 305 Interlocken Pkwy, Broomfield, CO 80021, Contact: Weed Free Forage Coordinator at (303) 869-9038. Also available at www.colorado.gov/ag/csd.

Bales shall be approximately 5 cubic feet of material and weigh at least 35 pounds. Stakes shall be wood and shall be 2 inch by 2 inch nominal.

(b) *Silt Fence*. Silt fence posts shall be wood with a minimum length of 42 inches. Wood posts shall be 1.5 inch by 1.5 inch nominal. Geotextile shall be attached to wood posts with three or more staples per post.
Silt fence geotextile shall conform to the following requirements:

Physical Requirements for Silt Fence Geotextiles

Property	Wire Fence Supported Requirements	Self-Supported Requirements Geotextile Elongation <50%	Test Method
Grab Strength, lbs	90 minimum	124 minimum	ASTM D 4632
Permittivity sec-1	0.05	0.05	ASTM D 4491
Ultraviolet Stability	Minimum 70% Strength Retained	Minimum 70% Strength Retained	ASTM D 4355

Silt Fence (Reinforced). Silt fence posts shall be metal T-post with a minimum length of 66 inches. Metal posts shall be "studded tee" with .095 inch minimum wall thickness. Wire fabric reinforcement for the silt fence geotextile shall be a minimum of 10 gauge, with a maximum mesh spacing of 6 inches. Geotextile shall be attached to welded wire fabric with ties or nylon cable ties 12 inch O.C. at top, mid and bottom wire. Welded wire fabric shall be attached to the post with a minimum three 12 gauge wire ties per post. Vinyl or rubber safety caps shall be installed on all T-post.

(c) *Temporary Berms*. Temporary berms shall be constructed of compacted soil.

(d) *Temporary Slope Drains*. Temporary slope drains shall consist of fiber mats, plastic sheets, stone, concrete or asphalt gutters, half round pipe, metal or plastic pipe, wood flume, flexible rubber or other materials suitable to carry accumulated water down the slopes. Outlet protection riprap shall conform to section 506. Erosion control geotextile shall be a minimum Class 2, conforming to subsection 712.08.

(e) *Silt Berm.* Silt berm shall consist of an ultraviolet (UV) stabilized high-density polyethylene, shall be triangular in shape, and shall have the following dimensions:

Width	6 - 11 inches
Height	6 - 10 inches
Weight	0.3 - 1.4 lbs./sq. ft.
Percent Open Area	30 – 50%

Securing spikes shall be10 to12 inch x 0.375 inch diameter (minimum).

(f) *Rock Check Dam*. Rock Check dams shall be constructed of stone. Stone shall meet the requirements of Section 506.

(g) *Sediment* Trap. In constructing an excavated Sediment Trap, excavated soil may be used to construct the dam embankment, provided the soil meets the requirements of subsection 203.03. Outlet protection riprap shall be the size specified in the Contract and shall conform to Section 506. Erosion control geotextile shall be a minimum Class 1, conforming to subsection 712.08.

(h) *Erosion log*. Shall be one of the following types unless otherwise shown on the plans:

(1) Erosion Log (Type 1) shall be curled aspen wood excelsior with a consistent width of fibers evenly distributed throughout the log. The casing shall be seamless, photo-degradable tube netting and shall have minimum dimensions as shown in Table 208-1, based on the diameter of the log called for on the plans. The curled aspen wood excelsior shall be fungus free, resin free, and free of growth or germination inhibiting substances.

(2) Erosion Log (Type 2) shall consist of a blend of 30-40 percent weed free compost and 60-70 percent wood chips. The compost/wood blend material shall pass a 50 mm (2 inch) sieve with a minimum of 70 percent retained on the 9.5 mm (3/8 inch) sieve and comply to subsection 212.02 for the remaining compost physical properties. The compost/wood chip blend may be pneumatically shot into a geotextile cylindrical bag or be pre-manufactured. The geotextile bag shall consist of material with openings of 1/8 to 3/8 inches of HDPE or polypropylene mesh (knitted, not extruded), and contain the compost/wood chip material while not limiting water infiltration.

Erosion log (Type 1 and Type 2) shall have minimum dimensions as shown in Table 208-1, based on the diameter of the log.

Table 208-1

NOMINAL DIMENSIONS OF EROSION LOGS

Diameter Type 1 (Inches)	**Diameter Type 2 (Inches)**	**Length (feet)**		**Weight (minimum) (pounds/foot)**	**Stake Dimensions (Inches)**
		Min.	**Max.**		
9	8	10	180	1.6	1.5 by 1.5 (nominal) by 18
12	12	10	180	2.5	1.5 by 1.5(nominal) by 24
20	18	10	100	4.0	2 by 2 (nominal) by 30

Stakes to secure erosion logs shall consist of pinewood or hardwood.

(i) *Silt Dikes*. Silt dikes shall be pre-manufactured triangular shaped urethane foam covered with a woven geotextile fabric. The fabric aprons shall extend a minimum of two feet beyond each side of the triangle. Each silt dike shall have the following dimensions:

Dimension	**Length**
Center height	8 to 10 inches
Base	16 to 21 inches
Section length	3 to 7 feet
Section width including fabric extensions	5.6 feet

Staples shall be 6 gauge and at least 8 inches long.

(j) *Concrete Washout Structure*. The Contractor shall construct a washout structure that will contain washout from concrete placement and construction equipment cleaning operations. Embankment required for the concrete washout structure may be excavated material, provided that this material meets the requirements of Section 203 for embankment.

A pre-fabricated concrete washout structure shall only be used when specified in the Contract. It shall consist of a watertight container designed to contain liquid and solid waste from concrete washout.

(k) *Vehicle Tracking Pad*. Aggregate for the vehicle tracking pad shall be crushed natural aggregate with at least two fractured faces that meets the following gradation requirements:

Sieve size	**Percent by weight Passing Square Mesh Sieves**
75 mm (3 inch)	100
50 mm (2 inch)	0-25
19.0 mm (¾ inch)	0-15

Recycled crushed concrete or asphalt shall not be used for vehicle tracking pads.

Erosion Control Geotextile shall be Class 2 and conform to the requirements of subsection 712.08.

Pre-fabricated vehicle tracking pads if specified in the Contract shall have the following properties.

Minimum overall dimensions of the modular systems shall be:

Width of pad along edge of roadway	14 feet
Length of pad	30 feet

Weight (min.) (lbs./sq. ft.)	8
Crush strength (min.) (psi)	400

(l) *Aggregate Bag*. Aggregate bags shall consist of crushed stone or recycled rubber filled fabric with the following properties:

Diameter (inches)	**Weight (minimum) (pounds per foot)**
6-8	6
10	10
12	15

Rubber used in bags shall be clean, 95 percent free of metal and particulates.

Crushed stone contained in the aggregate bags shall conform to subsection 703.09, Table 703-7 for Class C.

The aggregate bag shall consist of a woven geotextile fabric with the following properties:

Property	**Requirement**	**Test Method**
Grab Tensile Strength	90 lbs. min.	ASTM D 4632
Trapezoid Tear Strength	25 lbs. min.	ASTM D 4533
Mullen Burst	300 psi	ASTM D 3786
Ultraviolet Resistance	70%	ASTM D 4355

(m) Storm Drain Inlet Protection. Storm drain inlet protection shall consist of aggregate filled fabric with the following dimensions:

Storm Drain Inlet Protection Properties	**Protection Types**		
	[1]Type I	**Type II**	**[3]Type III**
Diameter	4 in.	4 in.	N/A
Minimum Section Length	7 ft.	5 ft.	5 ft.
Apron Insert	---	30 in. or sized to grate	30 in or sized to grate
[1]Type I protection shall be used with Inlet Type R. [2]Type II protection shall be used with Combination Inlet. Option A or B [3]Type III protection Inlet Vane Grate only. Option A or B			

The storm drain inlet protection (Type I, II and III) shall consist of a woven geotextile fabric with the following properties:

Property	**Test Method**	**Unit**	**Requirement**
Grab tensile strength	ASTM D 4632	lbs.	minimum 350X280
Mullen Burst Strength	ASTM D 3786	lbs.	600
Trapezoid Tear Strength	ASTM D 4533	lbs.	minimum 110X95
Percent Open Area	COE-22125-86	%	28
Water Flow Rate	ASTM D 4491	gal./min./sq. ft.	250
Ultraviolet Resistance	ASTM D 4355	%	70

Curb roll for storm drain inlet protection (Type I and II) shall have an approximate weight of 7 to 10 pounds per linear foot of device. The device shall be capable of conforming to the shape of the curb. Aggregate contained in the storm drain inlet device shall consist of gravel or crushed stone conforming to Table 703-7 for Class C.

Storm drain inlet protection (Type III) shall have insert containment (option A) or insert without storage capacity (option B).

CONSTRUCTION REQUIREMENTS

208.03 Project Review, Schedule, and Transportation Erosion Control Supervisor. Prior to construction, an on-site Environmental Pre-construction Conference shall be held. The conference shall be attended by:

(1) The Engineer,

(2) The Superintendent,

(3) The Contractor's SWMP Administrator,

(4) Supervisors or Foremen of subcontractors working on the project,

(5) The Region Water Pollution Control Manager (RWPCM), and

(6) CDOT personnel (e.g., CDOT Landscape Architect) who prepared or reviewed the Stormwater Management Plan (SWMP).

At this conference, the attendees shall discuss the SWMP, CDPS-SCP, sensitive habitats on site, wetlands, other vegetation to be protected, and the enforcement mechanisms for not meeting the requirements of this specification.

Prior to beginning construction the Contractor shall evaluate the project site for storm water draining into or through the site. When such drainage is identified, BMPs (i.e., Control Measures) shall be used if possible to divert stormwater from running on-site and becoming contaminated with sediment or other pollutants. The diversion may be accomplished with a temporary pipe or other conveyance to prevent water contamination or contact with pollutants. Run-on water that cannot be diverted shall be treated as construction runoff and adequate BMPs shall be employed.

The SWMP Administrator shall evaluate all non-stormwater coming onto the site, such as springs, seeps, and landscape irrigation return flow. If such flow is identified, BMPs shall be used to protect off-site water from becoming contaminated with sediment or other pollutants.

The SWMP Administrator shall review existing inlets and culverts to determine if inlet protection is needed due to water flow patterns. Prior to beginning construction, inlets and culverts needing protection shall be protected and the location of the implemented BMP added to the SWMP site map.

Prior to construction, the Contractor shall implement appropriate BMPs for protection of wetlands, sensitive habitat and existing vegetation from ground disturbance and other pollutant sources, in accordance with the approved project schedule as described in subsection 208.03(b).

When additional BMPs are required and approved by the Engineer, the Contractor shall implement the additional BMPs and the SWMP Administrator shall record and describe them on the SWMP site map. The approved BMPs will be measured and paid for in accordance with subsections 208.11 and 208.12.

(a) *Project Review.* The Contractor may submit modifications to the Contract's BMPs in a written proposal to the Engineer. The written proposal shall include the following information:

(1) Reasons for changing the BMPs.

(2) Diagrams showing details and locations of all proposed changes.

(3) List of appropriate pay items indicating new and revised quantities.

(4) Schedules for accomplishing all erosion and sediment control work.

(5) Effects on permits or certifications caused by the proposed changes.

The Engineer will approve or reject the written proposal in writing within 5 working days after the submittal. The Engineer may require additional control measures prior to approving the proposed modifications. Additional modifications and additional BMPs will be paid for at the Contract Unit Price for the specific items involved. If no items exist, they will be paid for as extra work in accordance with subsection 109.04.

(b) *Erosion and Sediment Control Activities.* The erosion and sediment control activities shall be included in the weekly meeting update. The project schedule shall specifically indicate the sequence of clearing and grubbing, earthwork operations, and construction of temporary and permanent erosion control features and stabilization. Project schedule shall include erosion and sediment control work for haul roads, borrow pits, storage and asphalt or concrete batch sites, and all areas within the project limits. If during construction the Contractor proposes changes which would affect the Contract's BMPs, the Contractor shall propose revised BMPs to the Engineer for approval in writing. If necessary, the SWMP Administrator shall update proposed sequencing of major activities in the SWMP. Revisions shall not be implemented until the proposed measures have been approved in writing by the Engineer.

(c) *Erosion Control Management (ECM).* Erosion Control Management for this project shall consist of Erosion Control Inspection and the Administration of the Stormwater Management Plan (SWMP). All ECM staff shall have working knowledge and experience in construction, and shall have successfully completed the Transportation Erosion Control Supervisory Certificate Training (TECS) as provided by the Department. The Superintendent will not be permitted to serve in an ECM role. The Erosion Control Inspector and the Stormwater Administrator may be the same person in projects involving less than 40 acres of disturbed area.

1. Stormwater Management Plan (SWMP) Administration. The SWMP Plan shall be maintained by a SWMP Administrator. The SWMP Administrator shall have completed the TECS certification training as provided by the Department. In the case of a project requiring only one TECS, the SWMP Administrator may also be the Erosion Control Inspector for the project. The name of the SWMP Administrator shall be recorded on SWMP Plan Section 3. B. The SWMP Administrator shall have full responsibility to maintain and update the SWMP Plan and identify to the Superintendent critical action items needed to conform to the CDPS-SCP as follows:

(1) Complete the SWMP Notebook as described in subsection 208.03 (d).

(2) Participate in the Environmental Pre-construction Conference

(3) Attend weekly meetings

(4) Attend all Headquarter and Region water quality control inspections. The Contractor and the Contractor's SWMP Administrator will be notified a minimum of five days in advance of each inspection by the CDOT region or headquarter water quality staff.

(5) Coordinate with the Superintendent to implement necessary actions to reduce anticipated or presently existing water quality or erosion problems resulting from construction activities.

(6) Coordinate with the Superintendent to ensure that all labor, material, and equipment needed to install, maintain, and remove BMPs are available as needed.

(7) During construction, update and record the following items on the SWMP site map as changes occur:

(i) Limits of Construction (LOC).

(ii) Areas of disturbance (AD) are limits of disturbance (LDA).

(iii) Limits of cut and fill.

(iv) Areas used for storage of construction materials, equipment, soils, or wastes.

(v) Location of any dedicated asphalt or concrete batch plants.

(vi) Location of construction offices and staging areas.

(vii) Location of work access routes during construction.

(viii) Location of borrow and waste.

(ix) Location of temporary, interim and permanent stabilization.

(x) Location of outfall(s)

(xi) Arrows showing direction of surface flow

(xii) Structural and non-structural BMPs

(xiii) LDA and LOC lines as defined in subsection 107.25

(8) Amend the SWMP whenever there are: additions, deletions, or changes to BMPs. SWMP revisions shall be recorded immediately. Items shall be dated and initialed by the SWMP Administrator. Specifically, amendments shall include the following:

(i) A change in design, construction, operation, or maintenance of the site which would require the implementation of new or revised BMPs; or

(ii) Changes when the SWMP proves to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activity.

(iii) Changes when BMPs are no longer necessary and are removed.

(9) Complete vegetative survey transects when required in accordance with CDOT Erosion Control and Stormwater Quality Guide.

(10) Start a new site map before the current one becomes illegible. All site maps shall remain in the SWMP notebook.

(11) Document all inspection and maintenance activities. The SWMP and documentation shall be kept on the project site.

(12) When adding or revising BMPs on the SWMP, add a narrative explaining what, when, where, why, and how the BMP is being used, and add a detail to the SWMP notebook.
(i) How to install and inspect the BMP

(ii) Where to install the BMP

(iii) When to maintain the BMP

(13) If using existing topography, vegetation, etc. as a BMP, label it as such on the SWMP site map; add a narrative as to when, where, why, and how the BMP is being used.

(14) Indicate BMPS in use or not in use by recording on Standard Plans M-208-1, M-216-1, and M-615-1 in the SWMP notebook

(15) Record on the SWMP, the approved Method Statement for Containing Pollutant Byproducts.

(16) Update the potential pollutants list in the SWMP notebook and Spill Response Plan throughout construction.

2. Erosion Control Inspection.

Erosion control inspection shall be performed by TECS certified staff assigned as Erosion Control Inspector (ECI) to the project. One ECI is required for every 40 acres of total disturbed area which is currently receiving temporary and interim stabilization measures as defined in subsection 208.04 (e). An ECI shall not be responsible for more than 40 acres in the project. Accepted permanent stabilization methods as defined in subsection 208.04 (e) will not be included in the 40 acres.

ECI duties shall be as follows:

(1) Coordinate with the SWMP Administrator on reporting the results of inspections

(2) Review the construction site for compliance with the Stormwater Construction Permit.

(3) Inspect with the Superintendent and the Engineer (or their designated representatives) the stormwater

management system at least every seven calendar days. Post storm event inspections shall be conducted within 24 hours after the end of any precipitation or snow melt event that may cause surface erosion. If no construction activities will occur following a storm event, post-storm event inspections shall be conducted prior to commencing construction activities, but no later than 72 hours following the storm event. The occurrence of delay in inspections shall be documented in the inspection report. Form 1176 shall be used for all 7 day inspections and inspections following storm events. The Contractor shall notify the Erosion control inspector when a storm event occurs. Failure to perform inspections on time will result in liquidated damages in accordance with subsection 208.09.

Inspections are not required at sites when construction activities are temporarily halted, when snow cover exists over the entire site and melting conditions do not pose a risk of surface erosion. This exception shall be applicable only during the period where melting conditions do not exist, and applies to the routine 7 day, Headquarters and Region inspections, as well as the post-storm event inspections. The following information shall be documented on Form 1176 for use of this exclusion: dates when snow cover occurred, date when construction activities ceased, and date melting conditions began.

The order of precedence for required inspections shall be as follows:

(i) Headquarter water quality inspections

(ii) Region water quality inspections

(iii) Post-storm event inspections

(iv) 7 day inspections

When one of the listed inspections is performed, the inspections listed below it need not be performed on that day if the required CDOT and Contractor personnel participated in the inspection.

For example: A 7 day inspection is not required on the same day a headquarters or Region inspection is conducted. A sheet shall be placed in the inspections area of the SWMP Notebook to refer to the date inspection performed.

(4) Follow all other agency Stormwater requirements and inspections unless a waiver or other agreement has been made.

(5) The ECI shall immediately report to the Contractor's Superintendent and the SWMP Administrator the following instances of noncompliance:

(i) Noncompliance which may endanger health or the environment.

(ii) Spills or discharge of hazardous substance or oil which may cause pollution of waters of the State.

(iii) Discharge of stormwater which may cause an exceedance of a water quality standard.

(iv) Upset conditions that occur on site.

(6) Spills, leaks, or overflows that result in the discharge of pollutants shall be documented on the Form 1176 by the ECI. The ECI shall record the time and date, weather conditions, reasons for spill, and how it was remediated.

(d) *Documentation Available on the Project.* The following Contract documents and references will be made available for reference at the CDOT field office during construction:

1. SWMP Notebook. The Engineer will provide a SWMP Notebook at the Preconstruction Conference, which is and shall remain the property of CDOT. CDOT will initially provide the documentation for the first four items when available. The Contractor shall provide the contents required for items (5) through (18). The notebook shall be stored in the CDOT field office or at another on-site location approved by the Engineer. The SWMP Administrator shall modify and update the notebook as needed to reflect actual site conditions, prior to or as soon as practicable but in no case more than 72 hours after the change. The following Contract documents and reports shall be kept, maintained, and updated in the notebook under the appropriate items by the SWMP Administrator:

(1) SWMP Plan Sheets - Notes, tabulation, sequence of major activities, area of disturbance, existing soil data, existing vegetation percent cover, potential pollutant sources, receiving water, non-stormwater discharges and environmental impacts.

(2) Site Map and Plan Title Sheet - Construction site boundaries, ground surface disturbance, limits of cut and fill, flow arrows, structural BMPs, non-structural BMPs, Springs, Streams, Wetlands and surface water. Also included on the sheets is the protection of trees, shrubs and cultural resources.

(3) Specifications - Standard and Project special provisions related to Stormwater and Erosion Control.

(4) Standard Plans M-208-1, M-216-1 and M-615-1

(5) BMP Details not in Standard Plan M-208-1 - Non-standard details.

(6) Weekly meeting sign in sheet.

(7) Calendar of Inspections -Calendar of inspections marking when all inspections take place.

(8) Form 1176 – Weekly meeting notes and inspection report

(9) Region and Headquarter Water Quality Reports and Form 105(s) relating to Water Quality.

(10) Description of Inspection and Maintenance Methods - Description of inspection and maintenance methods implemented at the site to maintain all BMPs identified in the SWMP and Items not addressed in the design

(11) Spill Response Plan - Reports of reportable spills submitted to CDPHE

(12) List and Evaluation of Potential Pollutants - List of potential pollutants as described in subsection 107.25 and approved Method Statement for Containing Pollutant Byproducts.

(13) Other Correspondence e.g., agreements with other MS4s, approved deferral request, CDPHE audit documentation, Water Quality Permit Transfer to Maintenance Punch List and other miscellaneous documentation.

(14) TECS Certifications of the SWMP Administrator and all ECIs, keep current through the life of the project.

(15) Environmental Pre-construction Conference – Conference agenda with a certification of understanding of the terms and conditions of the CDPS-SCP and SWMP. The certification shall be signed by all attendees. A certification shall also be signed by all attendees of meetings held for new subcontractors beginning work on the project that could adversely affect water quality after the Environmental Pre-

construction Conference has been held.

(16) All Project Environmental Permits - All project environmental permits and associated applications and certifications, including, CDPS-SCP, Senate Bill 40, USACE 404,temporary stream crossings, dewatering, biological opinions and all other permits applicable to the project, including any separate CDPS-SCP obtained by the Contractor for staging area on private property, asphalt or concrete plant, etc.

(17) Photographs Documenting Existing Vegetation – Project photographs shall be time stamped on paper with a maximum of four colored images per 8 ½ inch by 11 inch sheet and/or a digital copy of all photographs on CD-ROM/Flash Drive in (JPG format), documenting existing vegetation prior to construction commencing. On the bottom of each photograph shall be a description using Station Number or Mile Post of where the photograph was taken.

(18) Permanent Water Quality Plan Sheets - Plan sheets and specifications for permanent water quality structures, riprap.

The Engineer will incorporate the documents and reports available at the time of award. The Contractor shall provide and insert all other documents and reports as they become available during construction.
The SWMP Administrator shall finalize the SWMP for CDOT Maintenance use upon completion of the project. SWMP completeness shall be approved by the Engineer, corrections to the SWMP shall be at the Contractor's expense. The following Reference materials shall be used:

(1) CDOT Erosion Control and Stormwater Quality Guide.
(2) CDOT Erosion Control and Stormwater Quality Field Guide.

(e) *Weekly Meetings.* The Engineer, Superintendent and the SWMP Administrator shall conduct a weekly meeting with supervisors involved in construction activities that could adversely affect water quality. The meeting shall follow an agenda prepared by the Engineer or a designated representative, and have a sign in sheet on which the names of all attendees shall be recorded. The SWMP Administrator shall take notes of water quality comments and action items at each weekly meeting, and place the agenda and sign in sheet in the SWMP notebook. At this meeting the following shall be discussed and documented on Form 1176:

(1) Requirements of the SWMP.
(2) Problems that may have arisen in implementing the site specific SWMP or maintaining BMPs.
(3) Unresolved issues from inspections and concerns from last inspection
(4) BMPS that are to be installed, removed, modified, or maintained.
(5) Planned activities that will effect stormwater in order to proactively phase BMPs.
(6) Recalcitrant inspection findings

All subcontractors who were not in attendance at the Environment Pre-construction conference shall be briefed on the project by the Engineer, Superintendent, and the SWMP Administrator prior to start of work. The SWMP Administrator shall record the names of these subcontractors as an addendum to the list of attendees, and added the SWMP Notebook.

208.04 Best Management Practices (BMPs) for Stormwater.

The SWMP Administrator shall modify the SWMP to clearly describe and locate all BMPs implemented at the site to control potential sediment discharges.

Vehicle tracking control shall be used at all vehicle and equipment exit points from the site to prevent sediment exiting the Limits of Construction (LOC) of the project site. Access shall be provided only at locations approved by the Engineer. The SWMP Administrator shall record vehicle tracking control pad locations on the SWMP site map.

New inlets and culverts shall be protected during their construction. Appropriate protection of each culvert and inlet shall be installed immediately. When riprap is called for at the outlet of a culvert, it shall be installed within 24 hours of completion of each pipe. The Contractor shall remove sediment, millings, debris, and other pollutants from within the newly constructed drainage system in accordance with the CDPS-SCP, prior to use, at the Contractor's expense. All removed sediment shall be disposed of outside the project limits in accordance with all applicable regulations.

Concrete products wasted on the ground during construction shall include, but shall not be limited to: excess concrete removed from forms, spills, slop, and all other unused concrete are potential pollutants that shall be contained or protected by an approved BMP at a pre-approved containment area. The concrete shall be picked up and recycled in accordance with 6 CCR 1007-2 (CDPHE Regulations Pertaining to Solid Waste Sites and Facilities) at regular intervals, as directed. The uses of recycled concrete from approved recycling facilities shall be in accordance with Section 203.

(a) *Unforeseen Conditions.* The Contractor shall design and implement erosion and sediment BMPs for correcting conditions unforeseen during the design of the project, or for emergency situations, that develop during construction. The Department's "Erosion Control and Stormwater Quality Guide" shall be used as a reference document for the purpose of designing erosion and sediment BMPs. Measures and methods proposed by the Contractor shall be reviewed and approved in writing by the Engineer prior to installation.

(b) *Other Agencies.* If CDPHE, US Army Corps of Engineers (USACE), or the Environmental Protection Agency (EPA) reviews the project site and requires additional measures to prevent and control erosion, sediment, or pollutants, the Contractor shall cease and desist activities resulting in pollutant discharge and immediately implement these measures. If the work may negatively affect another MS4, the Contractor shall cease and desist activities resulting in the discharge and shall implement appropriate measures to protect the neighboring MS4, including installing additional measures. . Implementation of these additional measures will be paid for at contract unit price.

(c) *Work Outside the Right of Way.* Disturbed areas, including staging areas, which are outside CDOT ROW and outside easements acquired by CDOT for construction, are the responsibility of the Contractor. These areas may be subject to a separate CDPS-SCP or other permits. The Contractor shall acquire these permits and submit copies to the Engineer prior to any disturbance. These permits, shall be acquired and all erosion and sediment control work performed at the Contractor's expense. These areas are subject to inspections by CDOT or any other agency, as agreed upon in writing.

(d) *Construction Implementation*. The Contractor shall incorporate BMPs into the project as outlined in the accepted schedule.

(e) *Stabilization*. Once earthwork has started, the Contractor shall continue erosion BMPs until permanent stabilization of the area has been completed and accepted. Clearing, grubbing and slope stabilization measures shall be performed regularly to ensure final stabilization. Failure to properly maintain erosion control and stabilization methods, either through improper phasing or sequencing will require the Contractor to repair or replace sections of earthwork at his expense. The Contractor shall schedule and implement the following stabilization measures during the course of the project:

(1) Temporary Stabilization. At the end of each day, the Contractor shall stabilize disturbed areas by surface roughening, vertical tracking, or a combination thereof. Disturbed areas are locations where actions have been taken to alter the existing vegetation and/or underlying soil of a site, such as clearing, grading, road bed preparation, soil compaction, and movement and stockpiling of top soils. Other stabilization measures may be implemented, as approved. The maximum area of temporary stabilization shall not exceed 20 acres.

(2) Interim Stabilization. Stockpiles and disturbed areas as soon as known with reasonable certainty that work will be temporarily halted for 14 days or more shall be stabilized using one or more of the specified following methods:

(i) Application of 1.5 tons of mechanically crimped certified weed free hay or straw in combination with an approved organic mulch tackifier.
(ii) Placement of bonded fiber matrix in accordance with Section 213.
(iii) Placement of mulching (hydraulic) wood cellulose fiber mulch with tackifier, in accordance with Section 213.
(iv) Application of spray-on mulch blanket in accordance with Section 213. Magnesium Chloride, Potassium Chloride and Sodium Chloride, or other salt products, will not be permitted as a stabilization method.

Protection of the interim stabilization method is required. Reapplication may be required as approved.

(3) Summer and Winter Stabilization. Summer and winter stabilization is defined as months when seeding will not be permitted. As soon as the Contractor knows shutdown is to occur, interim stabilization shall be applied to the disturbed area. Protection of the interim stabilization method is required. Reapplication of interim stabilization may be required as directed.

(4) Permanent Stabilization. Permanent stabilization is defined as the covering of disturbed areas with seeding, mulching with tackifier, soil retention coverings, and such non-erodible methods such riprap, road shouldering, etc., or a combination thereof as required by the Contract. Other permanent stabilization techniques may be proposed by the Contractor, in writing, and shall be used when approved in writing by the Engineer. Permanent stabilization shall begin within 48 hours after topsoil placement, soil conditioning, or combination thereof starts and shall be pursued to completion.

(5) Final Stabilization. Final stabilization is defined as when all ground disturbing activities at the site have been completed, and uniform vegetative cover has been established with an individual plant density of at least 70 percent of pre-disturbance levels, or equivalent permanent physical erosion reduction methods have been employed.

(f) *Maintenance*. Erosion and sediment control practices and other protective measures identified in the SWMP as BMPs for stormwater pollution prevention shall be maintained in effective operating condition until the CDPS-SCP has been transferred to CDOT. BMPs shall be continuously maintained in accordance with good engineering, hydrologic and pollution control practices, including removal of collected sediment when silt depth is 50 percent or more of the height of the erosion control device. When possible, the Contractor shall use equipment with an operator rather than labor alone to remove the sediment.

Maintenance of erosion and sediment control devices shall include replacement of such devices upon the end of their useful service life as recommended by the Contractor and approved by the Engineer. Maintenance of rock check dams and vehicle tracking pads shall be limited to removal and disposal of sediment or addition of aggregate. Damages resulting from failure to maintain BMPs shall be paid at the contactors expense.

Complete site assessment shall be performed as part of comprehensive inspection and maintenance procedures, to assess the adequacy of BMPs at the site and the necessity of changes to those BMPs to ensure continued effective performance. Where site assessment results in the determination that new or replacement BMPs are necessary, the BMPs shall be installed to ensure continuous effectiveness. When identified, BMPs shall be maintained, added, modified or replaced as soon as possible, immediately in most cases.

Approved new or replaced BMPs will be measured and paid for in accordance with subsections 208.11 and 208.12. Devices damaged due to the Contractor's negligence shall be replaced at Contractor’s expense.

From the time seeding and mulching work begins until the date the Contract work is accepted, the Contractor shall maintain all seeded areas. Damage to seeded areas or to mulch materials shall be immediately restored. Damage to seeded areas or to mulch materials due to Contractor negligence shall be immediately restored at the Contractor’s expense. Restoration of other damaged areas will be measured and paid for under the appropriate bid item.

Temporary BMPs may be removed upon completion of the project, as determined by the Water Quality Partial Acceptance walk-through. If removed, the area in which these BMPs were constructed shall be returned to a condition similar to that which existed prior to its disturbance. Removed BMPs shall become the property of the Contractor.

If a project delay occurs, the Contractor shall be responsible to continue erosion and sediment control operations beyond the original contract time.

Sediment removed during maintenance of BMPs and material from street sweeping may be used in or on embankment, provided it meets conditions of Section 203 and is distributed evenly across the embankment.

Whenever sediment collects on the paved surface, the surface shall be cleaned. Street washing will not be allowed. Storm drain inlet protection shall be in place prior to shoveling, sweeping, or vacuuming. Sweeping shall be completed with a pickup broom or equipment capable of collecting sediment. Sweeping with a kick broom will not be allowed.

Material from pavement saw cutting operations shall be cleaned from the roadway surface during operations using a vacuum. A BMP, such as a berm, shall be placed to contain slurry from joint flushing operations until the residue can be removed from the soil surface. Aggregate bags, erosion logs or other permeable BMPs shall not be used. Residue shall not flow into driving lanes. It shall be removed and disposed of in accordance with subsection 107.25(b) 13. Material containment and removal will not be paid for separately, but shall be included in the work.

208.05 Construction of BMPs. BMPs shall be constructed in accordance with Standard Plans M-208-1, M-216-1 and with the following.

(a) *Seeding, Mulching, Sodding, Soil Retention Blanket*. Seeding, mulching, sodding, and soil retention blanket shall be performed in accordance with Sections 212, 213, and 216.

(b) *Erosion Bales*. The bales shall be anchored securely to the ground with wood stakes.

(c) *Silt Fence*. Silt fence shall be installed in locations specified in the Contract prior to any grubbing or grading activity.

(d) *Temporary Berms*. Berms shall be constructed to the dimensions shown in the Contract, and sufficiently compacted to prevent erosion or failure. If the berm erodes or fails, it shall be immediately repaired or replaced at the Contractor's expense.

(e) *Temporary Diversion*. Diversions shall be constructed to the dimensions shown in the Contract, and graded to drain to a designated outlet. The berm shall be sufficiently compacted to prevent erosion or failure. If the diversion erodes or fails, it shall be immediately repaired or replaced at the Contractor's expense.

(f) *Temporary Slope Drains*. Temporary slope drains shall be installed prior to installation of permanent facilities or growth of adequate ground cover on the slopes. All temporary slope drains shall be securely anchored to the slope. The inlets and outlets of temporary slope drains shall be protected to prevent erosion.

(g) *Silt Berm*. Prior to installation of silt berms, the Contractor shall prepare the surface of the areas in which the berms are to be installed such that are they free of materials greater than 2 inches in diameter and are suitably smooth for the installation of the silt berms, as approved. Silt berms shall be secured with spikes. The Contractor shall install the silt berm in a manner that will prevent water from going around or under the silt berm. Silt berms shall be installed on top of soil retention blanket.

(h) *Rock Check Dam*. Rock shall be installed at locations shown on the plans. Rock check dams shall conform to the dimensions shown on the plans.

(i) *Riprap Outlet Protection*. Geotextile used shall be protected from cutting or tearing. Overlaps between two pieces of geotextile shall be 1 foot minimum. Riprap size shall be as shown on the plans.

(j) *Storm Drain Inlet Protection*. Prior to installation, the Contractor shall sweep the surface of the area in which the storm drain inlet protection devices are to be installed such that the pavement is free of sediment and debris. The ends of the inlet protection Type 1 and Type 2 shall extend a minimum of 1 foot past each end of the inlet.

The Contractor shall remove all accumulated sediment and debris from the surface surrounding all storm drain inlet protection devices after each rain event or as directed. The Contractor shall remove accumulated sediment from Type II and III containment area when it is more than a maximum one third full of sediment, or as directed.

The Contractor shall protect storm drain facilities adjacent to locations where pavement cutting operations involving wheel cutting, saw cutting, sand blasting, or abrasive water jet blasting are to take place.

(k) *Sediment Trap*. Sediment traps shall be installed to collect sediment laden water and to minimize the potential of pollutants leaving the project site. Locations shall be as shown on the plans or as directed.

Sediment traps shall be constructed prior to disturbance of upslope areas and shall be placed in locations where runoff from disturbed area can be diverted into the trap.

The area under the embankment shall be cleared, grubbed and stripped of any vegetation and roots.

Fill material for the embankment shall be free of roots or other vegetation, organic material, large stones, and other objectionable material.

Sediment shall be removed from the trap when it has accumulated to one half of the wet storage depth of the trap and shall be disposed of in accordance with subsection 208.04(f).

(l) *Erosion Logs*. Erosion logs shall be embedded 2 inches into the soil. Stakes shall be embedded to a minimum depth of 12 inches. At the discretion of the Engineer, a shallower depth may be permitted if rock is encountered.

The Contractor shall maintain the erosion logs during construction to prevent sediment from passing over or under the logs.

(m) *Silt Dikes*. Prior to installation of silt dikes, the Contractor shall prepare the surface of the areas in which the silt dikes are to be installed such that they are free of materials greater than two inches in diameter and are suitably smooth for the installation of the silt dikes, as approved by the Engineer.

(n) *Concrete Washout Structure*. The concrete washout structure shall meet or exceed the dimensions shown on the plans or be used in accordance with manufacturer's recommendations. Work on this structure shall not begin until written acceptance is provided by the Engineer.

Concrete washout structure shall conform to standard plan M-208-1 and shall meet the following requirements:

(1) Structure shall contain all washout water.

(2) Stormwater shall not carry wastes from washout and disposal locations.

(3) The site shall be located a minimum of 50 horizontal feet from State waters and shall meet all requirements for containment and disposal as defined in subsection 107.25.

(4) The site shall be signed as "Concrete Washout".

(5) The site shall be accessible to appropriate vehicles.

(6) Freeboard capacity shall be included into structure design to reasonably ensure the structure will not overtop during or because of a precipitation events.

(7) The Contractor shall prevent tracking of washout material out of the washout structure.

(8) Solvents, flocculents, and acid shall not be added to wash water.

(9) The structure shall be surrounded on three sides by a compacted berm.

(10) The structure shall be fenced with orange plastic construction fencing to provide a barrier to construction equipment and to aid in identification of the concrete washout area.

(11) Concrete waste, liquid and solid, shall not exceed 2/3 the storage capacity of the washout structure.

Pre-fabricated concrete washout structures shall meet the following requirements:

(1) Structure shall contain all washout water.

(2) Structure shall be located 50 horizontal feet away from State waters, and shall be confined so that no potential pollutants will enter State waters and other sensitive areas are as defined in the Contract. Locations shall be as approved by the Engineer. The site shall be delineated with orange plastic fence or other means and signed as “Concrete Washout”.

(3) The site shall be accessible to appropriate vehicles.

(4) Freeboard capacity shall be included into structure design to reasonably ensure the structure will not overtop during or because of a precipitation event.

(5) Solvents, flocculants, and acid shall not be added to wash water.

(6) Concrete waste, liquid and solid, shall not exceed 2/3 the storage capacity of the washout structure.

(7) Prefabricated structures cannot be moved when they contain liquid, unless otherwise approved.

(8) The concrete washout structure shall be completed and ready for use prior to concrete placement operations.

(9) Washout areas shall be checked and maintained as required. On site permanent disposal of concrete washout waste is not allowed.

All liquid and solid wastes, including contaminated sediment and soils generated from concrete washout shall be hauled away from the site and disposed of properly at the Contractor's expense.

(o) *Vehicle Tracking Pad (VTP).* Vehicle tracking pads shall be constructed to the minimum dimensions shown in the Contract, unless otherwise directed by the Engineer. Construction of approved vehicle tracking pads shall be completed before any disturbance of the area.

The Contractor shall maintain each vehicle tracking pad during the entire time that it is in use for the project.

The vehicle tracking pad shall be removed at the completion of the project unless otherwise directed by the Engineer. Additional aggregate may be required for maintenance and will be paid for under Pay Item, Maintenance Aggregate (Vehicle Tracking Pad).

(p) *Detention Pond*. Permanent detention ponds shown on the construction plans may be used as temporary BMPs if all the following conditions are met:

(1) The pond is designated as a construction BMP in the SWMP.

(2) The pond outfall and outlet are designed and implemented for use as a BMP during construction in accordance with good engineering, hydrologic, and pollution control practices. The stormwater discharges from the outfall shall not cause degradation or pollution of State waters, and shall have BMPs, as appropriate.

(3) All silt shall be removed and the pond returned to the design grade and contour prior to project acceptance

(q) *Aggregate Bag*. Aggregate bags shall be placed on a stable surface, consisting of pavement, grass or gravel. Aggregate bags shall be placed to conform to the surface without gaps. Discharge water shall not cause erosion.

(r) *Surface Roughening*. Surface roughening creates horizontal grooves along the contour of the slope. Roughening may be accomplished by furrowing, scarifying, ripping or disking the soil surface to create a 2 to 4 inch minimum variation in soil surface. Surface roughening will not be paid for separately, but shall be included in the work.

(s) *Vertical Tracking*. Vertical tracking involves driving a tracked vehicle up and down the soil surface and creating horizontal grooves and ridges along the contour of the slope. Sandy soils or soils that are primarily rock need not be tracked. Vertical tracking will not be paid for separately, but shall be included in the work.

208.06 Materials Handling and Spill Prevention. The SWMP Administrator shall clearly describe and record on the SWMP, all practices implemented at the site to minimize impacts from procedures or significant material that could contribute pollutants to runoff. Areas or procedures where potential spills can occur shall have a Spill Response Plan in place as specified in subsections 107.25(b) 6 or 208.06(c). Construction equipment, fuels, lubricants, and other petroleum distillates shall not be stored or stockpiled within 50 horizontal feet of any State waters or more if the Contractor determines necessary. Equipment fueling and servicing shall occur only within approved designated areas.

(a) *Bulk Storage Structures.* Bulk storage structures for petroleum products and other chemicals shall have impervious secondary containment or equivalent adequate protection so as to contain all spills and prevent any spilled material from entering State waters. Secondary containment shall be capable of containing the combined volume of all the storage containers plus at least 10 percent freeboard. For secondary containment that is used and may result in accumulation of stormwater within the containment, a plan shall be implemented to properly manage and dispose of all accumulated stormwater which is deemed to be contaminated (e.g., has an unusual odor or sheen).

(b) *Lubricant Leaks.* The Contractor shall inspect equipment, vehicles, and repair areas daily to ensure petroleum, oils, and lubricants (POL) are not leaking onto the soil or pavement. Absorbent material or containers approved by the Engineer shall be used to prevent leaking POL from reaching the soil or pavement. The Contractor shall have onsite approved absorbent material or containers of sufficient capacity to contain any POL leak that can reasonably be foreseen. The Contractor shall inform all Spill Response Coordinators in accordance with the Spill Response Plan if unforeseen leakage is encountered. All materials resulting from POL leakage control and cleanup shall become the property of the Contractor and shall be removed from the site. Control, cleanup, and removal of by-products resulting from POL leaks shall be performed at the Contractor's expense.

(c) *Spill Response Plan*. A spill Response Plan shall be developed and implemented to establish operating procedures for handling potential pollutants and preventing spills.

The Response Plan shall contain the following information:

(1) Identification and contact information of each Spill Response Coordinator

(2) Locations of areas on project site where equipment fueling and servicing operations are permitted.

(3) Location of cleanup kits.

(4) Quantities of chemicals and locations stored on site.

(5) Label system for chemicals and Safety Data Sheets (SDS) for products.

(6) Clean up procedures to be implemented in the event of a spill that does not enter State waters or ground water.

(7) Procedures for spills of any size that enter surface waters or ground water, or have the potential to do so. CDOT's Erosion Control and Stormwater Quality Guide contains Spill notification contacts and phone numbers required in the Spill Response Plan.

(8) A summary of the employee training provided.

Information in items (1) through (8) shall be updated in the SWMP Notebook when they change.

208.07 Stockpile Management. Material stockpiles shall be located 50 horizontal feet away from State waters, and shall be confined so that no potential pollutants will enter State waters and other sensitive areas as defined in the Contract. Locations shall be approved by the Engineer.

Erodible stockpiles (including topsoil) shall be contained with acceptable BMPs at the toe (or within 20 feet of the toe) throughout construction. BMPs shall be approved by the Engineer. The SWMP Administrator shall describe, detail, and record the sediment control devices on the SWMP.

208.08 Limits of Disturbance. The Contractor shall limit construction activities to those areas within the limits of disturbance shown on the plans and cross-sections. Construction activities, in addition to the Contract work, shall include the on-site parking of vehicles or equipment, on-site staging, on-site batch plants, haul roads or work access, and all other action which would disturb existing soil conditions. Staging areas within the LDA shall be as approved by the Engineer. Construction activities beyond the limits of disturbance due to Contractor negligence shall be restored to the original condition by the Contractor at the Contractor's expense. The SWMP Administrator shall tabulate additional disturbances not identified in the CDPS_SCP application and indicate changes to locations and quantities on the SWMP. The Contractor shall report the changes and additional disturbances to the Engineer, Water Quality Control Division of CDPHE and all other involved agencies.

The Contractor shall pursue and stabilize all disturbances to completion.

208.09 Failure to Perform Erosion Control. Failure to implement the Stormwater Management Plan is a violation of the CDPS – SCP and CDOT specifications. CDOT is obligated to implement enforcement mechanisms in accordance with CDOT's MS4 Permit COS000005 for Stormwater Management and erosion control Best Management Practices. Penalties may be assessed to the Contractor by the appropriate agencies. Penalties will be assessed by the Department as liquidated damages for failure to meet the Permit. All fines assessed to the Department for the Contractor's failure to implement the SWMP will be deducted from moneys due the Contractor in accordance with subsection 107.25(c) 2.

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REVISION OF SECTION 208
EROSION CONTROL

The Contractor will be subject to liquidated damages for incidents of failure to perform erosion control as required by the Contract. Liquidated damages will be applied for failure to comply with the CDPS-SCP and these specifications, including the following:

(1) Failure to include erosion control in the project schedule or failure to include erosion control in each schedule update as specified in subsection 208.03(b).

(2) Failure of the Contractor to perform the inspections required by subsection 208.03(c) 2.

(3) Failure of the Contractor to implement necessary actions required by the Engineer as required by subsection 208.03(c).

(4) Failure to amend the SWMP and implement BMPs as required by subsection 208.04.

(5) Failure to keep documentation and records current.

(6) Failure to construct or implement erosion control or spill containment measures required by the Contract, or failure to construct or implement them in accordance with the Contractor's approved schedule as required by subsection 208.06(c).

(7) Failure to limit temporary stabilization to 20 or fewer acres as required by subsection 208.04 (e).

(8) Failure to replace or perform maintenance on an erosion control feature after notice from the Engineer or from a water quality inspection as required by subsection 208.04(f).

(9) Failure to remove and dispose of sediment from BMPs as required.

(10) Failure to install and properly utilize a concrete washout structure for containing washout from concrete placement operations.

(11) Failure to perform stabilization as required by subsection 208.04 (e).

(12) Failure of the Superintendent or designated representative to attend inspections as required by subsection 208.03(c) and record findings in the appropriate form.

(13) Failure to prevent discharges not composed entirely of stormwater from leaving the Construction Site.

(14) Failure to provide the survey of Permanent Water Quality BMPs when required on the project in accordance with 208.10.

The Engineer will immediately notify the Contractor of each incident of failure to perform erosion control in accordance with the CDPS-SCP and these specifications, including items (1) through (14) above by issuing the Form 105. Correction shall be made as soon as possible but no later than 48 hours from the date of notification to correct the failure. The Contractor will be charged liquidated damages in the amount of $970 for each day after the 48 hour period has expired, that one or more of the incidents of failure to perform the requirements for each Form 105 remains uncorrected. Liquidated damages will begin at Midnight of the date the 48 hours has expired.

This deduction will not be considered a penalty, but will be considered liquidated damages based on estimated additional construction engineering costs. The liquidated damages will accumulate, for each cumulative day that one or more of the incidents remain uncorrected. The number of days for which liquidated damages are assessed will be cumulative for the duration of the project; that is: the damages for a particular day will be added to the total

number of days for which liquidated damages are accumulated on the project. The liquidated damages will be deducted from any monies due the Contractor.

If all other failures are not corrected within 48 hours after liquidated damages have begun to be assessed, the Engineer will issue a Stop Work Order in accordance with subsection 105.01. Work shall not resume until the Engineer has approved a written corrective action plan submitted by the Contractor that includes measures to prevent future violations and a schedule for implementation.

If the Contractor requires more than 96 hours to perform the corrective work from the date on the Form 105, the Contractor shall submit a request for deferment. The deferment request shall be in writing and shall include the specific failure, temporary measures until final correction is made, the methodology which will be employed to make the correction and interim milestones to completing the work. The Region Water Pollution Control Manager (RWPCM), Engineer, the SWMP Administrator and the Contractor shall concur on this deferral and set a proposed date of completion. If approved, the Contractor shall complete the corrective measures by Midnight of the proposed completion date. If corrective work is not corrected by the completion date the Engineer will issue a Stop Work Order. Liquidated Damages will apply retroactively back to the 48 hours after the 105 date of notification. Liquidated Damages will assessed until the corrective work has been completed and accepted.

Deferment of work to correct failures to perform erosion control will not affect the Contractor's other contractual responsibilities, notifications for other non-compliance, nor the final completion date of the project. Liquidated Damages for other non-compliance notifications will continue to apply during the deferment period in addition to liquidated damages associated with the deferment.

Based on the submittal date of the approved deferment Liquated Damages and a Stop Work Order may not be mandated to the Contractor.

Disagreements regarding the suggested corrective action for a BMP compliance issue between the Project Engineer, SWMP Administrator, and Superintendent, shall be discussed with the Resident Engineer and Region Water Pollution Control Manager. If after the discussions, the Project Engineer and the Contractor are still in disagreement and feel that additional compensation is owed, the Contractor will follow the decision of the Project Engineer, keep track of the costs and negotiate further with the Project Engineer. If after pursuing the issue, the Contractor is unable to reach agreement with the Project Engineer, then the Contractor can follow the dispute process outlined in subsection 105.22.

If the Contractor's corrective action plan and schedule are not submitted and approved within 96 hours of the initial notice, the Engineer will issue a Stop Work Order and have an on-site meeting with the Superintendent, SWMP Administrator, and the Superintendent's supervisor. This meeting will also be attended by the Resident Engineer, the Region Water Pollution Control Manager, and the Region Program Engineer. This meeting will identify and document needed corrective actions and a schedule for completion. If after the meeting, the unacceptable work is not remedied within the schedule as agreed to in the meeting, the Engineer will take action to effect compliance with the CDPS-SCP and these specifications by utilizing CDOT Maintenance personnel or other non-Contractor forces and deduct the cost from any moneys due or to become due to the Contractor pursuant to subsection 105.17. Delays due to these Stop Work Orders shall be considered non-excusable. The Stop Work Order shall be in place until the project is in CDPS-SCP compliance.

If the Contractor remains non-responsive to requirements of the on-site meeting, the Engineer will start default or Contract termination procedures in accordance with subsections 108.09 and 108.10.CDOT will proceed with corrective or disciplinary action in accordance with the Rules for Prequalification, Debarment, Bidding and Work on Transportation, Road, Highway and Bridge Public Projects.

When a failure meets any one of the following conditions, the Engineer will immediately issue a Stop Work Order in accordance with subsection 105.01 irrespective of any other available remedy:

(1) It may endanger health or the environment.

(2) It consists of a spill or discharge of hazardous substances or oil which may cause pollution of the waters of the state.

(3) It consists of a discharge which may cause a violation of a water quality standards.

208.10 Items to Be Completed Prior to Requesting Partial Acceptance of Water Quality Work.

(a) *Reclamation of Washout Areas.* After concrete operations are complete, washout areas shall be reclaimed in accordance with subsection 208.05(n) at the Contractor's expense.

(b) *Survey.* When Permanent Water Quality BMPs (Permanent BMP) are required on the project, the Contractor shall survey the BMPs to confirm that they conform to the configuration and grade shown on the Plans. The survey shall conform to Section 625. The results of the survey shall be submitted as Microstation or AutoCad drawing files and PDF files, showing both designed and final elevations and configurations. Paper versions of the drawings shall be submitted with the stamp and seal of the Contractor's Surveyor.

The Engineer and the CDOT Hydraulics Engineer for the region will perform a walkthrough of the Permanent BMPs to confirm conformance to material requirements, locations and dimensions of the Permanent BMPs. Permanent BMPs not meeting the Contract requirements will be identified in writing by the Engineer, and shall be repaired or replaced at the Contractor's expense. Correction surveys shall be performed at the Contractor's expense to confirm the locations and dimensions of each Permanent BMP. Final as-built plans of the Permanent BMPs shall be provided to the Engineer and the CDOT Region and Headquarter Permanent Water Quality Control Specialist for their records.

(c) *Locations of Temporary BMPs.* The Engineer will identify locations where modification, cleaning or removal of temporary BMPs are required, and will provide these in writing to the Contractor. Upon completion of work required, the SWMP Administrator shall modify the SWMP to provide an accurate depiction of BMPS to remain on the project site.

METHOD OF MEASUREMENT

208.11 Erosion Control Management will be measured as the actual number of days of ECM work performed onsite, regardless of the number of ECIs required, including erosion control inspections, documentation, meeting participation, SWMP Administration, and the preparation of the SWMP notebook.

Erosion bales will be measured by the actual number installed and accepted.

Silt fence, silt berms, erosion logs, aggregate bags, silt dikes, temporary berms, rock check dams, temporary diversions, and temporary slope drains, will be measured by the actual number of linear feet that are installed and accepted. Measured length will not include required overlap.

Concrete washout structure will be measured by the actual number of structures that are installed and accepted.

Storm drain inlet protection will be measured by linear foot or actual number of devices that are installed and accepted.

Sediment trap quantities will be measured by the actual number installed and accepted.

Removal of trash that is not generated by construction activities will be measured by the actual number of hours that Contractor workers actively remove trash from the project. Each week the Contractor shall submit to the Engineer a list of workers and the hours spent collecting such trash.

Removal of accumulated sediment from traps, basins, areas adjacent to silt fences and erosion bales, and other clean out excavation of accumulated sediment, and the disposal of such sediment, will be measured by the number of hours that equipment, labor, or both are used for sediment removal.

Vehicle tracking pads will be measured by the actual number constructed and accepted.

Additional aggregate required for maintaining vehicle tracking pads will be measured as the actual number of cubic yards installed and accepted.

BASIS OF PAYMENT

208.12 ECM and BMPs will be paid for at the Contract unit price for each of the items listed below that appear in the bid schedule.

Payment will be made under:

Pay Item	Pay Unit
Aggregate Bag	Linear Foot
Concrete Washout Structure	Each
Erosion Bales (Weed Free)	Each
Erosion Control Management	Day
Erosion Log (Type 1) (____ Inch)	Linear Foot
Erosion Log (Type 2) (_____Inch)	Linear Foot
Pre-Fabricated Concrete Washout Structure	Each
Pre-Fabricated Vehicle Tracking Pad	Each
Maintenance Aggregate (Vehicle Tracking Pad)	Cubic Yard
Removal and Disposal of Sediment (Equipment)	Hour
Removal and Disposal of Sediment (Labor)	Hour
Removal of Trash	Hour
Rock Check Dam	Each
Sediment Basin	Each
Sediment Trap	Each
Silt Berm	Linear Foot
Silt Dike	Linear Foot
Silt Fence	Linear Foot
Silt Fence (Reinforced)	Linear Foot
Storm Drain Inlet Protection (Type__)	Linear Foot
Storm Drain Inlet Protection (Type__)	Each
Sweeping (Sediment Removal)	Hour
Temporary Berm	Linear Foot
Temporary Diversion	Linear Foot
Temporary Slope Drains	Linear Foot
Vehicle Tracking Pad	Each

Payment for Erosion Control Management (ECM) will be full compensation for all labor, materials and equipment necessary for the SWMP Administrator and Erosion Control Inspectors to perform all the work described in this specification. This includes assembling items 5-19 and required updates to the SWMP Notebook on site.

The SWMP Administrator and ECI's commute times will not be measured and paid for separately, but shall be included in the work.

Modifications to the SWMP Notebook due to construction errors or survey errors by the contractor shall be at the Contractor’s expense.

Temporary erosion control will be measured and paid for by the BMPs used. Surface roughening and vertical tracking will not be measured and paid for separately but shall be included in the work. Payment for each BMP item will be full compensation for all work and materials required to furnish, install, maintain and remove the BMP when directed.

Payment for Removal and Disposal of Sediment (Equipment) will be full compensation for use of the equipment, including the operator. Payment for Removal and Disposal of Sediment (Labor) will be full compensation for use of the labor.

Payment for concrete washout structure, whether constructed or prefabricated, will be full compensation for all work and materials required to install, maintain, and remove the item. Maintenance and relocation, as required, of these structures throughout the duration of the project will not be measured and paid for separately, but shall be included in the work.

Silt berm spikes will not be measured and paid for separately, but shall be included in the work. When required, soil retention blankets will be measured and paid for in accordance with Section 216.Silt dike staples will not be measured and paid for separately, but shall be included in the work.

Spray–on mulch blankets required by the Contract, including those used in both interim and final stabilization, will be measured and paid for in accordance with Section 213.

Payment for storm drain inlet protection will be full compensation for all work, materials, and equipment required to complete the item, including surface preparation, maintenance throughout the project, and removal upon completion of the work. Aggregate will not be measured and paid for separately, but shall be included in the work.

Sweeping, when used as a BMP as shown in the Contract, will be measured by the number of hours that a pickup broom or equipment capable of collecting sediment, authorized by the Engineer, is used to remove sediment from the roadway or other paved surfaces. Each week the Contractor shall submit to the Engineer a statement detailing the type of sweeping equipment used and the number of hours it was used to pick up sediment. Operator will not be measured and paid for separately, but shall be included in the work.

Stakes, anchors, connections, geotextile, riprap and tie downs used for temporary slope drains will not be measured and paid for separately, but shall be included in the work.

Payment for vehicle tracking pad will be full compensation for all work, materials and equipment required to construct, maintain, and remove the entrance upon completion of the work. Aggregate and geotextile will not be measured and paid for separately, but shall be included in the work. If additional aggregate for maintenance of vehicle tracking pads is required, it will be measured by the cubic yard in accordance with Section 304 and will be paid for under this Section.

Seeding, sod, mulching, soil retention blanket, and riprap will be measured and paid for in accordance with Sections 212, 213, 216, and 506.

Geotextile (Erosion Control) (Class 2) will be measured and paid for in accordance with Section 420.

All work and materials required to perform the permanent BMP survey and furnish the electronic files shall be included in the original unit price bid for surveying. Surveying will be measured and paid for in accordance with Section 625.

Payment will be made for BMPs replaced as approved by the Engineer. Temporary erosion and sediment BMPs required due to the Contractor’s negligence, carelessness, or failure to install permanent controls as a part of the work as scheduled or ordered by the Engineer or for the Contractor's convenience, shall be performed at the Contractor’s expense. If the Contractor fails to complete construction within the contract time, payment will not be made for Section 208 pay items for the period of time after expiration of the contract time. These items shall be provided at the Contractor's expense.

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REVISION OF SECTION 212
SEED

Section 212 of the Standard Specifications is hereby revised for this project as follows:

In subsection 212.02 (a), delete the first paragraph and replace with the following:

a) *Seed.* All seed shall be furnished in bags or containers clearly labeled to show the name and address of the supplier, the seed name, the lot number, net weight, origin, the percent of weed seed content, the guaranteed percentage of purity and germination, pounds of pure live seed (PLS) of each seed species, and the total pounds of PLS in the container. All seeds shall be free from noxious weed seeds in accordance with current state and local lists and as indicated in Section 213. The Contractor shall furnish to the Engineer a signed statement certifying that the seed is from a lot that has been tested by a recognized laboratory for seed testing within thirteen months prior to the date of seeding. The Engineer may obtain seed samples from the seed equipment, furnished bags or containers to test seed for species identification, purity and germination. Seed tested and found to be less than 10 percent of the labeled certified PLS and different than the specified species will not be accepted. Seed which has become wet, moldy, or damaged in transit or in storage will not be accepted.

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REVISION OF SECTION 213
MULCHING

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

In subsection 213.01, delete the last paragraph and replace with the following:

This work includes furnishing and applying spray-on mulch blanket or bonded fiber matrix on top of rock cuts and slopes after seeding or as temporary stabilization as shown on the plans or as directed by the Engineer.

In subsection 213.02, delete the eighth paragraph and replace with the following:

The hydromulch material for hydraulic mulching shall consist of virgin wood fibers manufactured expressly from clean whole wood chips. The chips shall be processed in such a manner as to contain no growth or germination inhibiting factors. Fiber shall not be produced from recycled materials such as sawdust, paper, cardboard, or residue from pulp and paper plants. The wood cellulose fibers of the mulch must maintain uniform suspension in water under agitation. Upon application, the mulch material shall form a blotter like mat covering the ground. This mat shall have the characteristics of moisture absorption and percolation and shall cover and hold seed in contact with the soil. The Contractor shall obtain certifications from suppliers that laboratory and field testing of their product has been accomplished, and that it meets all of the foregoing requirements pertaining to wood cellulose fiber mulch.

In subsection 213.02, delete the eleventh paragraph and replace with the following:

Material for mulch tackifier shall consist of a free-flowing, noncorrosive powder produced either from the natural plant gum of Plantago Insularis (Desert Indianwheat) or pre-gelatinized 100 percent natural corn starch polymer. The powders shall possess the following properties:

Plantago Insularis (Desert Indianwheat):

Property	**Requirement**	**Test Method**
(1) pH 1% solution	6.5 - 8.0	
(2) Mucilage content	75% min.	ASTM D7047

Pre-gelatinized 100 percent natural corn starch polymer:

(1)	Organic Nitrogen as protein	5.5-7%
(2)	Ash content	0-2%
(3)	Fiber	4-5%
(4)	pH 1% solution	6.5 – 8.0
(5)	Size	100% thru 850 microns (20 mesh)
(6)	Settleable solids	<2%

All fibers shall be colored green or yellow with a biodegradable dye.

Delete the last paragraph in subsection 213.02 and replace with the following:

(a) *Spray-on Mulch Blanket.* Spray on mulch blanket shall be one of the following, unless otherwise shown on the plans:

(1) Spray-on Mulch Blanket (Type 1) shall be a hydraulically applied matrix containing organic fibers, water soluble cross-linked tackifier, reinforcing natural and/or synthetic interlocking fibers. Mulch Blanket (Type 1) shall conform to the following:

Properties	Requirement	Test Method
Organic Fibers	71% Min.	ASTM D 2974
Cross linked Tackifiers	10% +/- 2% Min.	
Reinforcing Interlocking Fibers	10% +/- 1% Min.	
Biodegradability	100%	ASTM D 5338
Ground Cover @ Application Rate	90% Min.	ASTM D 6567
Functional Longevity	12 Months Min.	
Cure Time	< 8 hours	
Application		
Application Rate	3,000 lb./acre	

The organic fiber shall not contain lead paint, printing ink, varnish, petroleum products, seed germination inhibitors, or chlorine bleach. The organic fibers and reinforcing interlocking fibers cannot be produced from sawdust, cardboard, paper, or paper by-products.

(2) Spray-on Mulch Blanket (Type 2) shall be a hydraulically applied matrix pre-packaged in 50 pound bags containing both a soil and fiber stabilizing compound and thermally processed wood fiber.

The sterilized weed-free wood fiber mulch shall be manufactured through a thermo-mechanical defibrating process containing a specific range of fiber lengths averaging 0.25 inches or longer.

Mulch Blanket (Type 2) shall meet the following requirements:

Property	Requirement	Test Method
Fiber Retention On 28-Mesh Screen	≥ 40%	Tyler Ro-Tap Method
Moisture Content	12% ± 2%	Total Air Dry Weight Basis
Organic Matter	99.2% ± 0.2%	Oven Dry Weight Basis
Ash Content	0.8% ± 0.2%	Oven Dry Weight Basis
pH At 3% Consistency In Water	4.5-7.0 ± 0.5%	
Sterilized Weed-Free	Yes	
Non-Toxic To Plant Or Animal Life	Yes	

The soil and fiber stabilizing compound shall be composed of linear anionic copolymers of acrylamide pre-packed within the bag having a minimum content of 1.0 percent. The compound shall conform to the following:

Property	Requirement
Molecular Weight	≥ 12x106
Charge Density	> 25%
Non-Toxic To Plant Or Animal Life	Yes

(b) *Bonded Fiber Matrices (BFM).* BFM shall consist of hydraulically-applied matrix with a minimum of 70 percent non-toxic thermally processed or refined long strand organic fibers and water soluble tackifier to provide erosion control and designed to be functional for a minimum of 9 months. BFMs form an erosion-resistant blanket that promotes vegetation and prevents soil erosion. The BFM shall be 100 percent biodegradable. The binder in the BFM should also be biodegradable. Biodegradable BFMs should not be applied immediately before, during, or immediately after rainfall if the soil is saturated. BFM shall conform to the following requirements:

Property	Requirement	Test Method
Ground Cover (%)	95	ASTM 6567
Bio-degradability (%)	100	ASTM 5338
Functional Longevity (months)	9 month minimum	
Cure Time (hours)	24-48	
Cross-linked tackifier	10% minimum	

Application	
Application Rate (lbs./Acre)	3000

The fibers shall not contain lead paint, printing ink, varnish, petroleum products, seed germination inhibitors, or chlorine bleach. Fiber shall not be produced from sawdust, cardboard, paper, or paper by-products.

In subsection 213.03 (b) 2, delete the second paragraph and replace with the following:

Application Rate: Apply this as an overspray at the following rate or as approved by the Engineer.

Powder	Fiber	Water
200 lbs./Acre	300 lbs./Acre	2000 gal./Acre

In subsection 213.03, delete (f) and replace with the following:

(f) *Spray-on Mulch Blanket.* Spray-on Mulch Blanket shall strictly comply with the Manufacturer's mixing recommendations and installation instructions. No chemical additives with the exception of fertilizer, soil pH modifiers, extended-term dyes and bio nutrients will be permitted. Apply Spray-on mulch blanket in a uniform application using a minimum 22 degree arc type nozzle. Apply hydro slurry in two direction (from top of slope down and from toe of the slope up, as well as, be applied at a minimum of two layers).

Hydromulching vessel shall be filled with water to at least 1/3 capacity (high enough to cover agitators) prior to adding any material. Continue to fill vessel with water and slowly add the fibers while agitators are in motion. Run agitators at ¾ speed. Continue to mix tank a minimum of 10 minutes prior to application.

Co-polymer shall not be used use in channels, swales, or other areas where concentrated flows are anticipated and should not be used on saturated soils that have groundwater seeps.

Subsection 213.03 shall include the following:

(g) *Bonded Fiber Matrices (BFM).* Bonded fiber matrices shall strictly comply with the Manufacturer's mixing recommendations and installation instructions. No chemical additives with the exception of fertilizer, soil pH modifiers, extended-term dyes and bio stimulant materials shall be permitted. BFM shall be applied in a uniform application using a minimum 22 degree arc type nozzle. Apply BFM in two direction (from top of slope down and from toe of the slope up, as well as, be applied at a minimum of two layers.

Biodegradable BFMs should not be applied immediately before, during, or immediately after rainfall if the soil is saturated.

Product shall not be used use in channels, swales, or other areas where concentrated flows are anticipated and should not be used on saturated soils that have groundwater seeps.

Foot traffic, mechanical traffic or grazing shall not be permitted on treated areas until vegetated. Treated areas damaged due to circumstances beyond Contractor's control shall be repaired or re-applied as ordered. Payment for corrective work, when ordered, shall be at contract rates.

REVISION OF SECTION 213
MULCHING

In subsection 213.04, delete the first paragraph and replace with the following:

The quantity of hay and straw mulch, wood chip mulch, wood fiber and, spray-on mulch tackifier, bonded fiber matrix and tackifier will not be measured but shall be the quantity designated in the Contract, except that measurements will be made for revisions requested by the Engineer, or for discrepancies of plus or minus five percent of the total quantity designated in the Contract. Measurement for acres will be by slope distances.

In subsection 213.04, delete the fourth paragraph and replace with the following:

Spray-on Mulch Blanket and Bonded Fiber Matrix will be measured by the acre or by the actual pounds of product applied, as shown on the plans. The area will be calculated on the basis of actual or computed slope measurements. The Contractor shall verify prior to application, weight of spray on mulch blanket and bonded fiber matrix bags for certification of materials and application rate.

Subsection 213.05 shall include the following:

Payment will be made under:

Pay Item	**Pay Unit**
Bonded Fiber Matrix	Acre
Bonded Fiber Matrix	Pound
Spray on Mulch Blanket	Pound

Payment for spray-on mulch blanket and bonded fiber matrix will be full compensation for all work and materials necessary to complete this item.

REVISION OF SECTION 401
COMPACTION OF HOT MIX ASPHALT

Section 401 of the Standard Specifications is hereby revised for this project as follows:

In subsection 401.17, delete the first paragraph and replace with the following:

401.17 Compaction. The hot mix asphalt shall be compacted by rolling. Both steel wheel and pneumatic tire rollers will be required. The number, weight, and type of rollers furnished shall be sufficient to obtain the required density while the mixture is in a workable condition. Compaction shall begin immediately after the mixture is placed and be continuous until the required density is obtained. When the mixture contains unmodified asphalt cement (PG 58-28 or PG 64-22) or modified (PG 58-34), and the surface temperature falls below 185 °F, further compaction effort shall not be applied unless approved, provided the Contractor can demonstrate that there is no damage to the finished mat. If the mixture contains modified asphalt cement (PG 76-28, PG 70-28 or PG 64-28) and the surface temperature falls below 230 °F, further compaction effort shall not be applied unless approved, provided the Contractor can demonstrate that there is no damage to the finished mat.

Warm Mix Asphalt compaction requirements shall conform to CP 59.

In subsection 401.17, delete the third paragraph and replace with the following:

SMA shall be compacted to a density of 93 to 97 percent of the daily theoretical maximum specific gravity, determined according to CP 51. All other HMA shall be compacted to a density of 92 to 96 percent of the daily theoretical maximum specific gravity, determined according to CP 51. If more than one theoretical maximum specific gravity test is taken in a day, the average of the theoretical maximum specific gravity results will be used to determine the percent compaction. Field density determinations will be made in accordance with CP 44 or 81.

In subsection 401.17, second to last paragraph, delete the first sentence and replace with the following:

After production paving work has begun, a new Roller Pattern shall be demonstrated when a change in the compaction process is implemented.

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REVISION OF SECTION 401
TEMPERATURE SEGREGATION

Section 401 of the Standard Specifications is hereby revised for this project as follows:

In subsection 401.16 delete the twelfth (last) paragraph and replace it with the following:

The Engineer may evaluate the HMA for low density due to temperature segregation any time industry best practices, as detailed on Form 1346, are not being followed or the Engineer suspects temperature segregation is occurring. The Engineer will first meet with the Contractor to discuss the paving practices that are triggering the temperature investigation. Areas across the mat, excluding the outside 1 foot of both edges of the mat, that are more than 25 °F cooler than other material across the width may be marked for density testing. Material for temperature comparison will be evaluated in 3-foot intervals behind the paver across the width of the mat. The material shall be marked and tested in accordance with CP 58. If four or more areas within a lot of 500 tons have densities of less than 93 percent of the material's maximum specific gravity for SMA mixes or less than 92 percent of the material's maximum specific gravity for all other HMA mixes, a 5 percent price disincentive will be applied to the 500 ton lot. The 500 ton count begins when the Engineer starts looking for cold areas, not when the first cold area is detected. This price disincentive will be in addition to those described in Sections 105 and 106. Only one area per delivered truck will be counted toward the number of low density areas. Temperature segregation checks will be performed only in areas where continuous paving is possible.

REVISION OF SECTION 412
PORTLAND CEMENT CONCRETE PAVEMENT FINISHING

Section 412 of the Standard Specifications is hereby revised for this project as follows:

Delete subsection 412.12(a) and replace it with the following:

(a) *Hand Finishing*. Hand finishing should be minimized wherever possible. The Engineer shall be notified prior to hand finishing work and the proposed hand finished work shall be addressed in the Quality Control Plan for concrete finishing. Unless otherwise specified, hand finishing methods will be permitted only under the following conditions. Hand finished concrete shall be struck off and screeded with a portable screed that is at least 2 feet longer than the maximum width of the slab to be struck off. It shall be sufficiently rigid to retain its shape. Concrete shall be thoroughly consolidated by hand vibrators. Hand finishing shall not be allowed after concrete has been in-place for more than 30 minutes or when initial set has begun unless otherwise approved by the Engineer. Finishing tools made of aluminum shall not be used.

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

(1) Timing of hand finishing operations
(2) Methodology to place and transport concrete
(3) Equipment and tools to be utilized
(4) Qualifications and training of finishers and supervisors

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

REVISION OF SECTIONS 412, 601 AND 711
LIQUID MEMBRANE-FORMING COMPOUNDS
FOR CURING CONCRETE

Sections 412, 601 and 711 of the Standard Specifications are hereby revised for this project as follows:

In subsection 412.14, first paragraph, delete the second sentence and replace with the following:

The impervious membrane curing compound shall meet the requirements of ASTM C 309, Type 2 and shall be volatile organic content (VOC) compliant.

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

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

In subsection 601.16 (a) 1., delete the first sentence and replace with the following:

1. Membrane Forming Curing Compound Method. A volatile organic content (VOC) compliant curing compound conforming to ASTM C 309, Type 2 shall be uniformly applied to the surface of the deck, curbs and sidewalks at the rate of 1 gallon per 100 square feet.

Delete subsection 711.01 and replace with the following:

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

Burlap Cloth made from Jute or Kenaf	AASHTO M 182
Liquid Membrane-Forming Compounds for Curing Concrete	ASTM C 309
Sheet Materials for Curing Concrete	AASHTO M 171*
*Only the performance requirements of AASHTO M171 shall apply.	

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

REVISION OF SECTION 601
CLASS B, BZ, D, DT AND P CONCRETE

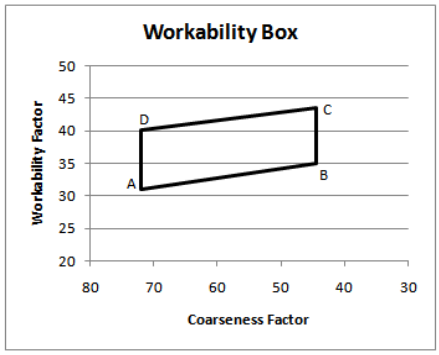
Section 601 of the Standard Specifications is hereby revised for this project as follows:

Subsection 601.02 shall include the following:

Deviations from the Standard Class B, Class BZ, Class D, DT and P concrete may be made under the following conditions:

(1) The minimum cement content may be reduced from that specified in Table 601-1 if lab test results show that the permeability of the mix does not exceed 2,500 Coulombs at an age of not more than 56 days as determined by ASTM C1202.
(2) The maximum cement content may be increased from that specified in Table 601-1 if lab test results show that the unrestrained shrinkage is less than 0.050 percent when tested by CP-L 4103.
(3) The maximum amount of fly ash substituted for ASTM C150 cement or the maximum pozzolan content when ASTM C595 or C1157 cement is used may exceed the limits in subsection 601.05 if lab test results show that the permeability of the mix does not exceed 2,500 Coulombs at an age of not more than 56 days as determined by ASTM C1202 and the salt scaling resistance is less than 3 as determined by ASTM C672.
(4) Except for Class DT, the concrete mix may use an Optimized Gradation (OG). When an OG is used aggregate proportions must be a result of an optimized combined aggregate gradation (CAG) developed by an approved mix design technique such as Shilstone or KU Mix. The amount of aggregate in the CAG passing the 19 mm (¾ inch) sieve and retained on the12.5 mm (½ inch) sieve shall be a minimum of 8 percent for the trial mix design. The coarseness factor (CF) and workability factor (WF) must plot within the workability box (ABCD) depicted graphically by the following 4 coordinate points:
    a. Point A> (CF,WF) 72, 31
    b. Point B> (CF,WF) 44.5, 35
    c. Point C> (CF,WF) 44.5, 43.5
    d. Point D> (CF,WF) 72, 40

Figure 601-1



CF = (S / T) x 100
Where:
S = Percent Cumulative Retained on 9.5 mm (3/8 inch) Sieve
T = Percent Cumulative retained on 2.36 mm (No. 8) Sieve

WF is the percent passing the 2.36 mm (No. 8) sieve. Increase workability factor by 2.5 percentage points for every 94 pounds per cubic yard of cementitious material used in excess of 564 pounds per cubic yard in the mix design. Decrease workability factor by 2.5 percentage points for every 94 pounds per cubic yard of cementitious material used below 564 pounds per cubic yard in the mix design. The Contractor shall not adjust the workability factor if the amount of cementitious material is 564 pounds per cubic yard.

(5) Aggregate gradings not obtained through an OG may be used if lab test results show that the unrestrained shrinkage is less than 0.050 percent when tested by CP-L 4103.

Concrete with any of the above deviations shall be known as Class (_) Non Standard concrete (Class _-NS concrete). For example Class B-NS. Non Standard concrete may be substituted for the equivalent standard concrete. Non Standard concrete shall be tested, accepted, measured and paid for as standard concrete or the pay item specifying standard concrete.

Subsection 601.05 shall include the following in the second paragraph:

(8) Concrete with an OG shall indicate the gradation proportions that results in a combined aggregate gradation corresponding to compliance within the specified CF and WF box and shall include the following charts used to perform aggregate gradation analysis:
- (i) Coarseness Factor
- (ii) Workability Factor
- (iii) 0.45 power
- (iv) Combined gradation

Delete Subsection 601.06 (10) and (11) and replace with the following:

(10) Weights of fine and coarse aggregates or combined weight when an OG is pre-blended
(11) Moisture of fine and coarse aggregates or combined moisture when an OG is pre-blended

Subsection 601.17 shall include the following:

(g) W*ater to cementitious material content (w/cm) ratio.* When a Non Standard concrete is used the maximum w/cm ratio is the w/cm ratio that was used in the in the laboratory trial mix for the Concrete Mix Design. The w/cm ratio shall be determined for each batch of Non Standard concrete by the Contractor and provided to the Engineer for approval prior to placement. If an adjustment to the mix is made after the Engineer's approval, the w/cm shall be determined and submitted to the Engineer prior to the continuation of placement. Any Non Standard concrete that is placed without the Engineer's approval shall be removed and replaced at the Contractor's expense.

REVISION OF SECTION 601
CONCRETE BATCHING

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

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

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

(17) Water to cementitious material ratio.

REVISION OF SECTION 601
CONCRETE FINISHING

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

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

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

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

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

(5) Timing of hand finishing operations
(6) Methodology to place and transport concrete
(7) Equipment and tools to be utilized
(8) Qualifications and training of finishers and supervisors

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

In subsection 601.14(a) delete the fourth paragraph.

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REVISION OF SECTION 601
CONCRETE SLUMP ACCEPTANCE

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

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

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

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

(b) *Slump*. Slump acceptance, but not rejection, may be visually determined by the Engineer. Any batch that exceeds the slump of the approved concrete mix design by 2.0 inches will be retested. If the slump is exceeded a second time, that load is rejected. If the slump is greater than 2 inches lower than the approved concrete mix design, the load can be adjusted with a water reducer, or by adding water (if the w/cm allows) and retested.

Portions of loads incorporated into structures prior to determining test results which indicate rejection as the correct course of action shall be subject to reduced payment or removal as determined by the Engineer.

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

If deviations occur in air content and strength within the same batch, the pay factor for the batch shall be the product of the individual pay factors.

Table 601-3
PAY FACTORS

Percent Total Air		**Strength**		
Deviations From Specified Air (Percent)	**Pay Factor (Percent)**	**Below Specified Strength (psi) [< 4500 psi Concrete]**	**Pay Factor (Percent)**	**Below Specified Strength (psi) [≥ 4500 psi Concrete]**
0.0-0.2	98	1-100	98	1-100
0.3-0.4	96	101-200	96	101-200
0.5-0.6	92	201-300	92	201-300
0.7-0.8	84	301-400	84	301-400
0.9-1.0	75	401-500	75	401-500
Over 1.0	Reject	Over 500	Reject	
			65	501-600
			54	601-700
			42	701-800
			29	801-900
			15	901-1000
			Reject	Over 1000

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REVISION OF SECTION 601
STRUCTURAL CONCRETE STRENGTH ACCEPTANCE

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

In subsection 601.17 (c), delete the first paragraph and replace with the following:

(c) *Strength (When Specified).* The concrete will be considered acceptable when the running average of three consecutive strength tests per mix design for an individual structure is equal to or greater than the specified strength and no single test falls below the specified strength by more than 500 psi. A test is defined as the average strength of three test cylinders cast in plastic molds from a single sample of concrete and cured under standard laboratory conditions prior to testing. If the compressive strength of any one test cylinder differs from the average by more than 10 percent that compressive strength will be deleted and the average strength will be determined using the compressive strength of the remaining two test cylinders.

REVISION OF SECTIONS 601 AND 701
CEMENTS AND POZZOLANS

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

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

High-Reactivity Pozzolans 701.04

Subsection 601.03 shall include the following:

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

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

Cementitious material requirements are as follows:

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

(1) ASTM C 150 Type I, II or V

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

(3) ASTM C 1157 Type GU, MS or HS

(4) ASTM C 150 Type III cement if it is allowed, as in Class E concrete

Class 1 requirements for sulfate resistance shall be one of the following:

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

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

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

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

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

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

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

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

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

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

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

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

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

(7) ASTM C 595 Type IP(HS).

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

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

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

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

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

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

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

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

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

(6) ASTM C 595 Type IL with a minimum of a 20 percent substitution of Class F fly ash by weight, where the blend has less than 0.10 percent expansion at 18 months when tested according to ASTM C 1012.

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

In subsection 601.05 delete the first paragraph and replace with the following:

601.05 Proportioning. The Contractor shall submit a Concrete Mix Design for each class of concrete being placed on the project. Concrete shall not be placed on the project before the Concrete Mix Design Report has been reviewed and approved by the Engineer. The Concrete Mix Design will be reviewed and approved following the procedures of CP 62. The Concrete Mix Design will not be approved when the laboratory trial mix data are the results from tests performed more than two years in the past or aggregate data are the results from tests performed

more than two years in the past. The concrete mix design shall show the weights and sources of all ingredients including cement, pozzolan, aggregates, water, additives and the water to cementitious material ratio (w/cm). When determining the w/cm, the weight of cementitious material (cm) shall be the sum of the weights of the cement, fly ash, silica fume and High-Reactivity Pozzolan.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

REVISION OF SECTIONS 601 AND 701
CEMENTS AND POZZOLANS

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

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

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

In subsection 701.02 add the following after the first paragraph:

Blending of pozzolans according to ASTM D5370 is permitted to meet the requirements of ASTM C 618.

Add subsection 701.04 immediately following subsection 701.03 as follows:

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

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

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

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

REVISION OF SECTION 612
DELINEATORS

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

In subsection 612.02(a) 1, delete the last sentence, and replace with the following:

Posts shall conform to the requirements shown on the plans, and reflectors shall conform to the requirements in subsections 713.07 and 713.10.

In subsection 612.02(a) 2.B, delete the first paragraph, and replace with the following:

B. Base Anchoring. The posts shall be designed to facilitate a permanent installation that resists overturning, twisting, and displacement from wind and impact forces. It shall have an anchoring depth of 18 to 24 inches. Actual depth shall be as recommended by the manufacturer. If soil conditions prohibit anchoring depth to less than 18 inches, installation shall be in accordance with manufacturer's recommendations.

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REVISION OF SECTION 630
RETROFLECTIVE SIGN SHEETING

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

In subsection 630.02, delete the sixth and seventh paragraphs, including Table 630-1, and replace them with the following:

Retroreflective sheeting for all signs requiring an orange background shall be Type VI or Type Fluorescent.

Retroreflective sheeting for all signs requiring a yellow background shall be Type Fluorescent.

Table 630-1
RETROREFLECTIVE SHEETING TYPES

Sheeting	**Type IV**	**Type VI (Roll-up sign material)**	**Type Fluorescent[1]**
Application	Work Zone	Work Zone	Work Zone
All Orange Construction Signs			X
Orange Construction Signs that are used only during daytime hours for short term or mobile operations		X[4]	X
Barricades (Temporary)	X		X
Vertical Panels	X		X
Flaggers Stop/Slow Paddle	X		X
Drums[2]	X		X
Non-orange Fixed Support signs with prefix "W"	X		
Special Warning Signs			X
STOP sign (R1-1) YIELD sign (R1-2) WRONG WAY sign (R5-1a) DO NOT ENTER sign (R5-1) EXIT sign (E5-1a)	X		
DETOUR sign (M4-9) or (M4-10)			X
All other fixed support signs[3]	X		X
All other signs used only during working hours	X		X
All other signs that are used only during daytime hours for short term or mobile operations	X	X[5]	X

1 Fluorescent Sheeting shall be of a brand that is on the CDOT Approved Products List.
2 Drum Sheeting shall be manufactured for flexible devices.
3 Fixed support signs are defined as all signs that must remain in use outside of working hours. They shall be mounted in accordance with Standard Plan S-630-1.
4 RS 24 only.
5 White only.

REVISION OF SECTION 702
BITUMINOUS MATERIALS

Section 702 of the Standard Specifications is hereby deleted for this project and replaced with the following:

702.01 Asphalt Cements.

(a) *Superpave Performance Graded Binders.* Superpave Performance Graded Binders shall conform to the requirements listed in Table 702-1. (Taken from AASHTO M 320)
Asphalt cement shall not be acid modified or alkaline modified.

Asphalt cement shall not contain any used oils that have not been re-refined. Modifiers that do not comply with environmental rules and regulations including 40 CFR Part 261.6(a) (3) (IV), and part 266/Subpart C shall not be added. Modifiers shall not be carcinogenic.

The supplier of the PG binder shall be certified in accordance with CP 11.

Table 702-1
SUPERPAVE PERFORMANCE GRADED BINDERS

Property	Requirement for PG Binder						AASHTO Test No.
	58-28	58-34	64-22	64-28	70-28	76-28	
Flash Point Temp., °C, minimum	230	230	230	230	230	230	T 48
Viscosity at 135 °C, Pa●s, maximum	3	3	3	3	3	3	T 316
Dynamic Shear, Temp. °C, where G*/Sin δ @ 10 rad/s ≥ 1.00 kPa	58	58	64	64	70	76	T 315
Ductility, 4 °C (5 cm/min.), cm minimum	-	-	-	50		-	T 51
Toughness, joules (inch-lbs)	-	-	-	12.4 (110)		-	CP-L 2210
Tenacity, joules (inch-lbs)	-	-	-	8.5 (75)		-	CP-L 2210
Acid or Alkali Modification (pass-fail)	Pass	Pass	Pass	Pass	Pass	Pass	CP-L 2214
RTFO Residue Properties							CP-L 2215
Mass Loss, percent maximum	1.00	1.00	1.00	1.00	1.00	1.00	CP-L 2215
Dynamic Shear, Temp. °C, where G*/Sin δ @ 10 rad/s ≥ 2.20 kPa	58	58	64	64	70	76	T 315
Elastic Recovery, 25 °C, percent min.	-	-	-	-	50	50	T 301
Ductility, 4 °C (5 cm/min.), cm minimum	-	-	-	20	-	-	T 51
PAV Residue Properties, Aging Temperature 100 °C							R 28
Dynamic Shear, Temp. °C, where G*●Sin δ @ 10 rad/s ≤ 5000 kPa	19	16	25	22	25	28	T 315
Creep Stiffness, @ 60 s, Test Temperature in °C	-18	-24	-12	-18	-18	-18	T 315
S, maximum, MPa	300	300	300	300	300	300	T 313
m-value, minimum	0.300	0.300	0.300	0.300	0.300	0.300	T 313

Acceptance Samples of the PG binder will be taken on the project in accordance with the Schedule in the Field Materials Manual.

The Department will test for acid modification and alkaline modification during the binder certification process. Thereafter, the Department will randomly test for acid modification and alkaline modification.

(b) *Damp proofing.* Asphalt for damp proofing shall conform to the requirements of ASTM D 449, and the asphaltic primer shall conform to the requirements of ASTM D 41.

702.02 Emulsified Asphalts. Emulsified asphalts shall conform to AASHTO M 140 or M 208 for the designated types and grades. Emulsified asphalt and aggregate used for surface seals shall be sampled and will be tested for information only in accordance with CP-L 2213.

Emulsified asphalt (HFMS-2S) with a residual penetration greater than 300 dmm shall conform to all properties listed in AASHTO M 140, Table 1 except that ductility shall be reported for information only.

(a) *Emulsion for Tack and Fog Coats.* Emulsions for tack and fog coats shall conform to the requirements listed in Table 702-2 or 702-3, prior to dilution.

Table 702-2
TACK AND FOG COAT EMULSIONS

Property		CSS-1h	**SS-1h**	**AASHTO Test No.**
Viscosity, at 25 ºC, Saybolt-Furol, s	min	20	20	T 59
	max	100	100	
Storage stability, 24 hr, % max[1]		1.0	1.0	T 59
Particle charge test		Positive		T 59
Sieve test, % max		0.10	0.10	T 59
Oil Distillate by volume, % max		3.0	3.0	T-59
Residue by distillation/ evaporation, % min[3]		57[3]	57[3]	T 59/ CP-L 2212[2]
Tests on residue:				
Penetration, 25 ºC, 100g, 5s, min, dmm		40	40	T 49
Penetration, 25 ºC, 100g, 5s, max, dmm		120	120	
Ductility, 25 ºC, 5 cm/min, cm, min		40	40	T 51
Solubility, in trichloroethylene% min		97.5	97.5	T 44

[1]If successful application is achieved in the field, the Engineer may wave this requirement.

[2] CP-L 2212 is a rapid evaporation test for determining percent residue of an emulsion and providing material for tests on residue. CP-L 2212 is for acceptance only. If the percent residue or any test on the residue fails to meet specifications, the tests will be repeated using the distillation test in conformance with AASHTO T-59 to determine acceptability.

[3] For polymerized emulsions the distillation and evaporation tests will in be in conformance with AASHTO T-59 or CP-L 2212 respectively with modifications to include 205 ± 5 ºC (400 ± 10 ºF) maximum temperature to be held for 15 minutes.

(b) *Emulsion for Chip Seals* Polymerized emulsions for chip seals shall conform to the requirements listed in Table 702-3. Emulsion for chip seals shall be an emulsified blend of polymerized asphalt, water, and emulsifiers. The asphalt cement shall be polymerized prior to emulsification and shall contain at least 3 percent polymer by weight of asphalt cement. The emulsion standing undisturbed for a minimum of 24 hours shall show no white, milky separation but shall be smooth and homogeneous throughout. The emulsion shall be pumpable and suitable for application through a distributor.

Table 702-3
POLYMERIZED EMULSIONS FOR CHIP SEALS

Property		CRS-2	CRS-2P	CRS-2R	HFMS-2P	AASHTO Test No.
Tests on Emulsion:						
Viscosity, at 50 ºC, Saybolt-Furol, s	min	50	50	50	50	T 59
	max	450	450	450	450	
Storage stability, 24 hr, % max		1.0	1.0	1.0	1.0	T 59
Particle charge test		Positive	Positive	Positive		T 59
Sieve test, % max		0.10	0.10	0.10	0.10	T 59
Demulsibility[1], % min		40	40	40		T 59
Oil Distillate by volume, % max or range		3.0	3.0	3.0	3.0	T-59
Residue by distillation/ evaporation, % min[3]		65[3]	65[3]	65[3]	65[3]	T 59/ CP-L 2212[2]
Tests on residue:						
Penetration, 25 ºC, 100g, 5s, min, dmm		70	70	70	70	T 49
Penetration, 25 ºC, 100g, 5s, max, dmm		150	150	150	150	
Ductility, 25 ºC, 5 cm/min, cm, min		40			75	T 51
Ductility, 4 ºC, 5 cm/min, cm, min				40		
Solubility, in trichloroethylene% min[4]		97.5[4]	97.5[4]	97.5[4]	97.5[4]	T 44
Elastic Recovery, 25 ºC min					58	T 301
Float Test, 60 ºC, s min					1200	T 50
Toughness, in-lbs, min			70	90		CP-L 2210
Tenacity, in-lbs, min			45	45		CP-L 2210

[1]If successful application is achieved in the field, the Engineer may waive this requirement.

[2] CP-L 2212 is a rapid evaporation test for determining percent residue of an emulsion and providing material for tests on residue. CP-L 2212 is for acceptance only. If the percent residue or any test on the residue fails to meet specifications, the tests will be repeated using the distillation test in conformance with AASHTO T-59 to determine acceptability.

[3] For polymerized emulsions the distillation and evaporation tests will in be in conformance with AASHTO T-59 or CP-L 2212 respectively with modifications to include 205 ± 5 ºC (400 ± 10 ºF) maximum temperature to be held for 15 minutes.

[4] Solubility may be determined on the base asphalt cement prior to polymer modification.

(c) *Emulsion for Slurry Seals and Micro-Surfacing.* Emulsions for slurry seals and micro-surfacing shall conform to the requirements listed in Table 702-4. The modified emulsion shall contain a minimum of 3 percent polymer, SBR latex, or natural latex by weight.

Table 702-4
SLURRY SEAL AND MICRO-SURFACING EMULSIONS

Property		CQS-1hL	CQS-1hP	AASHTO Test No.
Viscosity, at 25 ºC, Saybolt-Furol, s	min	15	15	T 59
	max	100	100	
Storage stability, 24 hr, % max[1]		1.0	1.0	T 59
Particle charge test		Positive	Positive	T 59
Sieve test, % max		0.10	0.10	T 59
Oil Distillate by volume, % max		0.5	0.5	T-59
Residue by distillation/ evaporation, % min[3]		62[3]	62[3]	T 59/ CP-L 2212[2]
Penetration, 25 ºC, 100g, 5s, min, dmm		40	40	T 49
Penetration, 25 ºC, 100g, 5s, max, dmm		150	150	
Ductility, 25 ºC, 5 cm/min, cm, min		50	50	T 51
Solubility, in trichloroethylene% min		97.5	97.5	T 44

[1]If successful application is achieved in the field, the Engineer may wave this requirement.

[2] CP-L 2212 is a rapid evaporation test for determining percent residue of an emulsion and providing material for tests on residue. CP-L 2212 is for acceptance only. If the percent residue or any test on the residue fails to meet specifications, the tests will be repeated using the distillation test in conformance with AASHTO T-59 to determine acceptability.

[3] For polymerized emulsions the distillation and evaporation tests will in be in conformance with AASHTO T-59 or CP-L 2212 respectively with modifications to include 205 ± 5 ºC (400 ± 10 ºF) maximum temperature to be held for 15 minutes.

(d) *Emulsion for Prime Coat.* Emulsion for prime coat shall conform to the requirements of Table 702-5. Circulate before use if not used within 24 hours.

Table 702-5
ASPHALT EMULSION FOR PRIME COAT (AEP)

Property	Requirement	AASHTO Test No.
Viscosity, Saybolt Furol, at 50 °C (122 °F), s	20-150	T 59
% Residue	65% min.	T 59 to 260 °C (500 °F)
Oil Distillate by Volume, %	7% max.	T59
Tests on Residue from Distillation:		
Solubility in Trichloroethylene, %	97.5 min.	T 44

(e) *Recycling Agent.* Recycling Agent for Item 406, Cold Bituminous Pavement (Recycle), shall be either a high float emulsified asphalt (polymerized) or an emulsified recycling agent as follows:

1. High Float Emulsified Asphalt (Polymerized). High Float Emulsified Asphalt (Polymerized) for Cold Bituminous Pavement (Recycle) shall be an emulsified blend of polymer modified asphalt, water, and emulsifiers conforming to Table 702-6 for HFMS-2sP. The asphalt cement shall be polymerized prior to emulsification, and shall contain at least 3 percent polymer.

   The emulsion standing undisturbed for a minimum of 24 hours shall show no white, milky separation, and shall be smooth and homogeneous throughout.

   The emulsion shall be pumpable and suitable for application through a pressure distributor.

Table 702-6
HIGH FLOAT EMULSIFIED ASPHALT
(POLYMERIZED) (HFMS-2sP)

Property	Requirement		AASHTO Test
	Minimum	Maximum	
Tests on Emulsion:			
Viscosity, Saybolt Furol at 50 °C (122 °F), sec	50	450	T 59
Storage Stability test, 24 hours, %		1	T 59
Sieve test, %		0.10	T 59
% Residue[1]	65		T 59
Oil distillate by volume, %	1	7	T 59
Tests on Residue:			
Penetration, 25 °C (77 °F), 100g, 5 sec	150	300[2]	T 49
Float Test, 60 °C (140 °F), sec	1200		T 50
Solubility in TCE, %	97.5		T 44
Elastic Recovery, 4 °C (39.2 °F), %	50		T 301

[1]400 ± 10° F maximum temperature to be held for 15 minutes.
[2]When approved by the Engineer, Emulsified Asphalt (HFMS-2sP) with a residual penetration greater than 300 dmm may be used with Cold Bituminous Pavement (Recycle) to address problems with cool weather or extremely aged existing pavement. Emulsified Asphalt (HFMS-2sP) with a residual penetration greater than 300 dmm shall meet all properties listed in Table 702-4 except that Elastic Recovery shall be reported for information only.

2. *Emulsified Recycling Agent.* Emulsified Recycling Agent for use in Cold Bituminous Pavement (Recycle) shall conform to the requirements in Table 702-7.

Table 702-7
EMULSIFIED RECYCLING AGENT

Property	Requirement		Test
	Minimum	Maximum	
Tests on Emulsion:			
Viscosity @ 25 °C, SFS	20	200	ASTM D 244
Pumping Stability	Pass		GB Method[1]
Sieve Test, %w		0.1	ASTM D 244[2]
Cement Mixing, %w		2.0	ASTM D 244
Particle Charge	Positive		ASTM D 244
Conc. Of Oil Phase	64		ASTM D 244[3]
Tests on Residue:			
Viscosity @ 60 °C , CST	2000	4000	ASTM D 2170
Flash Point, COC, °C (° F)	232		ASTM D 92
Maltenes Dist. Ratio[4] $\frac{PC+A_1}{S+A_2}$	0.3	0.6	ASTM D 2006
PC/S Ratio	0.4		ASTM D 2006
Asphaltenes, % max.		11.0	ASTM D 2006

[1]Pumping stability is determined by charging 450 ml of emulsion into a one liter beaker and circulating the emulsion through a gear pump (Roper 29.B22621) having a 6.3 mm (1/4 inch) inlet and outlet. The emulsion passes if there is no significant separation after circulating ten minutes.
[2]Test procedure identical with ASTM D 244 except that distilled water shall be used in place of 2 percent sodium oleate solution.
[3]ASTM D 244 Evaporation Test for percent of residue is modified by heating 50 gram sample to 149°C (300 °F) until foaming ceases, then cooling immediately and calculating results.
[4]In the Maltenes Distribution Ratio Test by ASTM Method D 2006.

PC = Polar Compounds S = Saturates
A_1 = First Acidaffin A_2 = Second Acidaffins

(f) Asphalt Rejuvenating Agents. Asphalt rejuvenating agents (ARA) shall be composed of a petroleum resin-oil base uniformly emulsified with water and shall conform to the physical and chemical requirements of Table 702-8 or ASTM D 4552.

Table 702-8
ASPHALT REJUVENATING AGENT

Property	Test Method	Requirement
Viscosity, S.F., @ 25 °C (77 °F), s	ASTM D 244	20-40
[1]Residue, % min.	ASTM D 244	60-65
[2]Miscibility Test	ASTM D 244	No coagulation
[3]Sieve Test, % max.	ASTM D 244	0.10
Particle Charge Test	ASTM D 244	Positive
ASTM D244 (Mod):		
Viscosity, 60 °C (140 °F), mm^2/s	ASTM D 445	100 - 200
Flash Point, COC, °C, min.	ASTM D 92	196
Asphaltenes, % max.	ASTM D2006	1.0
[4]Maltenes Dist. Ratio $\frac{PC+A_1}{S+A_2}$	ASTM D 2006	0.3-0.6
Saturated Hydrocarbons, %	ASTM D 2006	21-28

[1] ASTM D244 Modified Evaporation Test for percent of residue is made by heating 50-gram sample to 149 °C (300 °F) until foaming ceases, then cooling immediately and calculating results.
[2] Test procedure identical with ASTM D244 except that 0.02 Normal Calcium Chloride solution shall be used in place of distilled water.
[3] Test procedure identical with ASTM D244 except that distilled water shall be used in place of 2% sodium oleate solution.
[4] In the Maltenes Distribution Ratio Test by ASTM Method D4124:

PC = Polar Compounds S = Saturates
A_1 = First Acidaffin A_2 = Second Acidaffins

For hot-in-place recycling ARA-1P is an acceptable alternative to ARA. ARA-1P shall meet the requirements below:

Emulsified Polymer Modified Asphalt Rejuvenating Agent (ARA-1P) for use in hot-in-place recycling of bituminous pavements shall be modified with a minimum of 1.5 percent styrene-butadiene solution polymer. The finished product shall conform to the physical requirements listed in Table 702-9 below.

Table 702-9
ARA-1P

Property	Test Method	Min	Max
Test on Emulsion			
Viscosity, Saybolt-Furol @ 77 ºF, s	ASTM D 244		100
Residue @ 350 ºF, %	ASTM D 244 Mod	60	
Sieve Test, %	ASTM D 244		0.10
Oil distillate, %	ASTM D 244		2.0
Test on Residue			
Penetration @ 39.2 ºF, 100g, 5s, dmm	ASTM D-5 Modified	150	250
Asphaltenes, %	ASTM D 4124		15

702.03 (unused)

702.04 Hot Poured Joint and Crack Sealant. Hot poured material for filling joints and cracks shall conform to the requirements of ASTM D 6690, Type II or Type IV. The concrete blocks used in the Bond Test shall be prepared in accordance with CP-L 4101.

Sealant material shall be supplied pre-blended, pre-reacted, and prepackaged. If supplied in solid form the sealant material shall be cast in a plastic or other dissolvable liner having the capability of becoming part of the crack sealing liquid. The sealant shall be delivered in the manufacturer's original sealed container.

Each container shall be legibly marked with the manufacturer's name, the trade name of the sealer, the manufacturer's batch or lot number, the application temperature range, the recommended application temperature, and the safe heating temperature.

The sealant shall be listed in CDOT's Approved Products List prior to use.

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REVISION OF SECTION 703
AGGREGATE FOR BASES

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

In subsection 703.03, first paragraph, delete the first sentence and replace with the following:

Aggregates for bases other than Aggregate Base Coarse (RAP) shall be crushed stone, crushed slag, crushed gravel, natural gravel, crushed reclaimed concrete or crushed reclaimed asphalt pavement (RAP). All materials except Aggregate Base Course (RAP) shall conform to the quality requirements of AASHTO M 147 except that the requirements for the ratio of minus 75 µm (No. 200) sieve fraction to the minus 425 µm (No. 40) sieve fraction, stated in 3.2.2 of AASHTO M 147, shall not apply.

The requirements for the Los Angeles wear test (AASHTO T 96 & ASTM C535) shall not apply to Class 1, 2, and 3. Aggregates for bases shall meet the grading requirements of Table 703-3 for the class specified for the project, unless otherwise specified.

REVISION OF SECTION 703
AGGREGATE FOR HOT MIX ASPHALT

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

Delete subsection 703.04 and replace with the following:

703.04 Aggregates for Hot Mix Asphalt. Aggregates for hot mix asphalt (HMA) shall be of uniform quality, composed of clean, hard, durable particles of crushed stone, crushed gravel, natural gravel, or crushed slag. Excess of fine material shall be wasted before crushing. A percentage of the aggregate retained on the 4.75 mm (No. 4) sieve for Gradings S, SX and SG— and on the 2.36 mm (No. 8) sieve for Gradings SF and ST—shall have at least two mechanically induced fractured faces when tested in accordance with Colorado Procedure 45. This percentage will be specified in Table 403-1, as revised for the project in Section 403. The angularity of the fine aggregate shall be a minimum of 45.0 percent when determined according to AASHTO T 304. Grading SF mixes, when determined by RME, may not require fine aggregate angularity of 45.0 percent. Aggregate samples representing each aggregate stockpile shall be non-plastic if the percent of aggregate passing the 2.36 mm (No. 8) sieve is greater than or equal to 10 percent by weight of the individual aggregate sample. Plasticity will be determined in accordance with AASHTO T 90. The material shall not contain clay balls, vegetable matter, or other deleterious substances.

The aggregate for Gradings ST, S, SX and SG shall have a percentage of wear of 45 or less when tested in accordance with AASHTO T 96.

Table 703-4
MASTER RANGE TABLE FOR HOT MIX ASPHALT

Sieve Size	Percent by Weight Passing Square Mesh Sieves				
	Grading SF**	Grading ST	Grading SX	Grading S	Grading SG
37.5 mm (1½″)					100
25.0 mm (1″)				100	90 – 100
19.0 mm (¾″)			100	90 – 100	
12.5 mm (½″)		100	90 – 100	*	*
9.5 mm (⅜″)	100	90 – 100	*	*	*
4.75 mm (#4)	90 – 100	*	*	*	*
2.36 mm (#8)	*	28 – 58	28 – 58	23 – 49	19 – 45
1.18 mm (#16)	30 – 54				
600 µm (#30)	*	*	*	*	*
300 µm (#50)					
150 µm (#100)					
75 µm (#200)	2 – 12	2 – 10	2 – 10	2 – 8	1 – 7

* These additional Form 43 Specification Screens will initially be established using values from the As Used Gradation shown on the Design Mix.
**SF applications are limited and the CDOT Pavement Design Manual should be referenced, prior to use.

Aggregates for stone matrix asphalt (SMA) shall be of uniform quality, composed of clean, hard, durable particles of crushed stone, crushed gravel, or crushed slag. A minimum of 90 percent of the particles retained on the 4.75 mm (No. 4) sieve shall have at least two mechanically induced fractured faces when tested in accordance with Colorado Procedure 45. The particles passing the 4.75 mm (No. 4) sieve shall be the product of crushing rock larger than 12.5 mm (½ inch) and shall be non-plastic when tested in accordance with AASHTO T 90.

Additionally, each source of aggregate for SMA shall meet the following requirements:

(1) No more than 30 percent when tested in accordance with AASHTO T 96 Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.

(2) No more than 12 percent when tested in accordance with AASHTO T 104 Soundness of Aggregate by Use of Sodium Sulfate.

The aggregate for Hot Mix Asphalt (HMA) shall meet the requirements of Table 703-4A when tested in accordance with CP-L 4211 Resistance of Coarse Aggregate to Degradation by Abrasion in the Micro-Deval Apparatus. The Contractor shall be assessed a price reduction of $1000 for each production sample of the combined aggregate with a value greater than 20 according to CP-L 4211.

Table 703-4A
AGGREGATE DEGRADATION BY ABRASION
IN THE MICRO-DEVAL CP-L 4211

	Not to exceed
Combined Aggregate (Mix Design)	18
Combined Aggregate (1/10,000 tons, or fraction thereof during production)	20

REVISION OF SECTION 703
CONCRETE AGGREGATES

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

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

Delete subsections 703.01 and 703.02 and replace with the following:

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

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

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REVISION OF SECTION 709
EPOXY COATED REINFORCING BARS

Section 709 of the Standard Specifications is hereby revised for this project as follows:

In subsection 709.01, delete the last row of the table and replace with the following

Epoxy Coated Reinforcing Bars	AASHTO A 775

Delete the first sentence of subsection 709.03 and replace with the following:

Tie bars for longitudinal and transverse joints shall conform to AASHTO A 775 and shall be grade 40, epoxy-coated, and deformed.

REVISION OF SECTION 712
WATER FOR MIXING OR CURING CONCRETE

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

Delete subsection 712.01 and replace it with the following:

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

REVISION OF SECTION 713
EPOXY PAVEMENT MARKING

Section 713 of the Standard Specifications is hereby revised for this project as follows:

Delete subsection 713.17 and replace with the following:

713.17 Epoxy Pavement Marking Material. Only epoxy pavement marking material that is on the Department's Approved Products List may be used. Batches or lots of approved products will be accepted on the project by certified test report (CTR). The CTR shall confirm that the material meets all CDOT requirements and is the same material that was preapproved in the product evaluation process.

(a) *Formulation.* Epoxy pavement marking material shall be a two component, 100 percent solids, material formulated to provide simple volumetric mixing ratio of two volumes of component A and one volume of component B unless otherwise recommended by the material manufacturer.

(b) *Composition.* The component A of both white and yellow shall be within the following limits:

Resin / Pigment Components (% by Weight)

Pigment	WHITE:	YELLOW:
TiO_2, ASTM D476, Type II	18-25	10-17
Organic Yellow		6-10
Epoxy Resin	75-82	73-84

The pigment for yellow epoxy shall contain no lead or other material such that the cured epoxy could be considered a hazardous waste under EPA or CDPHE regulations. The Contractor shall submit to the Engineer a manufacturer's certification of compliance with this requirement.

(c) *Epoxide Number.* The epoxy number of the epoxy resin shall be the manufacturers target value ± 50 as determined by ASTM D 1652 for white and yellow component A on pigment free basis.

(d) *Amine Number.* The amine number on the curing agent (component B) shall be the manufacturers target value ± 50 per ASTM D 2071.

(e) *Toxicity.* Upon heating to application temperature, the material shall not produce fumes which are toxic or injurious to persons or property.

(f) *Color.* The epoxy material, without drop-on beads, shall correspond following requirements:

White – Federal Standard No. 595B-17925. The Yellowness Index (YI) of white shall not exceed 8.0 per ASTM E-313-10 initially.

After 72 QUV exposure per ASTM G-154 with a UVA-340 Lamp at an irradiance of 0.89 W/m2/nm with alternating cycles of 4 hours U.V @ 140º F, and 4 hours humidity @ 122º F the YI shall not exceed 20 when measured per ASTM E-313.

The YI, after 500-hour QUV testing as above, shall not exceed 35.

Yellow – Materials for pavement markings shall meet the initial daytime chromaticity that fall within the box created by the following corner points:

Initial Daytime Chromaticity Coordinates (Corner Points)

	1	2	3	4
x	0.530	0.510	0.455	0.472
y	0.456	0.485	0.444	0.400

After 72-hour QUV exposure per ASTM G-154 with a UVA-340 Lamp at an irradiance of 0.89 W/m2/nm with alternating cycles of 4 hours U.V @ 140º F, and 4 hours humidity @ 122º F the Yellow shall fall within the initial chromaticity coordinates stated above.

(g) *Drying Time.* The epoxy pavement marking material shall have a setting time to a no-tracking condition of not more than 25 minutes at a temperature of 73° F and above.

(h) *Curing.* The epoxy material shall be capable of fully curing under the constant surface temperature condition of 35° F and above.

(i) *Adhesion to Concrete.* The catalyzed epoxy pavement marking material, when tested according to ACI Method 503, shall *have* such a high degree of adhesion to the specified (4000 psi minimum) concrete surface that there shall be a 100 percent concrete failure in the performance of this test

(j) *Hardness.* The epoxy pavement marking materials, when tested according to ASTM D 2240, shall have a minimum Shore D Hardness value of 80. Samples shall be allowed to cure at room temperature, 75 ± 2 °F for a minimum of 72 hours and a maximum of 168 hours prior to performing the indicated test.

(k) *Abrasion Resistance.* The abrasion resistance shall be evaluated on Taber Abrader with a 1000 gram load and CS-17 wheels. The duration of the test shall be 1000 cycles. The wear index shall be calculated based on ASTM test method C-501 and the wear index for the catalyzed material shall not be more than 80. The tests shall be run on cured samples of material which have been applied at film thickness of 15 ± ½ mils to code S-16 stainless steel plates. The samples shall be allowed to cure at 75 ± 2 °F for a minimum of 72 hours prior to performing the indicated tests.

(l) *Tensile Strength.* When tested according to ASTM D 638, the epoxy pavement marking materials shall have a tensile strength of not less than 6000 psi. The Type IV Specimens shall be cast in a suitable mold and pulled at the rate of ¼ inch per minute by a suitable dynamic testing machine. The samples shall be allowed to cure at room temperature (75 ± 2 °F) for a minimum of 72 hours and a maximum of 168 hours prior to performing the indicated tests.

(m) *Compressive Strength.* When tested according to ASTM D 695, the catalyzed epoxy pavement marking materials shall have a compressive strength of not less than 12,000 psi. The cast sample shall be conditioned at room temperature, 75 ± 2 °F, for a minimum of 72 hours and a maximum of 168 hours prior to performing the tests. The rate of compression of these samples shall be no more than ¼ inch per minute.

1

REVISION OF SECTION 713
REFLECTORS FOR DELINEATORS AND MEDIAN BARRIER

Section 713 of the Standard Specifications is hereby revised for this project as follows:

In subsection 713.10(a) 1., delete A. and replace with the following

A. Delineator and Median Barrier Reflectors. The specific intensity of each delineator and median barrier reflector shall be at least equal to the following minimum values when tested in accordance with AASHTO T 257, with an observation angle of 0.1 degrees.

Entrance Angle Degrees	**Specific Intensity Candlepower per Foot-Candle**				
	Crystal	**Yellow**	**Blue**	**Red**	**Green**
0	115	70	48	25	62
20	45	25	26	10	34

1

REVISION OF SECTION 713
SIGN PANEL BACKGROUNDS

Section 713 of the Standard Specifications is hereby revised for this project as follows:

In subsection 713.04, delete the third paragraph and replace with the following:

The aluminum sign blanks shall receive a chemical treatment conforming to ASTM B 449, Class 2 or ASTM B921 prior to placement of reflective sheeting.

A. AFFIRMATIVE ACTION REQUIREMENTS

Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)

1. The Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area are as follows:

Goals and Timetable for Minority Utilization

Timetable - Until Further Notice			
Economic Area	**Standard Metropolitan Statistical Area (SMSA)**	**Counties Involved**	**Goal**
157 (Denver)	2080 Denver-Boulder	Adams, Arapahoe, Boulder, Denver, Douglas, Gilpin, Jefferson.....	13.8%
	2670 Fort Collins	Larimer.....	6.9%
	3060 Greeley	Weld.....	13.1%
	Non SMSA Counties	Cheyenne, Clear Creek, Elbert, Grand, Kit Carson, Logan, Morgan, Park, Phillips, Sedgwick, Summit, Washington & Yuma.....	12.8%
158 (Colo. Spgs. - Pueblo)	1720 Colorado Springs	El Paso, Teller.....	10.9%
	6560 Pueblo	Pueblo.....	27.5%
	Non SMSA Counties	Alamosa, Baca, Bent, Chaffee, Conejos, Costilla, Crowley, Custer, Fremont, Huerfano, Kiowa, Lake, Las Animas, Lincoln, Mineral, Otero, Prowers, Rio Grande, Saguache.....	19.0%
159 (Grand Junction)	Non SMSA	Archuleta, Delta, Dolores, Eagle, Garfield, Gunnison, Hinsdale, La Plata, Mesa, Moffat, Montezuma, Montrose, Ouray, Pitkin, Rio Blanco, Routt, San Juan, San Miguel	10.2%
156 (Cheyenne - Casper WY)	Non SMSA	Jackson County, Colorado.....	7.5%
GOALS AND TIMETABLES FOR FEMALE UTILIZATION			
Until Further Notice.....6.9% -- Statewide			

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts meet the goals established for the geographical area where the contract resulting form this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Par 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.

4. As used in this specification, and in the contract resulting from this solicitation, the "covered area" is the county or counties shown on the Invitation for Bids and on the plans. In cases where the work is in two or more counties covered by differing percentage goals, the highest percentage will govern.

B. STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS

Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246)

1. As used in these Specifications:

   a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;

   b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

   c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

   d. "Minority" includes;

      (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
      (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
      (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
      (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractor toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any office of Federal Contract Compliance Programs Office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following;

   a. Ensure and maintain a working environment free of harassment, intimidation , and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

   b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its union have employment opportunities available, and maintain a record of the organization's responses.

   c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source of community organization and of what action was taken with respect to each individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

   d. Provide immediate written notification to the Director when the union with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when he Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

   e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

   f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc., by specific review of the policy with all management personnel and with all minority and female employees at least once a year, and by posting the Contractor's EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the Contractor's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foreman, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc. such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and Contractor's activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligation.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goal and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even thought the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13 The Contractor in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form, however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

C. SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES.

1. *General.*

   a. Equal employment opportunity requirements not to discriminate and to take affirmative action to assure equal employment opportunity as required by Executive Order 11246 and Executive Order 11375 are set forth in Required Contract. Provisions (Form FHWA 1273 or 1316, as appropriate) and these Special Provisions which are imposed pursuant to Section 140 of Title 23, U.S.C., as established by Section 22 of the Federal-Aid highway Act of 1968. The requirements set forth in these Special Provisions shall constitute the specific affirmative action requirements for project activities under this contract and supplement the equal employment opportunity requirements set forth in the Required Contract provisions.

   b. The Contractor will work with the State highway agencies and the Federal Government in carrying out equal employment opportunity obligations and in their review of his/her activities under the contract.

   c. The Contractor and all his/her subcontractors holding subcontracts not including material suppliers, of $10,000 or more, will comply with the following minimum specific requirement activities of equal employment opportunity: (The equal employment opportunity requirements of Executive Order 11246, as set forth in Volume 6, Chapter 4, Section 1, Subsection 1 of the Federal-Aid Highway Program Manual, are applicable to material suppliers as well as contractors and subcontractors.) The Contractor will include these requirements in every subcontract of $10,000 or more with such modification of language as is necessary to make them binding on the subcontractor.

2. *Equal Employment Opportunity Policy*. The Contractor will accept as his operating policy the following statement which is designed to further the provision of equal employment opportunity to all persons without regard to their race, color, religion, sex, or national origin, and to promote the full realization of equal employment opportunity through a positive continuing program;

   It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, or national origin. Such action shall include; 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, preapprenticeship, and/or on-the-job training.

3. *Equal Employment Opportunity Officer*. The Contractor will designate and make known to the State highway agency contracting officers and equal employment opportunity officer (herein after referred to as the EEO Officer) who will have the responsibility for an must be capable of effectively administering and promoting an active contractor program of equal employment opportunity and who must be assigned adequate authority and responsibility to do so.

4. *Dissemination of Policy*.

   a. All members of the Contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the Contractor's equal employment opportunity policy and contractual responsibilities to provide equal employment opportunity in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum;

      (1) Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the Contractor's equal employment opportunity policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

(2) All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer or other knowledgeable company official, covering all major aspects of the Contractor's equal employment opportunity obligations within thirty days following their reporting for duty with the Contractor.

(3) All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer or appropriate company official in the Contractor's procedures for locating and hiring minority group employees.

b. In order to make the Contractor's equal employment opportunity policy known to all employees, prospective employees and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the Contractor will take the following actions:

(1) Notices and posters setting forth the Contractor's equal employment opportunity policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

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(2) The Contractor's equal employment opportunity policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

5. *Recruitment*.

a. When advertising for employees, the Contractor will include in all advertisements for employees the notation; "An Equal Opportunity Employer." All such advertisements will be published in newspapers or other publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

b. The Contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants, including, but not limited to, State employment agencies, schools, colleges and minority group organizations. To meet this requirement, the Contractor will, through his EEO Officer, identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the Contractor for employment consideration.

In the event the Contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the Contractor's compliance with equal employment opportunity contract provisions. (The U.S. Department of Labor has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the Contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The Contractor will encourage his present employees to refer minority group applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures with regard to referring minority group applicants will be discussed with employees.

`6. *Personnel Actions*. Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, or national origin. The following procedures shall be followed;

a. The Contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The Contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The Contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the Contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The Contract will promptly investigate all complaints of alleged discrimination made to the Contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the Contractor will inform every complainant of all of his avenues of appeal.

7. *Training and Promotion*.

a. The Contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the Contractor's work force requirements and as permissible under Federal and State regulations, the Contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

c. The Contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The Contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

8. *Unions*. If the Contractor relies in whole or in part upon unions as a source of employees, the Contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women with the unions, and to effect referrals by such unions of minority and female employees. Actions by the Contractor either directly or thorough a contractor's association acting as agent will include the procedures set forth below:

a. The Contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The Contractor will use best efforts to incorporate an equal employment opportunity clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, or national origin.

c. The Contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the Contractor, the Contractor shall so certify to the State highway department and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the Contractor with a reasonable flow of minority and women referrals within he time limit set forth in the collective bargaining agreement, the Contractor will, through

independent recruitment efforts, fill the employment vacancies without regard to race, color, religion , sex or national origin; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The U.S. Department of Labor has held that it shall be no excuse that the union with which the Contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the Contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such Contractor shall immediately notify the State highway agency.

9. *Subcontracting*.

a. The Contractor will use his best efforts to solicit bids from and to utilize minority group subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of minority-owned construction firms from State highway agency personnel.

b. The Contractor will use his best efforts to ensure subcontractor compliance with their equal employment opportunity obligations.

10. *Records and Reports.*

a. The Contractor will keep such records as are necessary to determine compliance with the Contractor's equal employment opportunity obligations. The records kept by the Contractor will be designed to indicate:

(1) The number of minority and nonminority group members and women employed in each work classification on the project.

(2) The Progress and efforts being made in cooperation with unions to increase employment opportunities for minorities and women (applicable only to contractors who rely in whole or in part on unions as a source of their work force).

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees, and

(4) The progress and efforts being made in securing the services of minority group subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. All such records must be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the State highway agency and the Federal Highway Administration.

c. The Contractors will submit an annual report to the State highway agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form PR 1391.

CITY COUNCIL COMMUNICATION

DATE: September 6, 2016

AGENDA ITEM: **8.C**

SUBJECT: 49th Street Resurfacing Project

PRESENTED BY: Gary Wilson, Project Manager

PROJECT DESCRIPTION:

This report presents the results of bidding for the 49th Street resurfacing project. This project includes resurfacing 49th Street from the flood damaged area at the curve of 49th Street, west to 35th Avenue. Based on the bid results, and information regarding the force main project, staff recommends that Council not take any action at this time. Staff recommends re-bidding the project early in 2017 for construction during the spring of 2017.

This project was advertised on August 10, 2016. Four bids were received. The lowest bid was $893,668.25, which is $293,668 over the project budget of $600,000. A tabulation of bids is provided in the following table.

49th Street Resurfacing Bid Results		
Company	**Bid Price**	**Submittal Package***
Zito Excavators, L.L.C.	$893,668.25	Complete
The Perfect Patch Asphalt Co., Inc.	$921,221.30	Complete
Asphalt Specialties Company, Inc.	$950,059.00	Complete
Don Kehn Construction, Inc.	$1,007,064.50	Complete

EIAF Grant

The City was awarded an Energy and Mineral Impact Assistance Fund grant earlier this year to partially fund this project and the flood repair located east of the resurfacing project. The EIAF grant included $500,000 for resurfacing 49th Street. This funding was matched by $100,000 from the City, authorized by Council when the EIAF grant application was submitted in late 2015. EIAF funds must be spent by May 31, 2017. This program is currently on hold due to litigation and the option of requesting more funding this year is not possible.

Coordination with Force Main

As Council is aware, the City is undertaking a major force main project. The force main will cross 49th Street at the Evans Ditch, located where a section of 49th Street is proposed to be resurfaced. Staff had worked to accelerate construction of the section of the force main crossing of 49th Street prior to the resurfacing work to avoid re-repairing the resurfacing work when the force main is constructed. However, construction of the force main cannot be started before December 2016.

Scope of Work
The scope of work includes resurfacing 7,700 lineal feet of 49th Street from the ending point of the flood damage repair at the curve of 49th Street, west to approximately 140 feet from the intersection of 49th Street with 35th Avenue. A vicinity sketch is attached. The work proposed reclamation of the old asphalt for reuse to strengthen the road base and placement of new asphalt over the base. This approach was recommended because 49th Street is being designated as a truck route.

FINANCIAL SUMMARY: Given the bid results, the City would be required to make a financial contribution of $393,668 to undertake the project at this time. Staff believes that bidding of the project late in the 2016 construction season may have been a cause of the very high bid results. A number of the line item amounts, such mobilization and traffic control in the bid details were also very high for a project of this scope. Staff will look at the project specifications to see if costs savings are possible. Staff recommends be re-bidding in early 2017 for construction in prior to DOLA's May 31, 2017 deadline.

STAFF RECOMMENDATION:

Staff recommends City Council postpone action and that the project be advertised for re-bidding in early 2017. Motions are presented below for taking action on the project, however, the option of not taking any action is also available to Council.

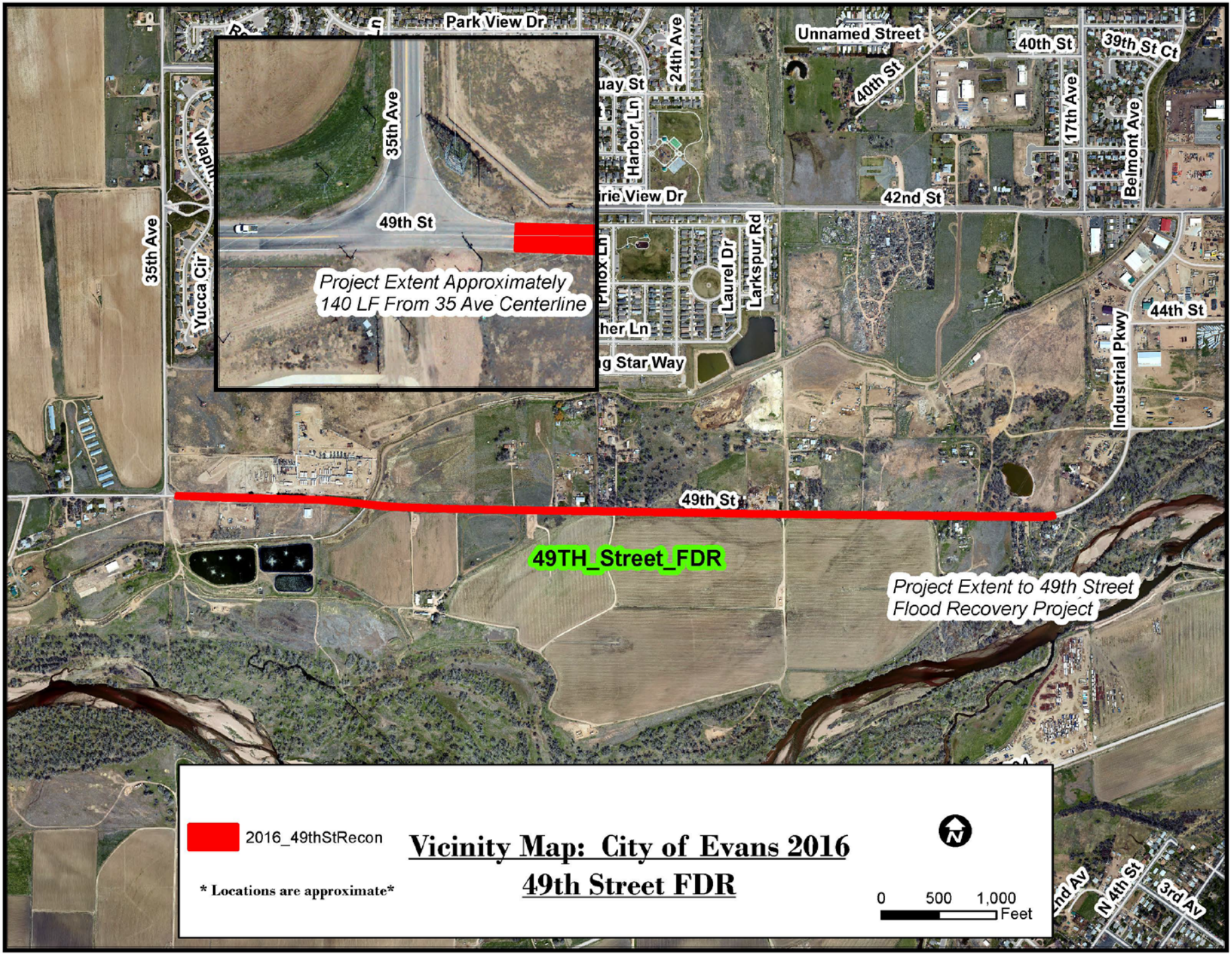
SUGGESTED MOTIONS:

"I move to approve the contract for the 49th Street Resurfacing project."

"I move to deny the approval the contract for the 49th Street Resurfacing project"

ATTACHMENTS:

Diagram of Project Area



Vicinity Map: City of Evans 2016
49th Street FDR

COUNCIL COMMUNICATION

DATE: September 6, 2016

AGENDA ITEM: **8.D**

SUBJECT: Award of Contract – City Manager Executive Search Firm

PRESENTED BY: Jessica Gonifas, CPA, Deputy City Manager

AGENDA ITEM DESCRIPTION:

With the recent announcement of retirement from City Manager, Aden Hogan, the City Council initiated the search process for a replacement City Manager. The Mayor appointed a selection committee comprised of:

- Brian Rudy, Mayor Pro-Tem;
- Sherri Finn, Council Member;
- Jessica Gonifas, Deputy City Manager;
- Julie Roeder, Director of Human Resources & Risk Management; and
- Rick Brant, Police Chief.

The first task for the selection committee was to issue a request for proposals ("RFP) for the selection of an executive search firm.

The RFP was released on August 12th and was sent directly to 55 firms and posted on the Rocky Mountain Bid Network website and the City website. Eleven proposals were received. The selection committee evaluated each proposal based on the following criteria:

Qualification	Standard	Weighting Factor
Quality of Response & Sample Materials	Did the proposal confirm to format? Was the proposal clear and precise? Did the firm provide information requested? Did the firm follow the question/answer format suggested? What is the quality and quantity of recruiting specifications, community/agency profiles, brochures, letters and announcements provided?	10%
Consultant Qualifications and Experiences/Project Manager/Team Member Experience	Did the firm describe their organizational background and experience, including public sector experience and executive search firm capabilities? What was the firms experience with City Manager recruitments? How well did the firm describe the responsibility, experience and qualifications of the individuals(s) who would comprise the project team, as well as listing their recent assignments? Is there a high level of expertise of those individuals that would be servicing this project?	25%
Scope of Work and Services	What services does the firm provide? Did the firm describe the services, methodology, process, and proposed outline of tasks, products and product schedule? Did the firm provide samples of recruitment materials?	20%
Proposed Pricing/Cost	Was the proposed pricing reasonable? Was the proposed pricing and/or cost for services competitive with other submitted proposals?	25%
Availability	Is the firm available to complete the work within the required time frame?	10%
References & Dependability	Quantity and quality of client references provided, specifically from executive searches for the position of City Manager. Ability to meet time and cost estimates as evidenced by documentation provided through references.	10%

After narrowing down the potential firms to the top three, Slavin Management Consultants, The Novak Consulting Group and Waters and Company, the selection committee conducted interviews and reference checks.

Based on the scoring, interviews and reference checks, the selection committee is recommending Slavin Management Consultants to fulfill the duties necessary to recruit the City's new City Manager.

FINANCIAL SUMMARY:

The fees included in the proposals ranged from $12,000 to $30,000 with seven in the range of $21,000 – 25,000.

The estimated fees for Slavin Management Consultants services are $23,000. This represents a "do not exceed amount" and includes services along with travel expenses.

A preliminary budget revision will be necessary in this amount. The General Fund has a budgeted excess fund balance of $5,540,197.

STAFF RECOMMENDATION:

The selection committee recommends approval of the mayor's signature on the professional services agreement for Slavin Management Consultants and approval of the preliminary budget revision in the amount of $23,000.

SUGGESTED MOTIONS:

"I move to approve the Mayor's signature on a professional services agreement with Slavin Management Consultants and a preliminary budget revision in the amount of $23,000 within the General Fund."

'I move to deny the Mayor's signature on the profession services agreement with Slavin Management Consultants and the preliminary budget revision."

ATTACHMENTS:

Professional Services Agreement

City of Evans, Colorado
AGREEMENT FOR PROFESSIONAL SERVICES BY INDEPENDENT CONTRACTOR

THIS AGREEMENT is made and entered into this 1st day of September, 2016, by and between the City of Evans, State of Colorado (hereinafter referred to as the "City"), and Slavin Management Consultants (hereinafter referred to as "Consultant").

RECITALS:

A. The City requires professional services.

B. Consultant has held itself out to the City as having the requisite expertise and experience to perform the required services for the Project.

NOW, THEREFORE, it is hereby agreed, for the consideration hereinafter set forth, that Consultant shall provide to the City professional consulting services for the Project.

I. SCOPE OF SERVICES

Consultant shall furnish all labor and materials to perform the services required for the complete and prompt execution and performance of all duties, obligations and responsibilities for the Project, which are described or reasonably implied from **Exhibit A**, which is attached hereto and incorporated herein by this reference.

II. THE CITY'S OBLIGATIONS/CONFIDENTIALITY

The City shall provide Consultant with reports and such other data as may be available to the City and reasonably required by Consultant to perform hereunder. No project information shall be disclosed by Consultant to third parties without prior written consent of the City or pursuant to a lawful court order directing such disclosure. All documents provided by the City to Consultant shall be returned to the City. Consultant is authorized by the City to retain copies of such data and materials at Consultant's expense.

III. OWNERSHIP OF INSTRUMENTS OF SERVICE

The City acknowledges that the Consultant's documents are an instrument of professional service. Nevertheless, the documents prepared under this Agreement shall become the property of the City upon completion of the services. Any reuse of the Consultant's documents is at the City's own risk.

IV. COMPENSATION

A. In consideration for the completion of the services specified herein by Consultant, the City shall pay Consultant an amount not to exceed Twenty-two thousand seven hundred two and fifty one-hundredths dollars ($22,702.50). Payment shall be made in accordance with the schedule of charges in **Exhibit A**, which is attached hereto and incorporated herein by this reference. Invoices will be itemized and include hourly breakdown for all personnel and other

charges. The maximum fee specified herein shall include all fees and expenses incurred by Consultant in performing all services hereunder.

B. Consultant may submit monthly or periodic statements requesting payment. Such request shall be based upon the amount and value of the services performed by Consultant under this Agreement, except as otherwise supplemented or accompanied by such supporting data as may be required by the City.

1. All invoices, including Consultant's verified payment request, shall be submitted by Consultant to the City no later than the twenty-fourth (24th) day of each month for payment, pursuant to the terms of this Agreement. In the event Consultant fails to submit any invoice on or before the twenty-fourth (24th) day of any given month, Consultant defers its right to payment, pursuant to said late invoice, until the following month.

2. Progress payments may be claimed on a monthly basis for reimbursable costs actually incurred to date as supported by detailed statements, including hourly breakdowns for all personnel and other charges. The amounts of all such monthly payments shall be paid within thirty (30) days after the timely receipt of invoice, as provided by this Agreement.

C. The City has the right to ask for clarification on any Consultant invoice after receipt of the invoice by the City.

D. In the event payment for services rendered has not been made within forty-five (45) days from the timely receipt of the invoice for any uncontested billing, interest will accrue at the rate of twelve percent (12%) per annum compounded annually. In the event payment has not been made within ninety (90) days from the receipt of the invoice for any uncontested billing, Consultant may, after giving seven (7) days' written notice and without penalty or liability of any nature, suspend all authorized services specified herein. In the event payment in full is not received within thirty (30) days of giving the seven (7) days' written notice, Consultant may terminate this Agreement. Upon receipt of payment in full for services rendered, Consultant will continue with all authorized services.

E. Final payment shall be made within sixty (60) calendar days after all data and reports (which are suitable for reproduction and distribution by the City) required by this Agreement have been turned over to and approved by the City and upon receipt by the City of Consultant's written notification that services required herein by Consultant have been fully completed in accordance with this Agreement and all data and reports for the Project.

V. COMMENCEMENT AND COMPLETION OF SERVICES

Within seven (7) days of receipt from the City of a Notice to Proceed, Consultant shall commence services on all its obligations as set forth in the Scope of Services or that portion of such obligations as is specified in said Notice. Except as may be changed in writing by the City, the Project shall be complete and Consultant shall furnish the City the specified deliverables, as provided in **Exhibit A**.

VI. CHANGES IN SCOPE OF SERVICES

A change in the Scope of Services shall constitute any material change or amendment of services which is different from or additional to the Scope of Services specified in Section I of this Agreement. No such change, including any additional compensation, shall be effective or paid, unless authorized by written amendment executed by the City. If Consultant proceeds without such written authorization, then Consultant shall be deemed to have waived any claim for additional compensation, including a claim based on the theory of unjust enrichment, quantum merit or implied contract. Except as expressly provided herein, no agent, employee or representative of the City shall have the authority to enter into any changes or modifications, either directly or implied by a course of action, relating to the terms and scope of this Agreement.

VII. PROFESSIONAL RESPONSIBILITY

A. Consultant hereby warrants that it is qualified to assume the responsibilities and render the services described herein and has all requisite corporate authority and professional licenses in good standing, as required by law.

B. The services performed by Consultant shall be in accordance with generally accepted professional practices and the level of competency presently maintained by other practicing professional firms in the same or similar type of services in the applicable community.

C. Consultant shall be responsible for the professional quality, technical accuracy, timely completion, and the coordination of all designs, drawings, specifications, reports, and other services furnished by Consultant under this Agreement. Consultant shall, without additional compensation, correct or resolve any errors or deficiencies in his designs, drawings, specifications, reports, and other services, which fall below the standard of professional practice, and reimburse the City for construction costs caused by errors and omissions which fall below the standard of professional practice.

D. Approval by the City of drawings, designs, specifications, reports and incidental services or materials furnished hereunder shall not in any way relieve Consultant of responsibility for technical adequacy of the services. Neither the City's review, approval or acceptance of, nor payment for, any of the services shall be construed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement, and Consultant shall be and remain liable in accordance with applicable performance of any of the services furnished under this Agreement.

E. The rights and remedies of the City provided for under this Agreement are in addition to any other rights and remedies provided by law.

VIII. COMPLIANCE WITH LAW

The services to be performed by Consultant hereunder shall be done in compliance with applicable laws, ordinances, rules and regulations.

IX. INDEMNIFICATION

A. INDEMNIFICATION – GENERAL: The City cannot and by this Agreement does not agree to indemnify, hold harmless, exonerate or assume the defense of the Consultant or any other person or entity whatsoever, for any purpose whatsoever. Provided that the claims, demands, suits, actions or proceedings of any kind are not the result of professional negligence, the Consultant shall defend, indemnify and hold harmless the City, its mayor and City council, officials, officers, directors, agents and employees from any and all claims, demands, suits, actions or proceedings of any kind or nature whatsoever, including worker's compensation claims, in any way resulting from or arising from the services rendered by Consultant, its employees, agents or subconsultants, or others for whom the Consultant is legally liable, under this Agreement; provided, however, that the Consultant need not indemnify or save harmless the City, its mayor and City council, its officers, agents and employees from damages to the extent caused by the negligence of the City's mayor and City council, officials, officers, directors, agents and employees.

B. INDEMNIFICATION FOR PROFESSIONAL NEGLIGENCE: The Consultant shall indemnify and hold harmless the City, its mayor and City council, and any of its officials, officers, directors, and employees from and against damages, liability, losses, costs and expenses, including reasonable attorneys fees, but only to the extent caused by the negligent or intentional acts, errors or omissions of the Consultant, its employees, subconsultants, or others for whom the Consultant is legally liable, in the performance of professional services under this Agreement. The Consultant is not obligated under this subparagraph IX.B. to indemnify the City for the negligent acts of the City, its mayor or City council, or any of its officials, officers, directors, agents and employees.

C. INDEMNIFICATION – COSTS: Consultant agrees, to the extent provided in Paragraph A., above, to investigate, handle, respond to, and to provide defense for and defend against any such liability, claims or demands at the sole expense of Consultant or, at the option of the City, agrees to pay the City or reimburse the City for the defense costs incurred by the City in connection with any such liability, claims or demands. Consultant also agrees, to the extent provided in Paragraph A. above, to bear all other costs and expenses related thereto, including court costs and attorney fees, whether or not any such liability, claims or demands alleged are groundless, false or fraudulent. If it is determined by the final judgment of a court of any competent jurisdiction that such injury, loss or damage was caused in whole or in part by the act, omission or other fault of the City, its mayor and City council, officials, officers, directors, agents and employees, the City shall reimburse Consultant for the portion of the judgment attributable to such act, omission or other fault of the City, its mayor and City council, officials, officers, directors, agents and employees.

X. INSURANCE

A. Consultant agrees to procure and maintain, at its own cost, a policy or policies of insurance sufficient to insure against all liability, claims, demands and other obligations assumed by Consultant, pursuant to Section IX, Indemnification, above. Such insurance shall be in addition to any other insurance requirements imposed by this Agreement or by law. Consultant shall not be relieved of any liability, claims, demands or other obligations assumed pursuant to Section IX, Indemnification, above, by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations or types.

B. Consultant shall procure and maintain, and shall cause any subconsultant of Consultant to procure and maintain, the minimum insurance coverages listed below. Such coverages shall be procured and maintained with forms and insurers acceptable to the City. All coverages shall be continuously maintained to cover all liability, claims, demands and other obligations assumed by Consultant, pursuant to Section IX, Indemnification, above. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.

1. Worker's compensation insurance to cover obligations imposed by applicable laws for any employee engaged in the performance of services under this Agreement, and Employer's Liability insurance with minimum limits of Five Hundred Thousand Dollars ($500,000) each claim, Five Hundred Thousand Dollars ($500,000) disease - policy limit, and Five Hundred Thousand Dollars ($500,000) disease - each employee.

2. Commercial general liability insurance with minimum combined single limits of One Million Dollars ($1,000,000) each occurrence and Two Million Dollars ($2,000,000) general aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, products and completed operations. The policy shall contain a severability of interests provision.

3. Professional liability insurance with minimum limits of One Million Dollars ($1,000,000) each claim and Two Million Dollars ($2,000,000) annual aggregate, and Consultant shall maintain such coverage for at least three (3) years from the termination of this Agreement.

4. The policy required by Paragraph 2, above shall be endorsed to include the City and the City's officers, employees and consultants as additional insureds. Every policy required above shall be primary insurance, with the exception of Professional Liability and Worker's Compensation, and any insurance carried by the City, its officers, its employees or its consultants shall be excess and not contributory insurance to that provided by Consultant. No additional insured endorsement to the policy required by Paragraph 2, above shall contain any exclusion for bodily injury or property damage arising from completed operations. Consultant shall be solely responsible for any deductible losses under any policy required above.

5. The certificate of insurance provided for the City shall be completed by Consultant's insurance agent as evidence that policies providing the required coverages, conditions and minimum limits are in full force and effect, and shall be reviewed and approved by the City prior to commencement of the Agreement. No other form of certificate shall be used. The certificate shall identify this Agreement and shall provide that the coverages afforded under the policies shall not be cancelled or terminated until at least thirty (30) days' prior written notice has been given to the City. The completed certificate of insurance shall be sent to:

City of Evans
1100 37th Street
Evans, Colorado 80620-2036
Attn: Risk Manager

6. Failure on the part of Consultant to procure or maintain policies providing the required coverages, conditions and minimum limits shall constitute a material breach of agreement upon which the City may immediately terminate this Agreement or, at its discretion, the City may procure or renew any such policy or any extended reporting period thereto and may pay any and all premiums in connection therewith, and all monies so paid by the City shall be repaid by Consultant to the City upon demand, or the City may offset the cost of the premiums against any monies due to Consultant from the City.

7. The City reserves the right to request and receive a certified copy of any policy and any endorsement thereto.

8. The parties hereto understand and agree that the City, its officers and its employees are relying on, and do not waive or intend to waive by any provision of this Agreement, the monetary limitations (presently Three Hundred Fifty Thousand Dollars ($350,000) per person and Nine Hundred Ninety Thousand Dollars ($990,000) per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, Colo. Rev. Stat. §24-10-101, et seq., as from time to time amended, or otherwise available to the City, its officers or its employees.

XI. NONASSIGNABILITY

Neither this Agreement nor any of the rights or obligations of the parties hereto shall be assigned by either party without the written consent of the other.

XII. TERMINATION

This Agreement shall terminate at such time as the services in Section I are completed and the requirements of this Agreement are satisfied, or upon the City's providing Consultant with seven (7) days' advance written notice, whichever occurs first. In the event the Agreement is terminated by the City's issuance of said written notice of intent to terminate, the City shall pay Consultant for all services previously authorized and completed prior to the date of termination. If, however, Consultant has substantially or materially breached the standards and terms of this Agreement, the City shall have any remedy or right of set-off available at law and equity. If the Agreement is terminated for any reason other than cause prior to completion of the Project, any use of documents by the City thereafter shall be at the City's sole risk, unless otherwise consented to by Consultant.

XIII. CONFLICT OF INTEREST

The Consultant shall disclose any personal or private interest related to property or business within the City. Upon disclosure of any such personal or private interest, the City shall determine if the interest constitutes a conflict of interest. If the City determines that a conflict of interest exists, the City may treat such conflict of interest as a default and terminate this Agreement.

XIV. VENUE

This Agreement shall be governed by the laws of the State of Colorado, and any legal action concerning the provisions hereof shall be brought in the County of Weld, State of Colorado.

XV. INDEPENDENT CONTRACTOR

A. Consultant is an independent contractor. Notwithstanding any provision appearing in this Agreement, all personnel assigned by Consultant to perform services under the terms of this Agreement shall be, and remain at all times, employees or agents of Consultant for all purposes. Consultant shall make no representation that it is the employee of the City for any purposes.

B. **Disclosure: Consultant is not entitled to workers' compensation benefits, unemployment insurance benefits unless unemployment compensation coverage is provided by the Consultant or some other entity, and Consultant is obligated to pay federal and state income tax on any moneys earned pursuant to this Agreement for Professional Services by Independent Contractor.**

XVI. NO WAIVER

Delays in enforcement or the waiver of any one or more defaults or breaches of this Agreement by the City shall not constitute a waiver of any of the other terms or obligations of this Agreement.

XVII. ENTIRE AGREEMENT

This Agreement and the attached Exhibit A is the entire Agreement between Consultant and the City, superseding all prior oral or written communications. None of the provisions of this Agreement may be amended, modified or changed, except as specified herein.

XVIII. NOTICE

Any notice or communication between Consultant and the City which may be required, or which may be given, under the terms of this Agreement shall be in writing, and shall be deemed to have been sufficiently given when directly presented or sent pre-paid, first class United States mail, addressed as follows:

The City: City of Evans
Attn: Aden Hogan, City Manager
1100 37th Street
Evans, Colorado 80620-2036

Consultant: Robert E. Slavin, President
SLAVIN MANAGEMENT CONSULTANTS
3040 Holcomb Bridge Road, A-1
Norcross, GA 30071-1357

XIX. EFFECTIVE DATE AND EXECUTION

This Agreement shall become effective following execution by both Consultant and City. This Agreement may be executed in counterparts, including by facsimile or electronically, each of which shall be considered an original, but all of which together shall constitute one instrument.

XX. SPECIAL PROVISIONS

The "Special Provisions" attached hereto as **Exhibit C** and incorporated by this reference are made a part of this Agreement. For purposes of the Special Provisions, the Consultant shall be referred to as the "Contractor."

IN WITNESS WHEREOF, the parties hereto each herewith subscribe the same in triplicate, as of the date first written above.

CITY OF EVANS, COLORADO

By: _____
John Morris, Mayor

ATTEST:

_____
Raegan Robb, City Clerk

APPROVED AS TO FORM AND SUFFICIENCY:

_____
Scotty P. Krob, City Attorney

APPROVED AS TO CONTENT:

_____
Aden Hogan, Jr., City Manager

CONSULTANT

By: Robert E. Slaven

Title: President

ATTEST:

By: Janet Fisher

Title: Office Administrator

Exhibit C

Special Provisions Required by §§ 8-17.5-101 et seq., C.R.S.

A. Certification. By entering into this Agreement, Contractor hereby certifies that, at the time of this certification, it does not knowingly employ or contract with an illegal alien and that Contractor has participated or attempted to participate in the basic pilot program administered by the U.S. Department of Homeland Security in order to verify that it does not employ any illegal aliens. §

B. Prohibited Acts. Contractor shall not:

1. Knowingly employ or contract with an illegal alien to perform work under this Agreement; or

2. Enter into a contract with a subcontractor that fails to certify to Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement.

C. Verification.

1. Contractor has verified or attempted to verify through participation in the basic pilot program administered by the U.S. Department of Homeland Security that Contractor does not employ any illegal aliens and, if Contractor is not accepted into the basic pilot program prior to entering into this Agreement, that Contractor shall apply to participate in the basic pilot program every three (3) months until Contractor is accepted or this Agreement has been completed, whichever is earlier.

2. Contractor shall not use basic pilot program procedures to undertake pre-employment screening of job applicants while this Agreement is being performed.

3. If Contractor obtains actual knowledge that a subcontractor performing work under this Agreement knowingly employs or contracts with an illegal alien, Contractor shall:

i. Notify the subcontractor and the City within three (3) days that Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and

ii. Terminate the subcontract with the subcontractor if within three (3) days of receiving the notice required pursuant to subparagraph i. hereof, the subcontractor does not stop employing or contracting with the illegal alien; except that Contractor shall not terminate the contract with the subcontractor if during such three (3) days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.

D. Duty to Comply with Investigations. Contractor shall comply with any reasonable request by the Colorado Department of Labor and Employment made in the course of an

investigation conducted pursuant to C.R.S. § 8-17.5-102(5)(a) to ensure that Contractor is complying with the terms of this Agreement.

EXHIBIT "A"

SCOPE OF SERVICES

We recommend a five-step process as follows:

- Develop job qualifications and requirements for the position -- the "recruitment profile".
- Identify and recruit qualified candidates.
- Evaluate prospective candidates.
- Make recommendations, help in selection and facilitate employment.
- Establish evaluation criteria and follow-up.

Each step of this process is described below.

A. Develop the Position Profile

We will meet with the Mayor and City Council and other appropriate stake holders of the City's choosing to learn the City's needs, focus and requirements such as experience, education and training as well as preferred management style and personal traits. In developing the recruitment profile we will spend a considerable amount of time at the beginning of the process in Evans to gather additional information about the City and to ascertain the unique challenges of the job and the general environment within which the position functions.

Once we have gained the necessary information, we will prepare a draft recruitment profile and review it with the City to arrive at a general agreement regarding the specifications for the position. The final profile will include information about the City of Evans, the City Manager position, major issues to be faced, the ideal candidate and the selection criteria established.

B. Identify Qualified Candidates

We will first review our database to find those candidates whom we may already know and/or already have on file who may meet your specifications. Although the above process is valuable, we will rely most heavily on our own contacts in related fields and on our own experience. In other words, through networking, we will conduct a professional search for the best-qualified candidates and invite them to apply for the position. In this effort, we utilize appropriate professional organizations, our established contacts, and our knowledge of quality jurisdictions and their employees.

More than 25% of SMC placements are from protected groups. At our clients request, we actively recruit qualified protected group members. Our consultants hold membership in a variety of professional organizations, including minority and women based organizations. We utilize our contacts in these and other minority and women based organizations to achieve a diverse candidate base. We also post announcements on web sites and publications of minority and women's organizations.

In consultation with the City, we will prepare and place advertisements in professional publications. We will acknowledge all resumes received and thoroughly screen all potential candidates.

C. Evaluate Prospective Candidates

Preliminary Screening and Progress Report

Criteria for the preliminary screening will be contained in the approved recruitment profile. They will include such items as education, technical knowledge, experience, accomplishments, management style, personal traits, etc. Screening of candidates against those criteria will be based on data contained in the resume and other data provided by the candidates and on our knowledge of the organizations in which they work. At this stage, each must meet the minimum qualifications specified in the recruitment profile.

We request that all candidates provide us, in writing, substantial information about their accomplishments and their management style and philosophy. This information is verified and, at the City's option, may be further tested by having the finalists respond to a supplemental questionnaire and/or complete management and leadership style inventories. We interpret these instruments for the City as well.

We will meet with the City to provide a progress report on a number of semifinalist candidates. These individuals will be top prospects who clearly meet the specifications for the position. With the City's guidance, we will narrow the semifinalist candidate group on the basis of refined criteria. During this meeting we will determine the City's expectations relative to interview questions that we will write as well as the candidate rating and scoring processes which will be included in our final report.

D. Selection and Employment

In-depth Screening and Final Report

At this point, we will interview those semifinalist candidates whom you have the greatest interest in. Proper "fit" is as important as technical ability. We assess both. In order to better assess candidates' management style and interpersonal characteristics, we personally interview each in his or her present work environment. We will closely examine each candidate's experience, qualifications, achievements, management style and interpersonal skills in view of the selection criteria and our professional expertise in evaluating the quality of such qualifications, skills and achievements.

We conduct in-depth background checks on those individuals who continue to demonstrate their overall suitability for the position. Included are detailed and extensive reference checks which cover a minimum period of ten years. In conducting these, it is our practice to speak directly to individuals who are now or have been in positions to evaluate the candidate's job performance. We ask each candidate to provide us with a large number of references. We then network these references to other persons who know the candidate. In this way, we thoroughly evaluate each candidate. These references and evaluations are combined to provide frank and objective appraisals of the top candidates.

As part of our evaluation process we conduct credit checks and verify undergraduate and graduate college degrees. We also conduct criminal history, civil court records and driving record checks. SMC contracts with the *G4S Corporation* to conduct criminal, driving, and

civil records checks on finalist candidates. W we utilize *Equifax* to perform finalist candidate credit checks and National Student Clearinghouse to verify candidate educational credentials. At the City's option, we can arrange for assessment centers and/or psychological (or similar) testing of the candidates. (These optional items will result in extra cost.)

We will then meet with the City to present a group of well-qualified finalist candidates for interviews in Evans. These final candidates will not be ranked because, at this point, they will all be qualified and it will then be a matter of chemistry between the candidates and the City that should produce the final selection decision.

Our final report will be presented in a meeting with the City. This written report is a comprehensive document. It contains our candidate recommendations, details about the search, interview tips, interview questions, candidate evaluation forms and information about legal vs. illegal inquiries. The report also includes the candidate interview schedule as well as our recommendations relative to timing, sequencing, location, setting, format, and conduct of interviews. The report contains comprehensive information about each recommended candidate. This includes educational and experience information, an evaluation of the candidate's experience relative to the criteria established by the City, a summary of reference comments and a statement of accomplishments and management style prepared by the candidate. Present compensation is also provided for each recommended candidate.

We will provide information about trends in employment, employment contracts and agreements, relocation expenses, perquisites, appropriate roles for spouses, receptions, etc. We arrange schedules for top candidate interviews with the City and we will coordinate the entire process.

We will properly handle any and all media relations. Unless otherwise directed, it is our standard practice to tell all media that we are working on behalf of the City of Evans and that any public statement should come from the City directly. Within the boundaries of the open records laws, we will not release information to the media unless specifically directed by you to do so.

We will notify all unsuccessful candidates of the final decision reached. Finally, we will continue to work for the City until a suitable candidate is recruited and hired.

SMC is an equal opportunity employer and recruiter and will not discriminate against any employee or applicant for employment because of race, religion, creed, color, sex, disability or national origin.

E. Establish Evaluation Criteria

Once the new City Manager has been on board for 30 days or so, we will conduct a session with the City Council and the new City Manager to establish mutually agreed upon performance expectations and goals.

F. Follow-up

We will follow-up with the City and the new City Manager during the first year and assist in making any adjustments that may be necessary.

G. Reporting

We will keep the City informed, involved in decisions and involved in the search process. We will provide weekly progress reports.

H. Deliverables

Deliverables include the recruitment profile (draft and final), the advertisement (draft and final), the progress report (presented in person), the final report with interview tips, interview schedule, interview questions, candidate resumes, candidate evaluations, candidate writing samples, rating sheets, ranking forms, tabulation forms and appropriate/inappropriate question list and a negotiated employment agreement between the City and the selected candidate.

I. Timeline

The search process normally takes between sixty (60) and ninety (90) days to complete and typically follows the following pattern:

		DAYS			
	STEPS	**1-30**	**30-45**	**45-60**	**60-360**
1.	DEVELOP SEARCH PROCESS, RECRUITMENT PROFILE AND ADVERTISING PROGRAM FOR CITY APPROVAL	✓			
2.	IDENTIFY QUALIFIED CANDIDATES, REVIEW DATA BASE, NETWORK, RECEIVE AND REVIEW RESUMES	✓	✓		
3.	SCREEN & EVALUATE PROSPECTIVE CANDIDATES		✓		
4.	PROGRESS MEETING AND REPORT		✓		
5.	INTERVIEW AND EVALUATE PROSPECTIVE CANDIDATES		✓	✓	
6.	SUBMIT FINAL REPORT AND RECOMMENDATIONS, ASSIST IN SELECTION, FACILITATE EMPLOYMENT			✓	
7.	ESTABLISH EVALUATION CRITERIA AND FOLLOW-UP				✓

J. Guarantees

We provide a comprehensive set of assurances and guarantees to our executive recruitment clients that include:

- We are committed to excellence. We guarantee the highest quality of work and its success in your environment. To accomplish this, we will continue to work with the City until it is satisfied with the candidates and a candidate is selected and accepts employment.

- We guarantee our work and will redo the search for the cost of our out-of-pocket expenses only, if the position is vacated, for any reason, within two years of the employment date of a candidate selected by the City through our efforts.

- We will never actively recruit any *candidate who we have placed* **nor** will we actively recruit *any employee* from a client organization for at least two years from the completion date of an assignment.

City Managers Update
September 2, 2016

City Manager's Office	• Staff had another busy week working on updating annexes to the Emergency Operation Plan and started to review and make updates to the Emergency Operation Plan. The Emergency Operation Plan is due in October for its annual approval and adoption by City Council. • Emergency management and Communications worked on creating pre-scripted public messages that can be quickly released during emergencies in order to keep residents informed of hazards and actions that they should take during an emergency. • Staff also worked with the Fire District to implement a 24-hour phone number which Emergency Management can be reached. At this time, the best solution identified is to use (970) 475-1199, which is David's desk number. This number can be forwarded every night to his cell phone or to anyone that is covering for him, when he is not available to be on call. • Staff also finalized two reports; Lessons learned from his deployment to Ellicott City and an After Action Report from the July 13, 2016 Emergency Operation Center Exercise. Both reports are attached to the weekly report. • The City Manager selection committee interviewed the top the executive recruitment firms and will be making a recommendation to the City Council at the next meeting. Staff worked with the recommended firm to obtain agreements. • Liquor Licensing - Both El Coco Pirata and 85 Liquor have been approved by City and State this summer to keep businesses in these locations. Staff is continuing to work with 85 liquor on the implementation of their Site Improvement Agreement. • Special Events - Evans is hosting the District-2 Meeting this fall on behalf of the Colorado Municipal League. The event is scheduled for Thursday, September 29th, from 4:00pm to 8:30pm at the RLCC. • Staff is also working with the Evans VFW Post #6624 to host a fund raiser for the Post's Auxiliary Fund. The event will be held at the VFW, 3501 State Street, from 1:00 p.m. to 5:00 p.m. on Saturday, October 1st. • Staff has been working with the Board President of the Greeley Philharmonic Orchestra to host the Wines of Note Fundraiser on Friday, October 28th at the RLCC.
Communications	• The Community Development and Building Services Customer Service Survey has been created and is live on the website. Customers will soon receive a card with every application which directs them to complete the survey. Paper copies will also be available if a customer prefers. • The September newsletter went out September 1, 2016. • The CGI Welcome videos are complete and are live on the website. There are a total of 4 videos – Welcome, Education, Economic Development and Parks and Recreation.
Customer Service Unit	• The August utility bills were mailed on Tuesday, August 30, 2016. • The Court Clerk is experiencing a significant increase in court cases due to a 26% increase in traffic enforcement efforts in the 2nd Quarter. • Our 3rd Customer Service position has been filled and our new employee will begin Tuesday, September 6, 2016.

Human Resources/Risk Management

- Staff coordinated with Mountain States Employers Council and the Management Team on the PowerPoint presentation and handouts associated with the upcoming presentation to City Council on the City's Compensation Study for the September 6th Work Session.
- The Employee Review Team concluded in August a wellness challenge called Get Produce. This 6-week program challenged participants to increase their fruit and vegetable consumption. Twenty-three employees/spouses successfully completed the challenge.
- The Employee Review Team offered a healthy lifestyle class on "Meditation and Mindfulness" as a lunch and learn opportunity last week. We had 19 participants attend the class. The class focused on the science and techniques behind the practice of mindfulness and meditation.
- Staff held its second annual employee Fire Safety Training, where they learned fire safety and prevention. In addition to the basics of fire safety and prevention, employees were given fire extinguisher training and the opportunity to participate in a fire extinguisher simulation. The training was offered at three locations and times to accommodate for all employees' schedules.

Finance

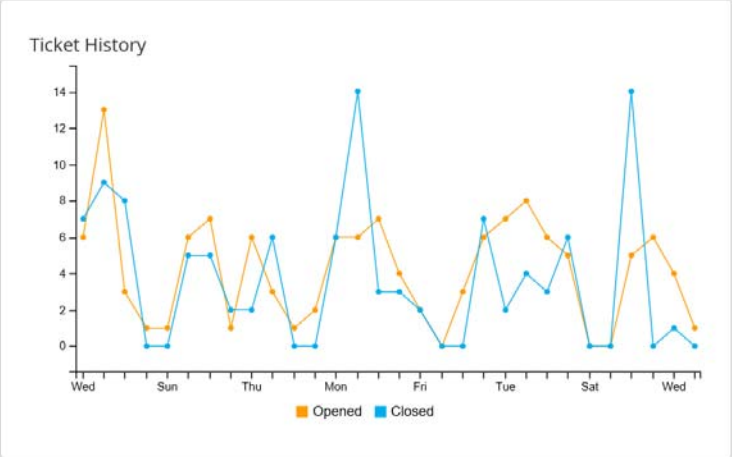
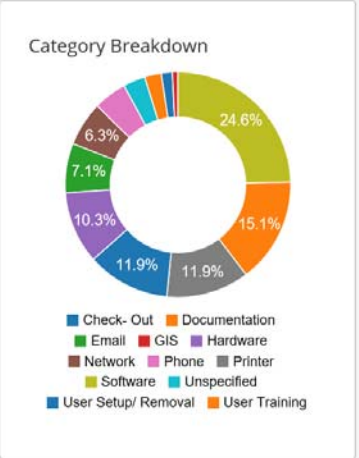
New Business License List – August

The chart below is a list of new Business and Tax License Applications received. The columns show the company and Doing Business As (DBA) name. "In/Out" indicates whether the business is located "In" Evans or "Out" of Evans. "Account Start" is the date the business/account started, location address and (NOB) nature or type of business conducted. New businesses located in Evans go through a review process.

New Acton Mobile Industries, LLC	Acton Mobile	O	8/1/2016	5400 Dahlia St	Commerce, CO 80022	Lessor of mobile offices and storage containers
Financial Services Vehicle Trust (As Nominee)	Financial Services Vehicle Trust (As Nominee)	O	8/1/2016	300 Chestnut Ridge Road	Woodcliff Lake , NJ 07677	Title holder of leased vehicles
Maria's Appliances	Maria's Appliances	I	8/1/2016	3201 Tide Water CT	Evans , CO 80620	Home Appliance Sales/Used
Priority Restoration, Inc.	Priority Restoration, Inc.	O	8/1/2016	7340 S. Alton Way Suite 11-J	Centennial, CO 80112	Roofing and Exteriors, Claims
Victory Construction & Refrigeration Inc	Victory Construction & Refrigeration Inc	O	8/1/2016	4771 Fox Street	Denver, CO 80216	Construction and construction service
MobileSolar LLC	MobileSolar LLC	I	8/2/2016	3610 35th ave; #2	Evans, CO 80620	Install solar on RV's and off grid
TBBK Direct Leasing, LLC	TBBK Direct Leasing, LLC	O	8/2/2016	3799 US Route 46, STE 110	Parsippany , NJ 07054	Motor Vehicle Leasing
Garney Companies Inc	Garney Companies Inc	O	8/3/2016	1333 NW Vivion Rd	Kansas City, MO 64118	General Contractor
Lawn Master Outdoor Living LLC	Lawn Master Outdoor Living LLC	O	8/6/2016	3841 South I-35 E	Waxahachie, TX 75168	Wholesale Manufacturer & Installer of western red cedar patio, etc.. for Home Depot
DW Enterprises of Tampa	U Lucky Dog	I	8/10/2016	3230 23rd Ave Unit 400	Evans, CO 80620	Skill games
Champion Technology Services Inc	Champion Technology Services Inc	O	8/11/2016	11824 Market Place Ave	Baton Rouge, LA 70816	Industrial automation and control systems consulting
Thomas Pless	T.H.O.M.A.S.'s Custom K-9	I	8/12/2016	3724 Burlington Ave	Evans, CO 80620	Dog training-mobile
J & M Tree Care LLC	J & M Tree Care LLC	O	8/15/2016	36923 Brian Ave	Windsor, CO 80550	Tree trimming, planting and removal
Ram Jack of Colorado Inc	Ram Jack of Colorado Inc	O	8/15/2016	14020 E Davies Ave	Centennial, CO 80112	Foundation Repair
Elena Sanchez	Crazy Horse Roofing LLC	O	8/18/2016	19532 Hwy 14	Ault, CO 80610	Roofing
J-Day's Appliance Inc	J-Day's Appliance Inc	O	8/18/2016	132 E 7th Street	Loveland, CO 80537	Appliance sales and repair

- Finance staff processes accounts payable checks every other week, and utility billing refund checks once per month. For the last check run, 60 regular accounts payable checks and 23 utility billing refund checks were issued. Utility billing refund checks are most commonly issued when residents move out and have an overpayment on their account.
- Budget process team members will present proposed budgets for payroll and supplies & services, Tuesday, September 6th at Council work session. Finance is grateful for the hard work team members have committed to this process.
- As a reminder for the upcoming budget schedule, an overview of the 2017 budget will be presented to finance committee for initial review on September 6th and presented at Council work session on September 20th.

Flood & Recovery	• Staff has received information from State Staff regarding the Scope Change for the 49th Street Road Repairs. The City of Evans is 8th out of 43 on list to have its scope change reviewed. • Staff will present the 49th Street Road repair bid results to council on Tuesday, September 6th.
Recreation	• Staff is busy at the Evans Community Complex. Rentals continue to happen every weekend in the banquet hall and now volleyball is going strong in the gymnasium. Teams from Ft. Lupton, Keenesburg, Platteville, LaSalle, Kersey, and Eaton will be here on Saturdays to participate in the league. Staff will encourage participants to try some of the great restaurants Evans has to offer. • Staff continues to work with contractors at the Riverside Library and Cultural Center for repairs to the irrigation pump station. It seems that the vault is fixed and clear of water so repairs to the pump can be made.

Information Technology	• Laserfiche Rio server (document management system) has been setup and data migrated. Scheduling off hours workstation upgrades and redirecting workstations to point to new server. User training is 9/7 @ 10am.
	• Staff continues migrating existing City geodata to an industry standard local government information model. (20% complete)
	  o Reference data was completed
	  o Census boundary data.
	  o Moving forward with the migration of elevation and emergency management data.
	• 24 helpdesk tickets closed this week.
	  

Building Department	• Building department issued the following number and types of permits in August.
	  o Addition and Remodel: 6
	  o New Construction Residential: 3
	  o One Stop Permits (water heaters, furnace, etc) 10
	  o Sign Permits: 1
	• Plans have been submitted and are under review for new residential construction in the Tuscany Subdivision. These permits should be approved for construction in September.

Planning	• Performed records search of 80 property owner vs. resident information provided by applicant, to ensure notice sent out on the Eastwood Village Appeal are accurate. Discrepancies corrected in the information provided for current owner names, etc. Provided notice to newspaper / adjoining property owners.

	• Established process with the Building Department for Plot Plan reviews to avoid post construction issues such as set back problems including electronic referral form, which also works with the County Assessor for their records. • Coordinating with I.T. department to improve addressing in GIS and to establish updated referral list for new addresses to Weld County Assessor, emergency service providers, US Post office and Utility Companies. • Consulted with Xcel Energy to formalize their requirements for a utility easement at the Synergy property. Also provided written referral comments Synergy's consultant on the subdivision plat and site plan review.
Engineering	• Staff met with Biltrite signs to work on correcting the issues to the truck route signs on the east side. Staff is working with Biltrite to get an updated state permit to proceed with the work. • Staff attended the County Commissioners meeting this week to answer questions and ask for a partnership to the FY 2020-21 North Front Range Metropolitan Planning Organization (NFRMPO) call for projects. The Board of County Commissioners voted in favor of partnering with Evans on an overlay project on 37th Street from 11th Avenue to 23rd Avenue. This partnership comes with a financial commitment of $100,000. The call for projects application is due on September 9, 2016. • Staff has begun negotiations with the top ranked engineering consultant, HDR Engineering, Inc., on scope and fees for the Hwy 85 Access Control Project at 31st Street Design. • Staff attended the pre-construction meeting for the Hwy 85 Access Control Project at 37th Street. The contractor is scheduled to mobilize on Tuesday, September 6th. • Attached is a document received from Greeley Evans Transit (GET) with survey results for the Ride Free with ID program. • Staff has prepped 34th Street marking patch locations in advance of the upcoming Asphalt Overlay project.

Police	• This week in the Citizen's Police Academy attendees received training in the use of less-lethal munitions. You'll note in the photos that the shotgun being brandished by our own Kristan Williams is orange in color. The department no longer uses standard (lethal) shotguns in the field and we only carry less-lethal ammunition in our shotguns. The attendees first received in-classroom training in firearms handling, then went out doors to fire the shotguns. It turns out Kristan is Evans' version of Annie Oakley as she is the only one to actually hit the target! Way to go, Kristan! • Officer Martin, one of our newest hires, has successfully completed his Field Training and is now working as a solo officer. Congratulations, Brandon!
Economic Development/ ERA	• Staff received the quote for the demolition of the Randy's Diner site and will be discussing with the Strike Team at its meeting on Tuesday. • The Fire District has requested and been granted permission to use the vacant buildings owned by the ERA for training. • The Police Department will be using the vacant paint store building for storage until the Evans Plant storage buildings are vacated by Waste water once the new facility is up and running.
Parks	• All mowing operations are on schedule. • Staff continue to prune trees and shrubs. • Staff have begun to make repairs to playground surfaces. • Staff performed a burial on 9/1/16. • Staff continue to edge all sidewalks and curb lines. • Staff has had to adjust our weekly schedules to allow for the reduction in available seasonal staff that have returned to school. There won't be a reduction in the service level however, some trimming and edging work will now be done on Saturday and Sunday.
PW Operations	• The automatic gates at the head of the ditch have been repaired. • Staff is finished spraying weeds in ROW locations. • Staff is working on pricing for repairs to a damaged section of 8th avenue. • Staff is working with landowners along some of our ditch laterals on the west side of town to perform preventative maintenance. • Street sweeping will resume 9/6/16. • The City encountered a culvert failure on county road 394 that caused the road to fail as well. A contractor was onsite 9/1/16 to perform the needed repairs.

Waste Water Operations	• Staff responded last weekend to a sewer main backup at 4602 Grand Canyon (Hill-N-Park) caused by roots and paper debris. • Jetting has begun on State St. from 31st to 37th. It is unknown why this stretch of mainline collects grit, but until the cause is identified this will need to be cleaned periodically. • Staff will begin jetting in the Sundown and Platte Valley Subdivisions next week. • Staff scheduled three candidates for follow up interviews for the vacant position this week. • All staff attended the Fire Safety training taught by the HR Safety and Risk Management Coordinator. • The WW Division recently purchased and just received this Kubota RTV to replace the John Deere Gator that was scheduled for replacement in the Asset Management Plan.
Waste Water Treatment Plant	• Site dewatering began on Monday 8/29 to the HNP lagoons. At the end of Tuesday 8/30 the dewatering operation was terminated due to staff concerns of the discharge overfilling the lagoons. A decision has been made to bypass the lagoons with the discharge and go directly to the HNP outfall headwall. This is an open channel that connects to the S. Platte River. In order to do so, Garney had to acquire a permit from CDPHE. The permit arrived today and Garney crews are now installing pipe to the headwall. • Now on site are construction office trailers and storage conex containers. Garney is also assembling a storage barn on the site. • The City informed Xcel that service to the site would need to be underground rather than overhead. Currently, Xcel is acquiring the permits and contracting a directional boring firm to complete the installation of service to the site. The service will be a permanent one rather than temporary.

Operation Twisted Sister After Action Report

7/13/2016

City of
Evans, Colorado
OEM Office of Emergency Management

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EXECUTIVE SUMMARY

Operation Twisted Sister was very informative and was a great team building exercise for staff working together in the EOC. We changed things up a little for this exercise and focused on a discussion based table top exercise. With this being the summer exercise and summer camp was using the Cities primary EOC, we were able to use our backup EOC. This was the second time we have operated the backup EOC at the Public Works Operation building. This exercise gave staff the opportunity to work together as team and develop a layout for the EOC and to work their way through the early stages of a devastating tornado. There were two items that we identified that staff would like to continue to see:

- Discussion based exercises, and
- Talking their way through hazard specific annexes

There were five themes identified and a total of eight take-a-way's identified during Operation Twisted Sister. They include:

- **Communication**
  - Internet & Wi-Fi
  - Radios
  - Internal and external communications
- **Training**
  - Greeley/Evans joint training
  - Position specific training
- **EOC**
  - Layout and location
- **MOU's**
  - Private and IGA's updates and new agreements
- **Roles and Responsibilities**
  - Local role vs. County role

BACKGROUND

As part of our quarterly EOC training, Emergency Management chooses exercises where we can test an annex or the improvements addressed in previous After Action Reports. We haven't tested the Tornado Annex in two years and since we are in tornado season, this was an opportunity for the group to test it and refresh everyone on their roles and responsibilities. All recent exercises in the EOC have been functional exercises; by having a discussion based exercise, the group had the opportunity to work their way through the incident. The discussion based exercise also gave the group an opportunity to see what everyone else does and why. OEM also wanted to use this time for team building since most of the staff don't work directly with each other daily.

The scenario was set around a tornado touching down at approximately 7:35 pm in a field south of 37th Street and 23rd Avenue. Reports indicate that the tornado was moving northeast and was on the ground for around a half an hour, causing power outages throughout the City. Evans Fire Station Two took a direct hit from the tornado. Fortunately, fire crews were returning from a call when the tornado touched down and weren't in the building. Having a tornado heading towards heavily populated areas during early evening hours increases the likelihood of mass casualties. With Evans Fire Station Two destroyed, the availability of resources to respond was greatly diminished. The goal of having the tornado touch down at this time of day and in this location was to present EOC staff with a worst case scenario.

GOALS

There were three goals for this exercise. Each goal and their definitions are listed below:

1. **EOC Setup –** Work as a team to determine the most effective layout for the backup EOC.
2. **Team building and problem solving –** Work as a team to identify unmet needs and as a team, how we can address those unmet needs.
3. **Maintain Situational Awareness –** Each position should maintain situational awareness throughout the incident to have a clear picture of the incident. Staff should maintain control of resources status and commitment levels throughout the incident.

SUSTAINS

EOC staff commented several times that they liked this type of discussion based exercises. Moving forward, we should look at completing more discussion based exercises which would lead to a functional exercise. This type of exercise also gave the group the opportunity to think ahead in the incident and better plan for what the incident/ incident commander may need, thus giving the EOC the opportunity to be inline or ahead of the incident. One goal of the EOC is to anticipate what the incident commander may need so that we are able to fill resource requests more quickly.

EOC staff also stated that by reviewing the Tornado Annex as the incident evolved, it gave them the opportunity to compare the actions, roles, and responsibilities currently taking place vs. what the plan describes. This added value by ensuring that the annex and actions taken by staff were in line with one another and allowed us to determine if the annex was accurate or if there were discrepancies that needed to be addressed.

TAKE AWAY

Communications

Internet & Wi-Fi:

Lack of internet and Wi-Fi is listed first since it is a high priority and is a critical infrastructure that can impact the EOC's ability to be efficient. Across the board, internet and Wi-Fi was one issue that everyone identified as significant that needs to be corrected quickly. Last summer we

had an exercise in the backup EOC where lack of internet and Wi-Fi was an issue identified then, but still had not been installed. Evans' IT Department has been working on getting internet and Wi-Fi connected to the Operations Building, but at the time of the exercise it was not operational. In conversations with Evans' IT Department, most of the infrastructure is in place for internet and Wi-Fi to be functional, but they just haven't had an opportunity to devote time to work on the system to bring it on line.

Radios:
This was listed specifically second as a take-away for a couple reasons. This is a high priority that has been identified in multiple After Actions Reports. We need to establish a communication plan for Public Works. Currently we use cell phones to communicate with Public Works and we don't have a back-up plan for the cell phones. The question has been asked multiple times, what happens when we can't charge cell phones or cell towers are down? How can we communicate with public works? We already have an active radio license with the FCC, now we need to look at installing radios into trucks and obtaining some handheld radios.

Communications:
Communication is addressed in almost every After Action Report. Some communication issues identified for this exercise included internal and external communication. It was determined that staff working within the EOC communicate well, however not always effectively. To improve communication skills within the EOC, we need to be better at active listening, and working together more as a group to understand more effective communication channels that we can then use within the EOC.
We continue to see a need to work on our internal and external communication skills. As experienced in the 2013 and 2015 floods, we often share information within the EOC, but at times we are slow to share information with staff working in the field or throughout the City. We also need to publish pre-scripted messages to the public quicker to inform the public about the incident, what actions they need to take, and what we are doing to manage the incident. In both cases, we need to establish processes, procedures, and messages that we can disseminate. As these processes are defined and policies are drafted, EOC staff, management, and team leaders need to practice and learn the newly defined process and policies inside and out.

Training

Greeley/Evans joint training:

During the exercise, it was brought up that events such as the one we tested today, Greeley may be effected too. Knowing that Greeley would be working on managing their incident, how could we manage both incidents together as one? How would that work? Could it work? The answer to them all should be yes. In order to make that happen, and happen well is for both organizations to train and exercise together.

Position Specific Training:
During the exercise it was identified that individuals would like to receive position specific training for roles in which they function. This would allow for staff to gain more experience in their roles in the EOC. By providing some position specific training, staff not only gain more experience in the roles and responsibilities, but boost their confidence in what they are doing. This is a huge benefit for not only staff in that position, but it will also boost morale and productivity in the EOC.

EOC

One of the objectives of the exercise was to determine the best layout of the backup EOC. Through discussion, the group talked about leaving logistics and planning at the two workstations in the back of the room. Staff talked about separating the two remaining tables and placing one on either side of the curtained walls. This would assist with some of the noise created by radios and conversations. The next step is to hold a functional exercise in the backup EOC and test the new layout.

There was also discussion during the exercise around EOC locations and sizes. OEM agrees that both EOC's are a little small for what we need. However, both the activity room and the Public Works Operations building are our best options that are currently available. OEM will continue to look for options as they become available.

MOU's

During the exercise, it was agreed that we still need to look at updating MOU's that are currently in place. The exercise also showed that we have a lot of work ahead of us to reach out to our neighbors, NGO's and private organizations that can help us during a disaster. By building these relationships with our partners and entering into agreements and have MOU's current we will be better prepared to serve our community and help with recovery.

Roles and Responsibilities

From the exercise, one observation that was made was that we needed to distinguish the roles between the City OEM and Weld County OEM and when Weld County would take the lead on the OEM functions. Conversations are currently taking place between Evans OEM and Weld County OEM around this conversation. Both organizations are also currently working on updating an MOU that will describe this relationship. Once both parties have agreed on roles, how they will share responsibly and MOU's are signed, this process will be included in upcoming exercises so that we can test this function.

IMPLEMENTATION PLAN

	NEED	Person responsible to fix the Need	Due Date	Date Completed
1	Wireless Internet at the backup EOC	Kevin	10/2016	
2	Radios for Public Works	Scott/ Dave	TBD	
3	Communications	Dave/ Kristan	12/2016	
4	Training	Dave	TBD	
5	MOU's	Scott, Dawn, Jacque, Dave	TBD	
6	EOC	Dave	12/2016	
7	Evans OEM and Weld County OEM MOU's	Dave/ Weld OEM/CC/BOCC	12/2016	
8				

Lessons Learned from the EMAC Deployment

Background

On Friday, August 5, 2106, David Burns along with 20 individuals from five Colorado State Type 3 Incident Management Teams (IMT) deployed to Ellicott City, Maryland. The 20 members of the Colorado IMT team merged with a Type 3 IMT from Pennsylvania and created a Type 2 Team. The mission of the team was to assist Howard County Maryland respond and start to recover from the devastating flood that impacted the community on July 31, 2016.

Ellicott City received about 6 inches of rain in a very short period of time, causing a flash flood and sending 6 feet of water rushing through the City. Left behind was heavy damage to buildings, streets and the loss of two individuals. The majority of the buildings were classified as destroyed. This was a historical area and many of the buildings were from the late 1800's - early 1900's with one or two established in the late 1700's. This destruction set the tone for the incident; Howard County determined that many buildings were unsafe or un-habitable, while the owners insisted on rebuilding. Most of the sewer lines were severed by flood waters, dumping raw sewage into the river, causing environmental issues.

Takeaways

Below are some of the lessons I took away from the incident that Evans can learn from:

- Only have one Incident Management Team (IMT) managing the incident.
    - There were a total of four IMT teams on the incident before it was handed back over to the locals. Two of the teams were combined to make the Type 2 team. One IMT team managed the incident until the Type 2 team took over, and one IMT team checked in resources, but did not share the information to the main IMT (complicating things).
- Review the Delegation of Authority with all members of the IMT so that everyone understands the goals and objectives of the Agencies Having Jurisdiction (AHJ).
- Have objectives that are **SMART** – **S**pecific, **M**easurable, **A**ttainable, **R**ealistic, and **T**ime sensitive.
- Run the incident on mission based objectives.
- Track resources
    - When I first arrived on scene there was not any accountability for resources on scene. It took about two days to obtain full accountability of all 500 resources on scene.
    - This is imperative for life safety and for reimbursement if the disaster becomes a federally declared disaster.
- Use the Incident Command System (ICS) as it is designed.
- Return the incident back to the locals and release resources in a timelier manner.

Summary

This was a great experience! It was an honor to represent Evans on the deploy as we helped the residents of Ellicott City and Howard County, Maryland respond and recover from this disaster. I did receive many thanks for being there and they felt fortunate to have individuals helping who had experienced firsthand what they were going through.

2015/2016 Crown Jewels Busing Program Survey

20 Schools & Over 3600 Students Surveyed….

Up 2 schools but down about 100 surveys from last year

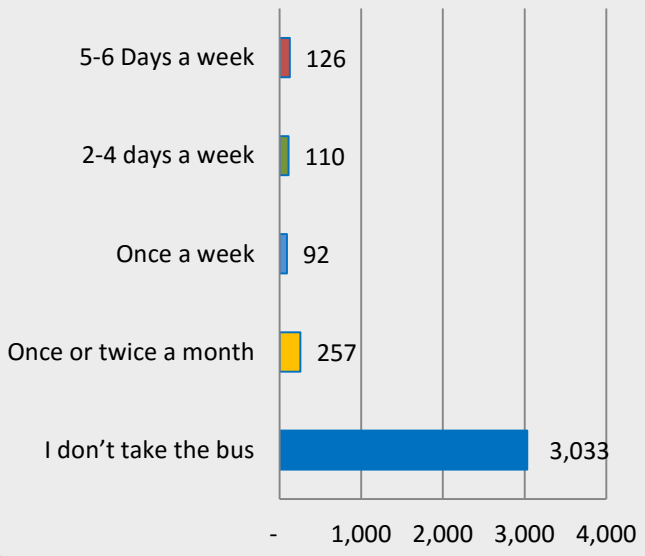
16% of students surveyed ride Greeley-Evans Transit…..

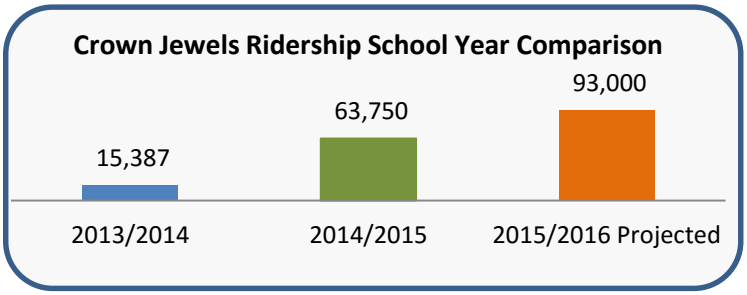
1% increase over last year

34% were not aware of the free program for students…..

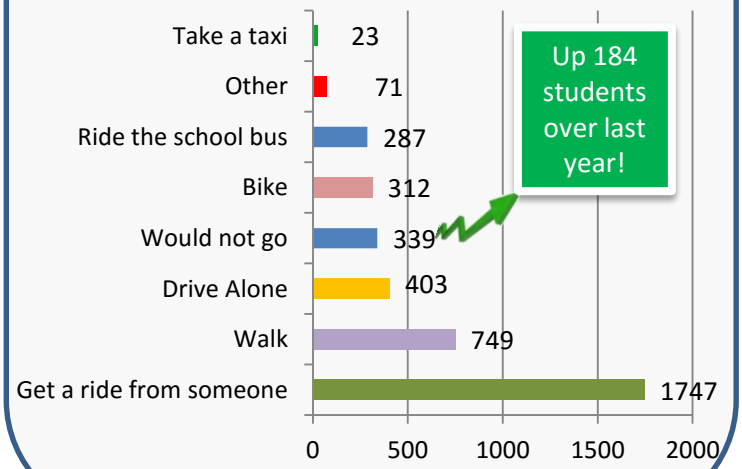
13% improvement over last year

How often do you take the bus?

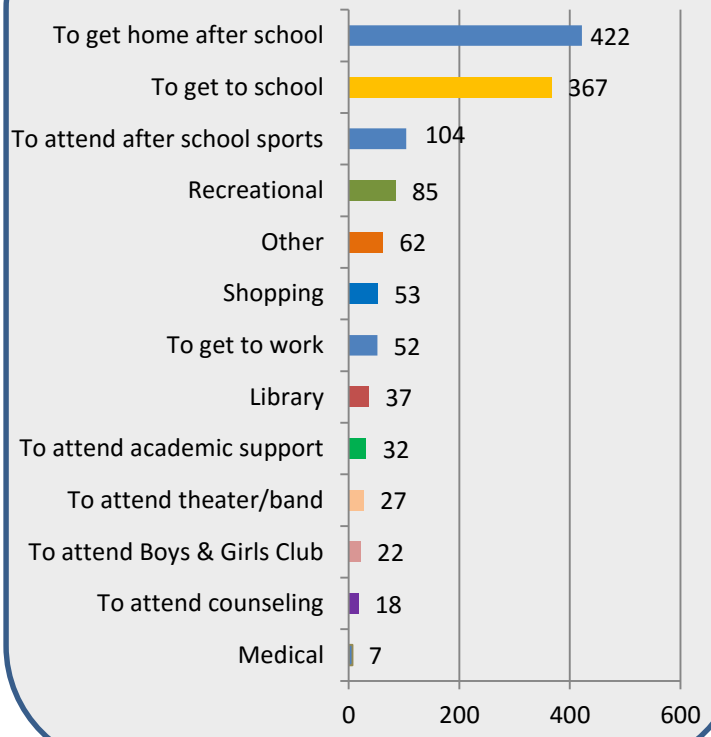




If the bus was not available how would you get there?



Why do you take the bus?

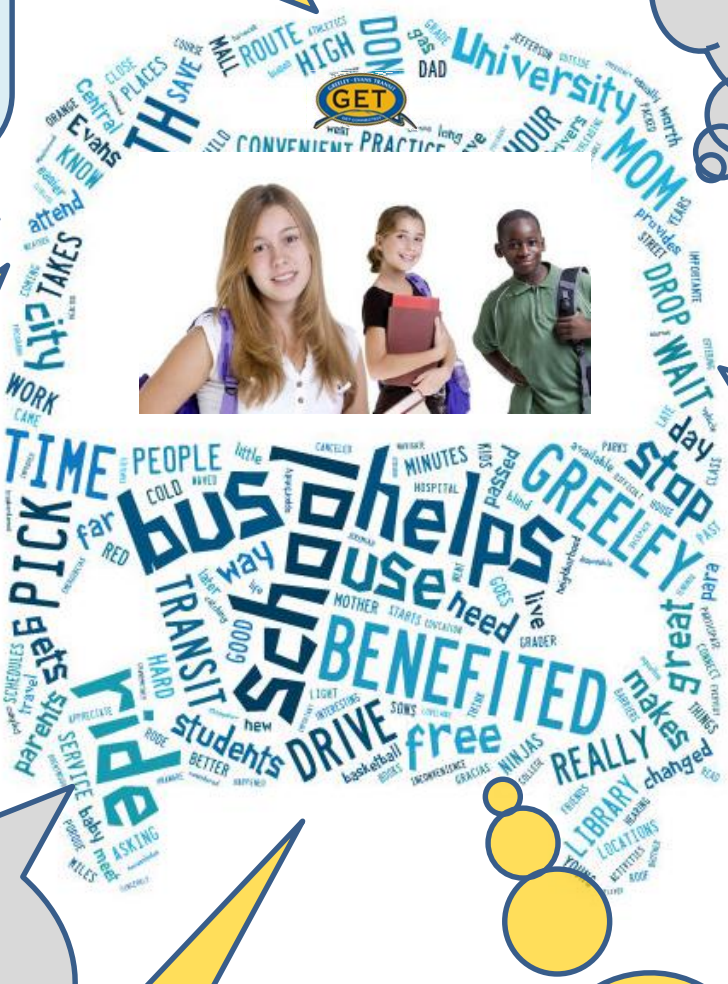


How Has GET Benefited You?

"This program has benefited me because I wouldn't have been able to go to my AIMS class during the summer. Even though it is very early for me to earn college credit"

"I used to ride the city bus to and from Northridge last year when I took Pro Start over there. Without the GET bus, I wouldn't have been able to further progress my education in culinary arts."

"Without GET, I wouldn't get to school or work or even home. I need GET!"



"The GET bus takes me home, brings me to school. If it wasn't for the GET bus I wouldn't be able to attend Early College Academy."

"This has greatly benefited me and my sister to get to school and allows me to participate in the MCJROTC. Thank you"

"I live with a blind person who cannot drive so the bus helps a lot"

"The GET bus is really important to me because I need a ride after school to get to my soccer games; it's there to help me get home so thanks to them I can go home safe"

"Using the bus has helped me a lot because every time I wanted to go to basketball practice I would always use the bus and going downtown to the library or play ball at the rec I think without the bus I would never have done all those things"

COUNCIL COMMUNICATION

DATE: September 6, 2016

AGENDA ITEM: **11.A**

SUBJECT: Adjournment to Executive Session

AGENDA ITEM DESCRIPTION:

The City Council will adjourn into an executive session to determine positions relative to matters that may be subject to negotiations, developing strategy for negotiations, and instructing negotiators, pursuant to C.R.S. 24-6-402(4)(e).

FINANCIAL SUMMARY:
N/A

RECOMMENDATION:

N/A

SUGGESTED MOTIONS:

> *"I move to go into Executive Session for the purpose of determining positions relative to matters that may be subject to negotiations, developing strategy for negotiations, and instructing negotiators, pursuant to C.R.S. 24-6-402(4)(e)."*