CITY OF GREELEY INVITATION FOR BID

11TH AVENUE TRAFFIC SIGNAL UPGRADE PROJECT - BID

BID #F24-04-033 DUE APRIL 24, 2024, BEFORE 10:00 A.M.



Serving Our Community It's A Tradition

The Office of the Purchasing Manager is a service division established to build effective partnerships through efficient and responsive procurement processes to obtain high quality goods and services for the best value.



Virtual Bid Opening Meeting

Wednesday, April 24, 2024, at 10:00 AM (MST)

F24-04-033 – 11TH AVENUE TRAFFIC SIGNAL UPGRADE PROJECT - BID

Microsoft Teams Need help?

Join the meeting now

Meeting ID: 248 768 279 893 Passcode: q8sDZZ

Dial-in by phone

<u>+1 347-966-8471,,819373659#</u> United States, New York City

Find a local number

Phone conference ID: 819 373 659#

For organizers: Meeting options | Reset dial-in PIN

SECTION 00110 BID #F24-04-033

INVITATION FOR BID

The City of Greeley, Colorado is requesting **sealed** bids for **11**TH **AVENUE TRAFFIC SIGNAL UPGRADE PROJECT - BID before APRIL 24, 2024, at 10:00 a.m. (MST)** emailed to <u>purchasing@greeleygov.com</u>. No late or faxed bids will be accepted. It is the responsibility of the vendor to ensure the solicitation documents are delivered to the correct address as noted in the Solicitation Documents. Solicitations delivered to other City of Greeley email addresses may be deemed as late and not accepted.

The City of Greeley disseminates all bids and requests for proposals through the Rocky Mountain E-Purchasing System site. Go to https://www.bidnetdirect.com, then "Bid Opportunities" and then select "The City of Greeley". Bids submitted to the City of Greeley must include Sections 00120, 00130, 00140 and 00160. Addenda must be acknowledged in Section 00120 of the bidding documents. Bidders failing to acknowledge any and all addenda may be considered non-responsive.

Each bid shall be accompanied, by a certified check drawn on a bank which is insured by the Federal Deposit Insurance corporation or a bidder's bond executed by a surety company authorized to do business in Colorado, made payable to the City of Greeley, Colorado, in an amount not less than five percent (5%) of the proposal sum as security that the successful bidder will enter into a contract to construct this project in accordance with the plans and specifications, and give bonds in the sum as hereafter provided. Checks accompanying bids not accepted will be returned.

The successful responsive and responsible bidder will be required to furnish a satisfactory performance bond and payment bond in the amount of the contract sum.

No bid shall be withdrawn after the opening on the bids without the consent of the City of Greeley, Colorado, for a period of sixty (60) days after the scheduled time of the receiving the bids.

Bid acceptance and bid evaluation. Bids shall be evaluated based on the requirements set forth in the invitation for bids, which may include criteria to determine acceptability such as inspection, testing, quality, workmanship, delivery and suitability for a particular purpose. Those criteria that will affect the bid price and be considered in evaluation for award shall be objectively measurable, such as discounts, transportation costs and total or life cycle costs. The invitation for bids shall set forth the evaluation criteria to be used. No criteria may be used in bid evaluation that are not set forth in the invitation for bids.

The City of Greeley retains the right to reject any and all bids and to waive any informality as deemed in the best interest of the city.

Questions pertaining to the project may be directed to purchasing@greeleygov.com before April 18, 2024, by 2:00 PM (MST).

Schedule of Events (subject to change)	All times are given in local Colorado time
Bid Proposal Issued	4/3/2024
Pre-Bid Conference include date/time and	4/11/2024 at 10:00 a.m. via Microsoft
location	Teams Meeting
Inquiry Deadline	4/18/2024 – by 2:00 p.m. MST
Final Addendum Issued	4/23/2024
Bid Due Date and Time	4/24/2024 – By 10:00 a.m. MST via email
	to purchasing@greeleygov.com
Interviews	N/A
Notice of Award (tentative)	4/29/2024
Notice to Proceed (tentative)	5/3/2024

Invitation for you to attend a Pre-Bid meeting via Microsoft Teams, Thursday, April 11, 2024, at 10:00 AM (MST)

Microsoft Teams Need help?

Join the meeting now

Meeting ID: 288 454 887 097 Passcode: zNdXG5

Dial-in by phone

<u>+1 347-966-8471,,396374962#</u> United States, New York City

Find a local number

Phone conference ID: 396 374 962#

For organizers: Meeting options | Reset dial-in PIN

City of Greeley, Colorado Purchasing Division

Greeley Website April 3, 2024

Section 00120

BID PROPOSAL

PROJECT: 11TH AVENUE TRAFFIC SIGNAL UPGRADE PROJECT - BID #F24-04-033

The Undersigned, having become familiar with the local conditions affecting the cost of the work, plans, drawings, and specifications attached herewith, and with advertisement for bids, the form of bid and proposal, form of bond, all of which are issued and attached and on file in the office of the Project Manager, hereby bid and propose to furnish all the labor, materials, necessary tools, and equipment and all utility and transportation service necessary to perform and complete in a workmanlike manner all of the work required in connection with the construction of the items listed on the bidding schedule in accordance with the plans and specifications as prepared by the City of Greeley, Colorado, for the sums set forth in the Bidding Schedule.

The total bid shall be the basis for establishing the amount of the Performance and Payment Bond for this project. The total bid is based on the quantities shown in the bid proposal form and the dimensions shown on the plans.

The undersigned has carefully checked the Bidding Schedule quantities against the plans and specifications before preparing this proposal and accepts the said quantities as substantially correct, both as to classification and the amounts, and as correctly listing the complete work to be done in accordance with the plans and specifications.

The undersigned, agrees to complete and file a Performance and Payment Bond within seven (7) calendar days of Section 00210: Notice of Award and further agrees to complete the contract within the dates as described in the Specifications Section 00620 Special Provisions. Official notice to proceed will not be issued until adequate Performance and Payment Bonds and other required documents are on file with the City of Greeley.

bid may be declared irregular as	any conditions or qualifying statements to this bid as otherwise the being non responsive to the Invitation for bids. The following received and the bid, as submitted, reflects any changes resulting
ATTEST	DATE
	COMPANY NAME
	BY
	SIGNATURE
	TITLE

BID SCHEDULE

11th Avenue Traffic Signal Upgrade Projects

City of Greeley Project No. 12437

Bid #F24-04-033

Item #	Contract Item	Unit	Bid Quantity	Unit Price	Total Amount
	TRAFFIC SIGNAL WORK				
1	11 th Avenue & 5 th Street (Complete traffic signal work and materials necessary to upgrade and operate traffic signals in accordance to plans and specifications)	LS	1	\$ -	\$ -
2	11th Avenue & 25th Street (Complete traffic signal work and materials necessary to upgrade and operate traffic signals in accordance to plans and specifications)	LS	1	\$ -	\$ -
3	11th Avenue & 26th Street (Complete traffic signal work and materials necessary to upgrade and operate traffic signals in accordance to plans and specifications)	LS	1	\$ -	\$ -
	Subtotal				\$ -
	ADA RAMP, SIDEWALK, & ASSOCIATED FLATWORK				
4	11th Avenue & 5th Street (Complete ADA Ramp, Sidewalk, and Associated Flatwork reconstruction in accordance to plans & specifications)	LS	1	\$ -	\$ -
5	11th Avenue & 25th Street (Complete ADA Ramp, Sidewalk, and Associated Flatwork reconstruction in accordance to plans & specifications)	LS	1	\$ -	\$ -
6	11 th Avenue & 26 th Street (Complete ADA Ramp, Sidewalk, and Associated Flatwork reconstruction in accordance to plans & specifications)	LS	1	\$ -	\$ -
	Subtotal				\$ -
	TOTAL	LS			\$ -

Requirements: Please submit a signed PDF of the bid schedule with your response.		
	Signature:	
	Title:	
	Date:	

Please click the link below to access the Section 00130 Excel spreadsheet.

SECTION 00130 - Bid Schedule - F24-04-033 - CN#12437.xlsx

COOPERATIVE PURCHASING STATEMENT

The City of Greeley encourages and participates in cooperative purchasing endeavors undertaken by or on behalf of other governmental jurisdictions. To the extent, other governmental jurisdictions are legally able to participate in cooperative purchasing endeavors; the City of Greeley supports such cooperative activities. Further, it is a specific requirement of this proposal or Request for Proposal that pricing offered herein to the City of Greeley may be offered by the vendor to any other governmental jurisdiction purchasing the same products. The vendor(s) must deal directly with any governmental agency concerning the placement of purchase orders, contractual disputes, invoicing, and payment. The City of Greeley shall not be liable for any costs or damages incurred by any other entity.

BID BOND

KNOW ALL MEN BY THESE PRESENT, that we, the undersigned	
as Principal, and	as Surety, are
hereby held and firmly bound unto the City of Greeley, Colorado, as	S Owner, 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.	

THE CONDITION of this obligation is such that whereas the Principal has submitted to the City of Greeley, Colorado, the accompanying bid and hereby made a part hereof to enter into a Contract Agreement for the construction of City of Greeley Project,

11TH AVENUE TRAFFIC SIGNAL UPGRADE PROJECT - BID #F24-04-033

WHEREAS, the Owner, as condition for receiving said bid, requires that the Principal to deposit with the Owner as Bid Guaranty equal to five percent (5%) of the amount of said bid.

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 Agreement (properly completed in accordance with said bid) and shall furnish a Performance and Payment Bond upon the forms prescribed by the Owner for the faithful performance of said Agreement; 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 shall, 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 of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such bid; and said Surety does hereby waive notice of any such extension.

Page 2 Bid Bond

seals this caused th	day of	rincipal and the Surety have hereunto set their han _, 20, and such of them as are corporation hereto affixed and these presents to be signed by first set forth above.	s have
ا	PRINCIPAL	SURETY	
Name:			
Address:			
Ву:			
		Attorney	
In-Fact:	(Seal)	(Seal)	

NOTE: Surety Companies executing bonds must be authorized to transact business in the State of Colorado and be accepted to the Owner.

NOTICE OF PRE-BID CONFERENCE

PROJECT: 11TH AVENUE TRAFFIC SIGNAL UPGRADE PROJECT - BID #F24-04-033

A pre-bid conference will be held:

On 4/11/2024, at 10:00 a.m., via Microsoft Teams Meeting. All bidders are encouraged to attend.

Join Teams Meeting

Microsoft Teams Need help?

Join the meeting now

Meeting ID: 288 454 887 097

Passcode: zNdXG5

Dial-in by phone

+1 347-966-8471,,396374962# United States, New York City

Find a local number

Phone conference ID: 396 374 962#

For organizers: Meeting options | Reset dial-in PIN

City of Greeley staff will be present to answer questions.

NOTICE OF AWARD

DATE:
TO:
Re: 11TH AVENUE TRAFFIC SIGNAL UPGRADE PROJECT - BID #F24-04-033
Dear Contractor:
The City of Greeley, Colorado (hereinafter called "the Owner") has considered the bids submitted for referenced work in response to its Invitation for Bids. You are hereby notified that your bid has been accepted for items and prices stated in the Bid Schedule in the amount of \$ You are required to execute the Contract Agreement, provide the necessary insurance certificates, the Performance and Payment Bonds within ten (10) days from the date of this Notice. If you fail to execute said Contract Agreement and furnish the necessary insurance certificates and bonds within the time allotted from this date, the Owner will be entitled to consider your rights arising out of the Owner's acceptance of your bid as abandoned and to demand payment of bid guaranty as damages. The Owner will be entitled to such other rights as may be granted by law. You are required to return an acknowledged copy of this Notice of Award and enclosures to Purchasing.
CITY OF GREELEY, COLORADO
By: Paul Trombino III
Title: Director of Public Works
ACKNOWLEDGMENT: Receipt of the foregoing Notice of Award accompanied with a Performance and Payment Bond form and a signed copy of the Contract Document is hereby acknowledged this day of, 20
Bidder:
By:

CONTRACT

THIS AGREEMENT made and entered into this ______day of ____, 20___, by and between the City of Greeley, Colorado, and under the laws of the state of Colorado, party of the first part, termed in the Contract Documents as the "Owner" and party of the second part, termed in the Contract Documents as "Contractor."

WITNESSETH: In consideration of monetary compensation to be paid by the Owner to the Contractor at the time and in the manner hereinafter provided, the said Contractor has agreed, and does hereby agree, to furnish all labor, tools, equipment and material and to pay for all such items and to construct in every detail, to wit:

PROJECT: 11TH AVENUE TRAFFIC SIGNAL UPGRADE PROJECT - BID #F24-04-033

at the price bid on the Proposal Form of \$_____all to the satisfaction and under the general supervision of the Project Manager for the City of Greeley, Colorado.

The Contract Documents consist of this Agreement, the Conditions of the Contract (General, Supplementary and other Conditions), the Drawings, the Specifications, all Addenda issued prior to and all Modifications issued after execution of this Agreement. These form the Contract, and all are as fully a part of the Contract as if attached to this Agreement or repeated herein.

The Project Manager named herein shall interpret and construe the Contract Documents, reconciling any apparent or alleged conflicts and inconsistencies therein; and all of the work and all details thereof shall be subject to the approval and determination of the Project Manager as to whether or not the work is in accordance with Contract Documents. Said City Project Manager shall be the final arbiter and shall determine any and all questions that may arise concerning the Contract Documents, the performance of the work, the workmanship, quality of materials and the acceptability of the completed project. The decision of the Project Manager on all questions shall be final, conclusive and binding.

AND FOR SAID CONSIDERATION IT IS FURTHER PARTICULARLY AGREED BETWEEN THE PARTIES TO THIS AGREEMENT.

- 1. That construction and installation of the above enumerated work for the Owner shall be completed and ready for use in accordance with the time of completion described in the Bid form of this Contract. The Owner reserves the right to void the contract if the work does not commence by the agreed upon schedule provided in the bid documents and/or executed contract.
- 2. That said work and materials for the project covered by the Contract Documents shall be completely installed and delivered to the Owner, within the time above stated, clear and free from any and all liens, claims, and demands of any kind.
- 3. The full compensation to be paid the Contractor by the Owner pursuant to the terms of this Contract shall be payable as provided in the Contract Documents.

Contract

Page 3

4. This Contract consists of the following component parts, all of which are as fully a part of the Contract as herein set out verbatim, or if not attached, as if hereto attached:

Section 00110: Invitation for Bid Section 00120: Bid Proposal Section 00130: Bid Schedule Section 00140: Bid Bond Section 00160: Pre-bid meeting Section 00210: Notice of Award Section 00310: Contract Section 00320: Performance Bond Section 00330: Payment Bond Section 00340: Certificate of Insurance Section 00350: Lien Waiver Release Section 00360: Debarment/Suspension Certification Statement Section 00410: Notice to Proceed

Section 00420: Project Manager Notification

Section 00430: Certificate of Substantial Completion

Section 00440: Final Completion

Section 00510: General Conditions of the Contract

Section 00520: Subcontractors List Section 00620: Special Provisions

Any modifications, including change orders, duly delivered after execution of this Agreement.

IN WITNESS WHEREOF, the parties have caused this instrument to be executed as of the day and year first above written.

EXECUTED:	CONTRACTOR:
The City of Greeley	
Approved as to Substance	
Signed:	Signed:
Name:	Name:
Title:	Title:
Date:	Date:
ENDORSED:	
The City of Greeley	
Approved as to Legal Form	
Signed:	_
Name:	
Title:	
Date:	-
ENDORSED:	
The City of Greeley	
Certification of Contract Funds Availability	
Signed:	_
Name:	
Title:	-
Date:	-

REVISED 10-20-22

PERFORMANCE BOND

Bond No
KNOWN ALL MEN BY THESE PRESENTS: that
(Firm)
(Address)
(an Individual), (a Partnership), (a Corporation), hereinafter referred to as "the Principal", and
(Firm)
(Address)
hereinafter referred to as "the Surety", are held and firmly bound unto the CITY OF GREELEY, 1000 10th Street, Greeley, CO. 80631, a Municipal Corporation, hereinafter referred to as "the Owner" 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 and severally, firmly by these present.
THE CONDITIONS OF THIS OBLIGATION are such that whereas the Principal entered into a certain Contract Agreement with the Owner, dated the day of, 20, a copy of which is hereto attached and made a part hereof for the performance of City of Greeley Project,

11TH AVENUE TRAFFIC SIGNAL UPGRADE PROJECT - BID #F24-04-033

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions and agreements of said Contract Agreement during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without Notice to the Surety and during the life of the guaranty period, and if he shall satisfy all claims and demands incurred under such Contract Agreement, and shall fully indemnify and save harmless the Owner from all cost and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, and 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 Agreement or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond; and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract Agreement or to the work or to the specifications.

Performance Bond Page 2	
IN WITNESS WHEREOF, this instrum 20	ent is executed this day of,
PROVIDED, FURTHER, that no final s the right of any beneficiary hereunde	ettlement between the Owner and Contractor shall abridger, whose claims may be unsatisfied.
IN PRESENCE OF:	PRINCIPAL
	By:
(Corporate Seal)	(Address)
IN PRESENCE OF:	OTHER PARTNERS
	By:
	By:
	By:
IN PRESENCE OF:	SURETY
(Attorney-in-Fact)	By:

NOTE: Date of Bond must not be prior to date of Contract Agreement. If Contractor is Partnership, all partners should execute bond.

(Address)

(SURETY SEAL)

IMPORTANT: Surety Company must be authorized to transact business in the State of Colorado and be acceptable to the Owner.

PAYMENT BOND

Bond No
KNOWN ALL MEN BY THESE PRESENT: that (Firm)
(Address)(an Individual), (a Partnership), (a Corporation), hereinafter referred to as "the Principal", and (Firm)
(Address)
hereinafter referred to as "the Surety", are held and firmly bound unto the CITY OF GREELEY, 1000 10th Street, Greeley, Co. 80631, a Municipal Corporation, hereinafter referred to as "the Owner", in the penal sum of
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 CONDITIONS OF THIS OBLIGATION are such that whereas the Principal entered into a certain Contract Agreement with the Owner, dated the day of, 20, a copy of which is hereto attached and made a part hereof for the performance of

11TH AVENUE TRAFFIC SIGNAL UPGRADE PROJECT - BID #F24-04-033

NOW, THEREFORE, if the Principal shall 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 Agreement, and any equipment and tools, consumed, rented 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 Agreement or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond; and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract Agreement or to the work or to the specifications.

Payment Bond Page 2 IN WITNESS WHEREOF, this instrument is executed this day of , PROVIDED, FURTHER, that no final settlement between the Owner and Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied. IN PRESENCE OF: **PRINCIPAL** _____ By: _____ (Corporate Seal) (Address) IN PRESENCE OF: OTHER PARTNERS By: _____ By: _____ By: _____ IN PRESENCE OF: SURETY By: _____ (Attorney-in-Fact)

NOTE: Date of bond must not be prior to date of Contract Agreement. If Contractor is Partnership, all partners should execute Bond.

(Address)

IMPORTANT: Surety Company must be authorized to transact business in the State of Colorado and be acceptable to the Owner.

(SURETY SEAL)

SECTION 00340 CERTIFICATE OF INSURANCE

	Client	#: 12	2170	j			GRE			
-	CERT	IFI	C	ATE OF LIA	BIL	ITY II	NSUR	ANCE		4/2013
CI BI RI	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.									
th	IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(les) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).									
PRO	UCER				NAME:	-1				
	Insurance Company				PHONE (A/C, No	. Ext:		(A/C, No)		
). Box 1234				AD DRES	ss:		,,,,,,,		
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INSU	Sample Certificate				INSURE	RA: Financi	ial Rating o	f A		
ı	Sample Certificate				INSURER B:					
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l					INSURE	RD:				
					INSURE	RE:				
					INSURE	RF:		DE1481811 11111111111		
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LTR	TYPE OF INSURANCE	MSR	WVD	POLICYNUMBER		MM/DD/YYYY	MWDD*****	LMI	rs	
	GENERAL LIABILITY							EACH OCCURRENCE	\$1,00	000,00
ll	X COMMERCIAL GENERAL LIMBILITY	ı						PREMISES (Ea occurrence)	s100,	,000
ll	CLAMS-MADE X OCCUR	ı						MED EXP (Any one person)	\$5,00	10
		ı						PERSONAL & ADVINJURY	\$1,00	00,000
		ı						GENERAL AGGREGATE		00,000
	GENL AGGREGATE LIMIT APPLIES PER:	ı						PRODUCTS - COMP/OP AGG	\$2,00	00,000
Ш	POLICY PRO- LCC LCC	<u> </u>	—						\$	
	AUTOMOBILE LIABILITY	ı						COMBINED SINGLE LIMIT (Ea accident)	\$1.00	000,00
	X ANY AUTO	ı						BODILY INJURY (Perperson)	\$	
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\Box	WORKERS COMPENSATION	-	\vdash	 				X WC STATU-	-	
	AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE	l						E.L. EACH ACCIDENT	s100.	.000
	OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	N/A						E.L. DISEASE - EA EMPLOYE	s100.	,000
	If yes, describe under DESCRIPTION OF OPERATIONS below							E.L. DISEASE-POLICY LIMIT	s500.	,000
		Г								
City	DESCRIPTION OF OPERATIONS/ LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space in required) City of Greeley is named as Additional insured on General Liability. Waiver of subrogation is included on Work Compensation. This insurance is primary and noncontributory to insurance policies held by the City.									
CER	CERTIFICATE HOLDER CANCELLATION									
	City of Greeley 1000 10th St Greeley, CO 80631-3808 SHOULD ANY OF THE ABOVE DESCRIBED POLICES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.									
					AUTHO	REZED REPRESE	NTATIVE			

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ACORD 25 (2009/09) 1 of 1 The ACORD name and logo are registered marks of ACORD #8786373/M786364

DSM

LIEN WAIVER RELEASE

TO: City of Greeley, Colorado (hereinafter referred to as "the OWNER".)

FROM: (hereinafter referred to as "the CONTRACTOR")

PROJECT: 11TH AVENUE TRAFFIC SIGNAL UPGRADE PROJECT - BID #F24-04-033

- 1. The CONTRACTOR does hereby release all Mechanic's Liens Rights, Miller Act Claim (40 USCA 270), Stop Notice, Equitable Liens and Labor and Material Bond Rights resulting from labor and/or materials, subcontract work, equipment or other work, rents, services or supplies heretofore furnished in and for the construction, design, improvement, alteration, additions to or repair of the above described project.
- 2. This release is given for and in consideration of the sum of \$ and other good and valuable consideration. If no dollar consideration is herein recited, it is acknowledged that other adequate consideration has been received by the CONTRACTOR for this release.
- 3. In further consideration of the payment made or to be made as above set forth, and to induce the OWNER to make said payment, the CONTRACTOR agrees to defend and hold harmless the OWNER, employees, agents and assigns from any claim or claims hereinafter made by the CONTRACTOR and/or its material suppliers, subcontractors or employees, servants, agents or assigns of such persons against the project. The CONTRACTOR agrees to indemnify or reimburse all persons so relying upon this release for any and all sums, including attorney's fees and costs, which may be incurred as the result of any such claims.
- 4. It is acknowledged that the designation of the above project constitutes an adequate description of the property and improvements for which the CONTRACTOR has received consideration for this release.
- 5. It is further warranted and represented that all such claims against the CONTRACTOR or the CONTRACTOR's subcontractors and/or material suppliers have been paid or that arrangements, satisfactory to the OWNER and CONTRACTOR, have been made for such payments.
- 6. It is acknowledged that this release is for the benefit of and may be relied upon by the OWNER, the CONTRACTOR, and construction lender and the principal and surety on any labor and material bond for the project.

***(partial) release of a	Il rights, claims and de ing to the above refer	emands of the CONT renced project. If pa	*** (full, final and complete) RACTOR against the OWNER rtial, all rights and claims on h, 20 .
Dated this	day of	, 20	
CONTRACTOR			
Ву:			
Title:			
STATE OF))ss.)		
The foregoing instrumen	t was acknowledged b	efore me this	day of,
20by			
My Commission expires:			
		Notary Public	
***Strike when not appl	icable		

Debarment/Suspension Certification Statement

The proposer certifies that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any Federal, State, County, Municipal or any other department or agency thereof. The proposer certifies that it will provide immediate written notice to the City if at any time the proposer learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstance.

JEI # (Optional)	
lame of Organization	
address	
authorized Signature	
itle	
Pate	

NOTICE TO PROCEED

Month , 20

TO: NAME
PROJECT: 11TH AVENUE TRAFFIC SIGNAL UPGRADE PROJECT - BID #F24-04-033
To Whom It May Concern:
You are hereby notified to commence work on the above-referenced project in accordance with the Contract Agreement dated Month $$, 20 $$.
You are to complete this project by Month , 20
CITY OF GREELEY, COLORADO
By:
Title:

Signature

PROJECT MANAGER NOTIFICATION

_______, 20______ TO:

PROJECT: 11TH AVENUE TRAFFIC SIGNAL UPGRADE PROJECT - BID #F24-04-033

The Owner hereby designates Scott Logan as its Project Manager and authorizes this individual, under the authority of the Director of Public Works to make all necessary and proper decisions with reference to the project. Contract interpretations, change orders and other requests for clarification or instruction shall be directed to the Project Manager. The Director of Public Works shall be authorized to bind the Owner with respect to any decision made in accordance with the contract document.

	CITY OF GREELEY, COLORADO
By:	
Title: _	

CERTIFICATE OF SUBSTANTIAL COMPLETION

TO: **CONTRACTOR**

PROJECT: 11TH AVENUE TRAFFIC SIGNAL UPGRADE PROJECT - BID #F24-04-033

Project or designated portion shall include: Describe Scope.

The work performed under this contract has been reviewed and found to be substantially complete. The Date of Substantial Completion of the Project or portion thereof designated above is hereby established as Month , 20 .

The date of commencement of applicable warranties required by the Contract Documents is stipulated in Section 00440 - Certificate of Final Acceptance.

DEFINITION OF DATE OF SUBSTANTIAL COMPLETION

The Date of Substantial Completion of the Work or designated portion thereof is the date certified by the Project Manager when construction is sufficiently complete, in accordance with the Contract Documents, so the Owner can occupy or utilize the Work or designated portion thereof for the use for which it is intended, as expressed in the Contract Documents.

A list of items to be completed or corrected, prepared by the Contractor and verified and amended by the Project Manager is attached hereto. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. The date of commencement of warranties for items on the attached list is as stipulated in Section 00440 – Certificate of Final Acceptance.

The Owner shall operate and maintain the Work or portion of the Work described above from the Date of Substantial Completion and be responsible for all costs associated with the completed work excluding cost related to warrantee work.

Page 2
The Contractor will complete or correct the Work on the list of items attached hereto within days from the above Date of Substantial Completion.
Contractor
Owner
(NoteOwner's and Contractor's legal and insurance counsel should review and determine insurance requirements and coverage; Contractor shall secure consent of surety company, if

Certificate of Substantial Completion

any.)

CERTIFICATE OF FINAL ACCEPTANCE

TO: **CONTRACTOR**

PROJECT NAME: 11TH AVENUE TRAFFIC SIGNAL UPGRADE PROJECT - BID#F24-04-033

The work performed under this contract has been reviewed and found to meet the definition of final acceptance. This Certificate of Final Acceptance applies to the whole of the work.

The Date of Final Acceptance of the Project designated above is hereby established as: Month , 20 at 2:00 pm. This date is also the date of commencement of applicable warranties associated with the Project described above and as required by the Contract Documents.

DEFINITION OF DATE OF FINAL ACCEPTANCE

The Date of Final Acceptance of the Work is the date certified by the City of Greeley's Project Manager when the work is 100% complete, in accordance with the Contract Documents, as amended by change order(s), or as amended below:

Amendment to the Certificate of Final Completion (if any): Decribe Ammendments.

The Contractor and/or the City Of Greeley shall define any claims or requests for additional compensation above (or as attachments to this document).

Final Acceptance shall not be achieved until the Contractor provides the City Of Greeley with all contract specified Contractor and Sub-contractor close out documents including final lien waivers, releases, insurances, manuals, training, test results, warranties, and other documents required by the Contract Documents, as amended.

Upon issuance of the Certificate of Final Acceptance the Contractor may submit an application for payment requesting final payment for the entire Work. Liquidated damages (if any) will be assessed at this time.

Contractor's acceptance of the final payment shall constitute a waiver by the Contractor of all claims arising out of or relating to the Work; except as noted under 'Amendment to the Certificate of Final Acceptance' above.

Agreed:				
	20		20	
Contractor's Representative	DATE	Project Manager (COG)	DATE	

Section 00510

General Conditions (Enter Reference)

Please click the link below to access Section 00510.

SECTION 00510 General Conditions 5-12-20 F24-04-033.pdf



SECTION 00520 SUBCONTRACTORS/MATERIALS SUPPLIERS AND RELATED DATA

Firm Name:	City Contractors License #	
	Primary Contractor	
PROJECT:	Address:	
(use additional sheets as necess	 laterials Suppliers to be utilized, please provide the following inforr ary):	
Phone Number:	Fax Number:	
Proposed work and percentage of	f total work to be assigned	
	Fax Number: f total work to be assignedPercentage:	9
Firm Name:	City Contractors License #	····
Address:	Fax Number:	
Prone Number:	Fax Number:	
Froposed work and percentage of	f total work to be assignedPercentage:	
	City Contractors License #	
Address:		
Phone Number:	Fax Number:	
Proposed work and percentage of	f total work to be assigned	
	f total work to be assignedPercentage:	%
Firm Name:	City Contractors License #	· · · · · · · · · · · · · · · · · · ·
Address:	Fax Number:	
Proposed work and percentage of	f total work to be assigned	
rioposed work and percentage of	Percentage:	_%
	r elcentage	
Firm Name:	City Contractors License #	
Address:	Fax Number:	
Phone Number:	hax Number:	
Proposed work and percentage of	i total work to be assigned	
	Percentage:	%

If the Primary Contractor adds any Subcontractors or Materials Suppliers during the duration of the project, the Primary Contractor will supply the City with an updated form before the Subcontractor or Materials Supplier will be allowed to work on the project.

DR 160 (9/87) DEPARTMENT OF REVENUE 1375 SHERMAN STREET DENVER, COLORADO 80261

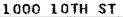
THIS LICENSE IS NOT TRANSFERABLE

State of Colorado

CERTIFICATE OF EXEMPTION FOR SALES AND USE TAX ONLY

GREELEY CITY OF 1000 10TH ST GREELEY CO 80631-3982

	LIABILITY INFORMATION	
ACCOUNT NUMBER		ISSUE DATE
98-03320	03 057 8600 9 120180	SEP 02 1988



GREELEY CO



Executive Director Department of Revenue

Substantial Completion Punchlist Items

CITY OF GREELEY PUBLIC WORKS DEPARTMENT

11th Avenue Traffic Signal Upgrade Projects

City of Greeley Project No. 12437

SECTION 00620 SPECIAL PROVISIONS

PROJECT DESCRIPTION

This is a lump sum bid item includes the traffic signal work and ADA ramp/sidewalk reconstruction. The traffic signal work includes all work and materials necessary to upgrade and operate traffic signals at the 11th Avenue & 5th Street, 11th Avenue & 25th Street, and 11th Avenue & 26th Street intersections. This work also includes installing signal equipment such as hand holes, traffic signal cabinets, wiring, push buttons, signal heads and other equipment indicated on plans provided in Appendix B, C, and D. The work specified below describes the installation of necessary material and equipment to complete traffic signal installations and/or electrical systems. All materials and labor shall be included in the base bid cost except for City furnished materials listed below. Incidental work includes performing traffic control, locates, and other associated work.

The ADA ramp/sidewalk work includes the reconstruction of the ramps and adjacent sidewalk sections as shown on the plans.

All work for this project shall be completed in accordance to the these specifications, the plans, any special provisions, and all supplemental documents including the current Colorado Department of Transportation specifications or City of Greeley specifications whichever is more stringent.

The City will furnish the following items:

- Video Detection Devices
- Traffic Signal Heads
- Pedestrian Count-down Signal Heads
- Pedestrian Push Buttons
- Pedestal Pole (without base)
- Traffic Signal Controller Cabinet & Operating Equipment
- Pull boxes
- Backplates
- CCTV cameras

Electrical equipment shall conform to the standards of the National Electrical Manufacturers Association. Material and work shall conform to the applicable requirements of the National Electrical Code and any local ordinance, which may apply.

TIME to COMPLETE Project is between June 1st and August 1, 2024.

(No work can be completed at the 11th Avenue/5th Street intersection between June 26th and July 7th due to the Stampede Event)

GENERAL

Prime Contractor Participation; Perform at least 55 percent of the original contract amount with the Contractor's own organization. The Contractor's own organization is defined as workers the Contractor employs and pays directly as well as equipment the Contractor owns or rents, either with or without operators. Submit documentation accordingly to indicate what work the Contractor's own organization is performing and the dollar value of that work. Use the following calculation and this shall be submitted with the bid:

All bidders will furnish with their bid a complete written list of clients for projects completed in the past two years. List shall include project title, name and contact information.

In case of conflict, documents will have the following priorities: (1) General Conditions, (2) Special Provisions, (3) Plans, (4) Governing documents for relevant construction element listed in the following Governing Specifications Table:

Table 1:	Governing	Specifications
----------	-----------	-----------------------

Construction Element	Governing Document	
All Construction	City of Greeley Design Criteria and Construction Specifications	
	Manual (DCCSM)	
Traffic Signal	City of Greeley 2021 Traffic Signal Standards & Manual on Uniform	
Installations	Traffic Control Devices (MUTCD)	
Concrete	Colorado Department of Transportation (CDOT) Standard	
	Specifications for Road and Bridge Construction & CDOT	
	M&S Standards	
Erosion Control	Mile High Flood District (MHFD) Criteria Manual Volume 3	
Traffic Control	Manual on Uniform Traffic Control Devices (MUTCD) and 2021 City	
	of Greeley Method of Handling Traffic Manual (MHTM)	

ALL CONSTRUCTION WILL MEET THE AMERICANS WITH DISABILITIES ACT (ADA) CONSTRUCTION SPECIFICATIONS.

PROJECT LOCATIONS

The traffic signal work, sidewalk, and ADA ramp construction is located at these three locations:

- 11th Avenue & 5th Street
- 11th Avenue & 25th Street, and
- 11th Avenue & 26th Street intersections.

TIME TO COMPLETE

All traffic signal work, sidewalk, and ADA ramp construction shall be completed between June 1st and August 1, 2024.

GENERAL PROJECT WORK

These projects include mobilization, traffic control, water pollution control, dust prevention and control, site cleanup, traffic signal equipment removal/installation (i.e., hand holes, traffic signal cabinets, wiring, push buttons, signal heads, etc.), asphalt concrete grinding/removal, asphalt concrete installation, ADA ramp construction, sidewalk construction, property owner notification, replacement & installation and all other work as shown on the Plans and as directed by the Engineer.

SUMMARY OF ESTIMATED QUANTITIES

The summary of approximate quantities for traffic signal work, sidewalk, and ADA ramp construction for each intersection is provided on the following tables.

Summary of Approximate Quantities (Traffic Signal Work)

CDOT	Summary of Approximate Quant		44.7	4	44.1	
CDOT Item Code	Item Description	Unit	11th Ave & 5th St	11th Ave & 25th St	11th Ave & 26th St	Total Qty
202-00827	REMOVAL OF PULL BOX	EACH	1	2	1	4
202-00831	REMOVAL OF TRAFFIC SIGNAL HEAD	EACH		8	2	10
202-00848	REMOVAL OF TRAFFIC SIGNAL CONTROLLER AND CABINET	EACH	1	1	1	3
202-00858	REMOVAL OF PEDESTAL POLE	EACH	1	0	1	2
202-00860	REMOVAL OF PEDESTRIAN PUSH BUTTON	EACH	8	8	8	24
202-00888 202-	REMOVAL OF VIDEO DETECTION SYSTEM	EACH	2	4	4	10
XXXXX 202- XXXXX	REMOVAL OF PEDESTRIAN SIGNAL HEAD REMOVAL OF BACKPLATE	EACH EACH	8	12	8	28
202- XXXXX	REMOVAL OF WIRELESS COMMUNICATIONS UNIT	EACH	1	1	1	3
202- XXXXX	REMOVAL OF FIRE PREEMPTION UNIT	EACH	1	0	0	1
203-01598	POTHOLING	EACH	5	6	3	14
210-00827	RESET PULL BOX	EACH		1	2	3
210-00865	RESET PEDESTRIAN SIGNAL HEAD	EACH	3	0	0	3
613-00200	2 INCH ELECTRICAL CONDUIT	LF	80	70	60	210
613-00206	2 INCH ELECTRICAL CONDUIT (BORED)	LF	100	400	90	590
613-00300	3 INCH ELECTRICAL CONDUIT	LF	20	20	20	60
613-00306	3 INCH ELECTRICAL CONDUIT (BORED)	LF	200	800	180	1180
613-07199	PULL BOX (17"x30"x24") (INSTALL ONLY)	EACH	2	2	2	6
613-07199	PULL BOX (24"x36"x24") (INSTALL ONLY)	EACH	2	1	1	4
613- XXXXX	WIRING (INSTALL ONLY)	LS	1	1	1	3
614-00025	SIGN PANEL (CLASS I) (INSTALL ONLY)	SF		30	15	45
614-10161 614-70450	SIGNAL HEAD B-PLATES (INSTALL ONLY) TRAFFIC SIGNAL FACE (12-12-12-12) (INSTALL ONLY)	EACH EACH	0	4	0	28
614-72861	PEDESTRIAN PUSH BUTTON (INSTALL ONLY)	EACH	8	8	8	24
614-75219	PEDESTRIAN SIGNAL FACE (16) (COUNTDOWN) (INSTALL ONLY)	EACH	1	8	8	17
614-75336	TRAFFIC SIGNAL FACE (12-12-12) (SIDE OF POLE) (INSTALL ONLY)	EACH	2	4	3	9
614-75336	TRAFFIC SIGNAL FACE (12-12-12-12) (SIDE OF POLE) (INSTALL ONLY)	EACH	0	2	0	2
614-75336 BID #F24-04-03:	TRAFFIC SIGNAL FACE (12-12-12-12-12) (SIDE OF POLE) (INSTALL ONLY) Page 34 of 56	ЕАСН	2	0	2 04/03/2024	4

Greeley Project	et No. 12437				March 2	25, 2024
614-75848	TRAFFIC SIGNAL CONTROLLER AND CABINET (INSTALL ONLY)	EACH	1	1	1	3
(14.04455	,					
614-84455	TRAFFIC SIGNAL PEDESTAL POLE (INSTALL ONLY)	EACH	4	3	1	8
614- XXXXX	FIRE PREEMPTION UNIT AND TIMER (INSTALL ONLY)	EACH	1	1	1	3
614- XXXXX	CLOSED CIRCUIT TELEVISION CAMERA (TRAFFIC SURVEILLANCE) (INSTALL ONLY)	EACH	1	1	1	3
614- XXXXX	PEDESTRIAN PUSH BUTTON POST ASSEMBLY (INSTALL ONLY)	EACH	1	1	2	4
614- XXXXX	VEHICLE DETECTION SYSTEM (SINGLE CAMERA) (INSTALL ONLY)	EACH	4	4	4	12
625-00001	CONSTRUCTION SURVEYING (HOURLY)	HOUR	4	4	4	12
626-00000	MOBILIZATION	LS	1	1	1	3
630-00003	UNIFORMED TRAFFIC CONTROL (GPD Only)	HOUR	2	2	2	6
630-00016	TRAFFIC CONTROL	LS	1	1	1	3

Summary of Approximate Quantities (ADA Ramp, Sidewalk, & Associated Flatwork)

CDOT Item Code	Item Description	Unit	11th Ave & 5th St	11th Ave & 25th St	11th Ave & 26th St	Total Qty
202-00190	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL	SY	32	8	0	40
202-00200	REMOVAL OF SIDEWALK	SY	40	20	27	87
202-00203	REMOVAL OF CURB AND GUTTER	LF	41	20	32	93
202-00206	REMOVAL OF CONCRETE CURB RAMP	SY	80	48	49	177
202-00220	REMOVAL OF ASPHALT MAT	SY	0	0	2	2
212-01200	LANDSCAPE RESTORATION	LS	1	1	1	3
608-00000	CONCRETE SIDEWALK	SY	16	6	1	23
608-00010	CONCRETE CURB RAMP	SY	109	71	81	261
610-00020	MEDIAN COVER MATERIAL (PATTERNED CONCRETE)	SF	0	0	37	37
610-00030	MEDIAN COVER MATERIAL (CONCRETE)	SF	257	48	44	349
609-21021	CURB AND GUTTER TYPE 2 (SECTION II-M)	LF	41	0	0	41

PROJECT SUPERINTENDENT

The Contractor's Project Superintendent, designated at the pre-construction meeting, will be on the work site when needed during all construction. If the Superintendent is unable to be on the job site, then a designee will be assigned with the authority to make all required decisions. A copy of the Special Provisions will be with the Project Foreman or his designate representative at all times.

The City of Greeley requires an English speaking Superintendent/Project Manager on the job site at all times to ensure clear communication between City Staff and Contractor.

LICENSE, FEES, AND PERMITS

The Contactor shall obtain all necessary City of Greeley permits for work. City of Greeley permit fees will be waived. The Contractor is responsible to keep all permits in compliance until the can be terminated.

SUBMITTALS - MATERIALS

Contractor shall submit manufacturer's information and materials specification, testing results, and certification that the materials proposed for this project meet the specification requirements outlined in the -----

CONSTRUCTION TRAFFIC CONTROL

The Contractor shall not perform any construction work in the public right-of-way prior to receiving approval of the Traffic Control Plan from the City of Greeley. The TRAFFIC CONTROL PLAN will include the City's Method of Handling Traffic (MHT) Form. The Contractor will appoint a Traffic Control Supervisor (TCS) to this project. The TCS should be on site daily and must be available twenty-four (24) hours a day. The name and phone of the TCS will be provided to the City at the Pre-Construction Meeting. The Contractor will also provide the name and phone number of an alternate local traffic control company that will act on the Contractor's behalf in case the designated TCS cannot be reached. If Contractor is unresponsive or otherwise is deemed to not be performing traffic control duties in accordance with submitted plan, the City or its subcontractor may perform traffic control services, at cost to the Contractor. The Contractor shall furnish all temporary traffic control devices to meet the City's requirements including:

- 1. Traffic Control must meet MUTCD, CDOT and City of Greeley Standards.
- 2. Contractors shall submit and receive an approved MHT plan prior to starting construction work within the public right-of-way.
- 3. The Contractor/Owner shall schedule and expedite the work to cause the least inconvenience to the public.
- 4. An applicant shall not cause or allow interference with traffic flow on any arterial or collector street during the hours of 7:00 a.m. through 8:30 a.m. and 4:00 p.m. through 6:30 p.m. Monday through Friday. If construction on a partially closed street stops for the day, all lanes must be reopened to traffic. The Public Works Department may waive these requirements upon a finding of good cause shown by the applicant or public service provider.
- 5. Construction or repair work will not be permitted at or near the vicinity of schools or school routes and/or along adjacent collector and arterials streets between the hours of 7:00 a.m. to 8:30 a.m. and 3:30 p.m. to 6:30 p.m. Monday through Friday when school is in-session. (Except in the case of an emergency or with approval of the Traffic Services Division.)
- 6. Except in the case of an emergency, no work shall be performed between the hours of 10:00 p.m. and 7:00 a.m. unless authorized in writing by the Public Works Department. The Public Works Department shall consider overall convenience to the public and to the service provider's customers when considering allowing work between 10:00 p.m. and 7:00 a.m.
- 7. No work shall be performed on the local streets before 7:00 a.m. or after 6:00 p.m. each workday unless otherwise approved by the City Project Representative.
- 8. The Public Works Department may require that the work be done overnight and during

- weekends when necessary to expedite construction and minimize disruption to traffic.
- 9. Intersections, traffic lanes, streets and driveways shall be closed only for a minimum amount of time. Contractors must adjust their MHT plan accordingly and open closure areas when work activities and/or road hazards do not call for maintaining the closures.
- 10. The Contractor/Owner shall coordinate street and driveway closures with property owners, one (1) week prior to construction by written notification with final approval by the Traffic Services Division.
- 11. The Contractor shall maintain responsibility to change or adjust traffic control devices if conditions warrant.
- 12. All flaggers shall be properly trained according to State and Federal guidelines.
- 13. The Contractor/Owner shall repair and replace damaged or missing permanent or temporary traffic control devices immediately within the job site.
- 14. The Contractor/Owner shall maintain all necessary barricades, signs, permanent signs, temporary signs, pavement markings, and other traffic control devices between phases of construction even if construction activity ceased for a year or more.
- 15. If the traffic control is deemed insufficient, notice will be given to rectify. If after one (1) hour the deficiencies have not been corrected, the City reserves the right to temporarily suspend operations until traffic control is compliant. In life/safety circumstances, the City reserves the right to suspend operations immediately.
- 16. The Contractor/Owner shall hold harmless the City of Greeley and City staff against claims resulting from accidents involving construction work or construction traffic control.

When the Contractor's operations create a condition hazardous to traffic or the public, the Contractor shall take the necessary precautions and provide adequate means to protect those who pass through or over the work, at no expense to the City. If the Contractor shall appear to be negligent in providing such warning or protective measures, the Superintendent may direct attention to the existence of a hazard, and the Contractor at no expense to the City shall install any measures required to protect the public.

Signal turn-on/turn-off and flashing entry/exit shall be done only at the on-site direction of the Superintendent.

Only City of Greeley police officers can be stationed to work as Uniform Traffic Control personal for this project.

(No work can be completed at the 11th Avenue/5th Street intersection between June 26th and July 7th due to the Stampede Event)

PRE-CONSTRUCTION MEETING

The date for the pre-construction meeting will be announced after the bids are opened and the contract has been awarded. The Contractor will be expected to present the City with the following items at least 3 business days in advance of the pre-construction meeting:

- 1. Construction schedule for entire project. Schedule shall be updated each week.
- 2. Copy of completed City permit application.
- 3. Approved Method of Handling (MHT) Traffic Control Plan:
- 4. Traffic Control Supervisor certification and TCS's 24-hour contact phone number.
- 5. Materials Suppliers List
- 6. Subcontractors List
- 7. All concrete mix designs
- 8. Submittals for base course and steel (inlet grates, detectable warning plates, etc) & incidentals such as concrete cure, finishing aid, etc.
- 9. Material Cut Sheet/C.O.C.'s.
- 10. Method statement for erosion control including concrete washout.

All submittals will be provided to the City via the City's document management system or as directed. Failure by the Contractor to provide the aforementioned items in the specified time frame may result in postponement of the meeting. Such postponement will not result in an extension of contract time.

UTILITIES

The Contractor must contact and schedule with Xcel Energy Company of Colorado, if needed, for the installation of overhead devices including signal heads, video detection, and other devices as part of this project. Xcel Energy has overhead transmission lines along the west side of 11th Avenue at several of these intersections. The Contractor shall coordinate his or work with Xcel Energy Company. All final **service** line connections shall be coordinated by the City and shall be made by Xcel Energy Company.

Prior to excavating, the Contractor shall positively locate through potholing if necessary all potential conflicts with existing underground utilities and proposed construction, as determined by the Contractor according to proposed methods and schedule of construction. The Contractor shall modify construction plans to avoid existing underground facilities as needed, and as approved by the Engineer. Please note that Colorado811 notifies only its members who are responsible to mark their own facilities - Other facilities may exist, and it is the Contractor's responsibility to investigate, locate and avoid such facilities.

The Contractor shall be responsible for coordinating the adjustment of utilities on this project. The Contractor shall keep each utility company advised of any work being performed in the vicinity of their facilities, so that each utility company can coordinate any needed locates, adjustments or inspections.

Contractor shall provide the appropriate utility company ample notice, but not less than two (2) working days, prior to commencing activities in the vicinity of their facilities. Any additional work performed by the Contractor on behalf of the impacted utility company shall not be paid for by the City but shall be paid by the utility company requiring the work, unless otherwise agreed to in writing by the Engineer.

Known utilities within the limits of this project are:

UTILITY	CONTACT/EMAIL	PHONE/FAX
Allo Communications	John Surber John.Surber@allofiber.com	719-221-4374
AT&T	Chris Tone Ct4146@att.com	303-994-2209
Atmos Energy	Curtis Rau Curtis.Rau@atmosenergy.com	970-534-0288
Comcast	John Hamburg John_Hamburg@comast.com	970-567-4797
City of Greeley - ITS	Nate McKinney	970-301-3753
City of Greeley - Traffic	AJ Swanson AJ.Swanson@greeleygov.com	970-702-3372
City of Greeley - Water and Sewer	Brandon Valenciano Brandon.Valenciano@greeleygov.com	970-302-2403
Xcel Energy Application for Gas & Electric Services	BCLCO@xcelenergy.com	1-800-628-2121

MATERIALS INSPECTION & TESTING

Process Control (Quality Control): The selected Contractor is required to perform Process Control testing. Testing may include, but is not limited to, tests associated with the placing of concrete (slump, airontent, etc.) and tests associated with sub-grade preparation (density tests, moisture tests, etc.) and tests associated with the placing of asphalt (density tests, cores, extractions, etc.) All Process Control testing performed by the Contractor, including complete testing reports and process control logs, will be made available to the City Project Manager throughout the project.

WORKSITE CONDITIONS

At the conclusion of each workday, the Contractor will cleanup all construction materials and leave the construction site in a condition approved by the City Project Manager.

Waste material, which is deemed not reusable by the City Project Manager, will be disposed of by the Contractor at his expense.

NO PARKING SIGNS

The Contractor will be required to notify residents and businesses along streets and possibly side streets where construction is to be performed. The use of portable NO PARKING SIGNS (supplied by the City to be mounted on approved stands), will be required to aid in removing cars parked in construction zones. These signs shall meet MUTCD Standards, Section 2B.46 & 47, governing regulatory signs. "No Parking" signs will be placed at no more than 200 ft. intervals or a minimum four per block on both sides of streets in areas of construction or as needed. These signs will be placed on streets no sooner than 48 hours and no later than 24 hours in advance of work taking place. These signs shall be kept in a new condition, as instructed by the City Project Manager, or may be removed and replaced with new signs. These signs shall have the dates of construction, as well as the time of day the work will be performed. These dates and times may be added to the signs with a black erasable marker. If dates cannot be met due to scheduling or other problems, these dates and times will be changed on signs, or signs will be removed. The sign area to be written on shall be cleaned thoroughly and all new markings shall be visible and understandable to all who can read. Signs shall be returned to the City Project Manager at end of project.

WARRANTY

The Contractor is responsible for providing a TWO-YEAR warranty to the City for all work completed under this contract. The beginning of the TWO-YEAR warranty period will be established with the issuance of the Certificate of Substantial Completion. There will be no additional cost to the City for material, equipment, labor, and/or traffic control for warranty work. Warranty work will be completed in accordance with these contract specifications and within thirty (30) days of written notification by the City Public Works Department, Engineering Division, and Street Infrastructure Management.

PAYMENT

Actual payments will be based upon mutually accepted As-Built quantities. The As-Built quantities will be determined in the field with measurements jointly collected by the City Project Manager and the Contractor's Project Manager. No payment will be made on work sites that have not been completed, including clean up. Request for payments shall be made at least monthly unless approved otherwise by the City Project Manager.

FINAL PAYMENT

Payment will be made in conformance with the General Conditions of the Contract and normally processed on a monthly basis.

BID ITEM DESCRIPTIONS

<u>Item</u>

No. <u>Description</u>

- 1 11th Avenue & 5th Street Traffic Signal Work. This lump sum bid item includes all traffic signal work and materials necessary to upgrade and operate traffic signals at the 11th Avenue & 5th Street in accordance with the plans, specifications, and other requirements to meet City and State standards. All materials and labor shall be included in the lump sum bid cost except for City furnished materials. Incidental work includes performing traffic control, locates, and other associated work.
- 2 11th Avenue & 25th Street Traffic Signal Work. This lump sum bid item includes all traffic signal work and materials necessary to upgrade and operate traffic signals at the 11th Avenue & 25th Street in accordance with the plans, specifications, and other requirements to meet City and State standards. All materials and labor shall be included in the lump sum bid cost except for City furnished materials. Incidental work includes performing traffic control, locates, and other associated work.
- 3 11th Avenue & 26th Street Traffic Signal Work. This lump sum bid item includes all traffic signal work and materials necessary to upgrade and operate traffic signals at the 11th Avenue & 26th Street in accordance with the plans, specifications, and other requirements to meet City and State standards. All materials and labor shall be included in the lump sum bid cost except for City furnished materials. Incidental work includes performing traffic control, locates, and other associated work.
- 4 11th Avenue & 5th Street ADA Ramp, Sidewalk, and associated Flatwork. This lump sum bid item includes all "complete" ADA ramps, sidewalk, and associated flatwork reconstruction work and materials as shown on the plans for the 11th Avenue & 5th Street intersection. This includes performing work and following practices/practices that meet City and State standards, specifications, and other requirements. All materials and labor shall be included in the lump sum bid cost. Incidental work includes performing traffic control, asphalt/concrete/curb & gutter/truncated dome removals, saw cuts, locates, storm drain inlet protection, erosion control, seeding, and other associated work.
- 5 11th Avenue & 25th Street ADA Ramp, Sidewalk, and associated Flatwork. This lump sum bid item includes all "complete" ADA ramp, sidewalk, and associated flatwork reconstruction work and materials as shown on the plans for the 11th Avenue & 25th Street intersection. This includes performing work and following practices/practices that meet City and State standards, specifications, and other requirements. All materials and labor shall be included in the lump sum bid cost. Incidental work includes performing traffic control, asphalt/concrete/curb & gutter/truncated dome removals, saw cuts, locates, storm drain inlet protection, erosion control, seeding, and other associated work.
- 6 11th Avenue & 26th Street ADA Ramp, Sidewalk, and associated Flatwork This lump sum bid item includes all "complete" ADA ramp, sidewalk, and associated flatwork reconstruction work and materials as shown on the plans for the 11th Avenue & 26th Street intersection. This includes performing work and following practices/practices that meet City and State standards, specifications, and other requirements. All materials and labor shall be included in the lump sum bid cost. Incidental work includes performing traffic control, asphalt/concrete/curb & gutter/truncated dome removals, saw cuts, locates, storm drain inlet protection, erosion control, seeding, and other associated work.

TRAFFIC SIGNAL INSTALLATIONS – SPECIAL PROVISIONS

TS-2 EXCAVATING AND BACKFILLING

A. Excavating

Blasting shall not be done within City limits.

When trenching, the trench shall be dug only as far in advance of the conduit as permitted by the Superintendent.

The trench bottom, regardless of whether it is existing, imported, or recompacted material, shall be shaped to provide a uniform and continuous bearing support for the conduit on solid and undisturbed material at every point between couplings. Couplings shall be provided for pipe. Excavations for conduit shall be two inches wider than the outside diameter of the conduit. Pipe shall not be installed in the trench until the subgrade preparation meets the above specifications, as determined by the Superintendent. Surplus excavated material shall be removed and disposed of immediately by the Contractor. After each excavation is complete, the Contractor shall notify the Superintendent and under no circumstances shall any conduit or material be covered without inspection and approval.

B. Backfilling

Excavation in trenches shall be backfilled to the original ground surface or to such grades as specified or shown on the drawings. Backfilling shall begin as soon as practical after the pipe has been placed and shall be carried on as rapidly as is consistent with construction in the open trench work area.

Complete cleanup shall proceed directly behind the backfilling to facilitate the return to normal conditions. The Contractor shall have sufficient equipment on the job at all times to assure timely backfilling and cleanup.

Backfilling and compacting shall be done as thoroughly as possible to prevent after-settlement. Depositing of the backfill shall be done so the impact of falling material will not damage the conduit. Grading over and around the work shall be done as directed by the Superintendent.

Backfilling of the conduit trenches shall be done by placing aggregate base course material CDOT Specification, Class 6, tamping in lifts of not more than six inches, to the bottom surface of the structural roadway material. The remaining portion of the excavation shall be backfilled with the same type of material used to construct the existing roadway surface.

Use of non-shrinking backfill material as outlined in City of Greeley Standards may be substituted for above.

When the trench excavation is within the right-of-ways of State or County highways, the backfilling of the trench, compaction of materials, sub-grade preparation, and surfacing shall be done in strict accordance with the requirements and specifications of the State or County Highway Department. Unless otherwise specified, this work shall be considered incidental to other portions of the contract.

The Contractor shall blade and compact the roadway after the trench has been backfilled, so it shall be passable to traffic at all times. The Contractor shall maintain the roadway in a condition acceptable to the Superintendent until final acceptance of the entire work by the City.

The Contractor shall remedy at no cost to the City any defects that appear in the backfill following completion and during the guarantee period.

C. Removing and Replacing Improvements

When a part of a square or slab of existing concrete sidewalk is broken or damaged, the entire square or slab shall be removed and the sidewalk reconstructed as specified above. The outline of areas to be

removed in Portland Cement concrete shall be outlined and shall be cut to a minimum depth of 12" with an abrasive-type saw prior to removing the material. Cut for the remainder of the required depth may be made by any method satisfactory to the Engineer. Saw cuts shall be neat and true with no shattering or chipping of concrete adjacent to or outside of the removal area.

Cuts in existing bituminous pavement shall be saw cut or cut with a sharp-edged wheel roller.

Removed bituminous and concrete materials shall be hauled from the site and disposed of by and at the expense of the Contractor, at a suitable disposal site provided by the Contractor.

Trenches in the roadway shall be patched within five calendar days. The Contractor shall be responsible for maintaining trenches on a daily basis until the final patch is in place. In the event the Contractor cannot comply within the allotted time frame, the City may employ a secondary contractor to install the necessary patch, and back charge the original Contractor for patch installation.

TS-3 CONDUIT

A. General

Conductors shall be run in conduit except when run in metal poles. A nylon pull line shall be left in each conduit run for future pulling of wires. Conduit shall be rigid PVC or galvanized rigid steel conforming to the plans, standard specifications, and/or the special provisions.

Electrical conduits running to the control cabinet shall enter from the bottom of the cabinet unless otherwise noted on the plans. Conduit runs shown on the plans are tentative as to routing and may be changed as directed by the Superintendent to avoid underground obstructions. In the event of any change from the location shown on the plans, accurate records shall be kept for as-built drawings, and necessary details submitted to the Superintendent before final payment is made.

B. PVC conduit

PVC conduit shall be manufactured of high-impact PVC, and shall conform to industry standards and commercial standards No. CS-207-60. Each length of PVC conduit and back of the various PVC fittings (expansion joints, couplings, adapter, etc.) shall bear the label of Underwriter's Laboratories, Inc. The conduit shall be of the size or sizes shown on the plans or indicated in the special provisions. All PVC conduits shall be schedule 40, except under any travel way HDPE SDR 11 shall be used. PVC conduit shall be used only for underground installations. Conduit used above ground shall be GRC.

A #8 AWG stranded copper conductor shall run continuously in all PVC conduits used for traffic signal circuits. This wire is used for bonding and grounding purposes.

A nylon pull line of not less than 500 lb. tensile strength shall run continuously in all conduits. Bare copper conductor and nylon pull line shall be supplied by the Contractor and shall be incidental to conduit installation.

C. Galvanized Rigid conduit

Conduit and fittings shall be galvanized rigid steel and shall be uniformly and adequately zinc-coated by the hot-dipped process conforming to ASTM Designation A153. Joints shall be set up tight with squared ends. Fastenings shall be secured and of a type appropriate in design and dimensions for the particular application. Couplings, connectors, and fittings shall be approved types specifically designed and manufactured for the purpose. Fittings shall be installed to provide a good electrical grounding throughout the conduit system. Neither the interior nor the exterior of a six-inch sample cut from the center of a standard length of conduit, when tested in accordance with the applicable portion of ASTM Designation A239, shall show a fixed deposit of copper after four one-minute immersions in the standard copper sulphate solution. The interior of the rigid conduit shall have a galvanized coating. Each length shall bear the label of Underwriters' Laboratories, Inc., and shall conform to appropriate articles of the electrical code.

D. Conduit Installation

Conduit under railroad tracks shall not be less than 42 inches below the bottom of the tie or as specified by railroad code. It shall be the responsibility of the Contractor to obtain clearance from the railroad before any work is done within the railroad right-of-way. The minimum size of conduit to be used will be shown on the plans or as required on the wire layout sheets. Conduit smaller than 3/4-inch electrical trade size shall not be used, unless otherwise specified, except that grounding jumpers at service points may be enclosed in 2-inch conduit.

Conduit installed for future use shall terminate in a pull box, and each conduit end shall also be capped. Each pull box (other than water valves) shall have a minimum of 6" of 3/4" rock and 4" clearance from the top of the conduit to the bottom of the lid.

E. PVC conduit Installation

In bending PVC conduit, the following methods may be used.

- 1. A water bending process may be used consisting of a water-filled steel pipe four feet long, heated to the temperature that will render the PVC conduit pliable in approximately 30 seconds after insertion in the pipe. The conduit may then be bent to the desired angle and held in an appropriate jig for a cooling period of approximately 20 seconds.
- 2. The Contractor may use other methods of bending PVC conduit if the preceding method is found unsuitable because of climactic conditions, but only after demonstrating the proposed method to the Superintendent and receiving his approval.

Bends in PVC conduit shall be made and conform to all appropriate sections of the National Electrical Code or local codes governing bending radius, and number of bends allowed as applicable for rigid conduit.

Conduit bends, except factory bends, shall have a radius of not less than six times the inside diameter of the conduit. When factory bends are not used, conduit shall be bent without crimping or flattening using the longest radius practicable.

F. Termination of conduit

Galvanized rigid conduit terminations shall be fitted with insulating bushings to prevent chafing of wire on exposed edges. Threaded ends shall be protected with approved insulated metal ground bushings or insulated bushing material, and sealed by duct seal.

G. Pull Boxes

All pull boxes shall be polymer concrete type (or an approved equal) with size to be determined by the superintendent. Each pull box will have installed a 5/8° X 10' ground rod and all # 8 copper wires attached to the ground rod. All conduits shall enter the pull box from the bottom and sweep up. There shall be at least 4" clearance between the top of the conduit and the top of the box and no more than 6". Each box shall contain a minimum of 6" of $\frac{3}{4}$ " rock.

TS-4 Traffic Signal Equipment Removal

This projects includes removing existing traffic signal equipment including signal heads, backplates, cabinet, etc as indicated on the plans. All traffic signal equipment that is removed shall remain the property of City of Greeley. Poles will be stripped clean of all attached parts before transporting. Traffic signal equipment removed from the project will be transported by the contractor to the City's Traffic Signal Yard on 35th Avenue (Bestway Yard). Any abandoned caisson or foundation shall be fully or partially removed and disposed of by the CONTRACTOR per the direction of the ENGINEER. Any conduit runs associated with an abandoned caisson or foundation shall be extended or abandoned as called for on the plans.

When existing traffic signal installations are modified or completely rebuilt, the CONTRACTOR shall work around existing traffic signal equipment until the new or modified traffic signal system has been installed and put into operation. Signal heads installed on standards or poles for new installation, which are not ready for actual electrical operation, shall be bagged with either black plastic or a suitable non-transparent material. The CONTRACTOR shall at all times maintain operation of a minimum of two (2) three section (red, yellow, and green) traffic signal heads and pedestrian heads (if required) for each roadway approach.

TS-5 CONCRETE FOUNDATIONS

A. General

Foundations shall be concrete conforming to City of Greeley Class "BZ" mix requirements.

After pouring the concrete, the anchor bolts shall be raised and lowered individually to eliminate any air pockets, and to allow proper alignment of the anchor bolts in the concrete prior to the setting of the concrete.

If the Contractor proposes any deviations in the pouring of foundations, the City Engineer prior to pouring of the concrete shall approve the deviations.

B. Poles, Standards, and Pedestal Foundations

Poles, standards, and pedestals shall not be erected until the foundation concrete has set at least seven days. Foundations for high-strain poles shall set a minimum of ten days. Equipment shall be plumbed or raked as required and directed by the Superintendent.

Foundations for poles shall normally be flush-top and shall be located as shown on the plans or as directed by the Superintendent. The maximum distance behind the curb for pole locations is desired. In locations where the roadway is not curbed, the top of the foundations shall be six inches plus or minus one-quarter inch above the grade of the edge of the pavement. Where foundations are located in the sidewalk, the foundation shall be two inches above the surface of the sidewalk. Expansion material shall be placed between the foundation and the sidewalk, with the top of the expansion material level with the sidewalk surface.

Poles that are to be painted, shall be washed with approved solvent, a two-part primer coat applied with an approved primer (Macro Poxy 846) and two-part epoxy paint (Sherman Williams code B65ST304) Federal Green.

The provisions in the above paragraph are general descriptions for normal roadway conditions. In certain cases, special foundation requirements may be indicated on the plans or required by the City Engineer.

For example: where heavy excavations, embankments, sloping (rip-rap) areas near the roadway, or unusual soil conditions are encountered.

C. Controller Foundations

Controller foundations shall be concrete conforming to City of Greeley Class "B" mix requirements. Foundations for traffic signal controller cabinets, when located in sidewalks, shall rise above the sidewalk surface as shown on the plans. Foundations may also be approved fiberglass when approved by the Superintendent.

The foundation shall be caulked with an asphalt or silicon caulk, or "Rubberneck" sealant prior to placing the cabinet on the foundation.

TS-6 VEHICLE DETECTOR INSTALLATION

The vehicle detection system shall be specified by the City of Greeley, and shall be installed per manufacturer standards. Vehicle detection cameras shall be mounted on the mast arm poles as shown on the plans. The mounting of the cameras shall be in accordance with manufacturer's specification to provide proper operation of the devices. The vehicle detection system shall consist of the Iteris Vantage Next detectors for all four approaches complete with the communication manager, I/0 24 Module, connecting cables, mounting brackets as well as other hardware/software (items listed below) for a complete system.

Camera – Iteris Vantage and Next 6' Pole & Mounting Bracket

TS-7 CABLE AND CONDUCTORS

A. General

Cable and conductors shall conform to the applicable I.M.S.A. Specifications and to these specifications. Multi conductor cable shall be copper and conform to IMSA Specification 19-1. The individual conductors in Multi conductor cable shall be 14 gauge stranded copper wire. Pedestrian push button wire shall be IMSA 19-1 AWG #16 Street light wire shall be 19-1 AWG 12, 3 conductor (Black, White, and Green) Cat 5e cable shall be OSP rated.

Opticom emergency priority equipment shall be wired with 3M cable designed specifically for this type of equipment. Opticom lead-in cables shall not be spliced. Opticom lead-in shall be color coded Purple.

All signal heads shall use IMSA 19-1 AWG 14-7 conductor.

All poles shall have a continuous run from traffic signal cabinet using IMSA 19-1 AWG 14-21 conductor. Any detector cabling shall meet the manufacturer specifications.

Separate conduits for low voltage and high voltage conductors shall be provided in all signal installations. High voltage conductors shall be run in conduits separate from low voltage actuation lead-ins and telephone interconnect.

Opticom emergency priority equipment shall be wired with 3M cable designed specifically for this type of equipment.

Connections to signal heads, pushbuttons, and traffic controllers shall be secured to the screw type terminals in the traffic signal heads, pedestrian pushbuttons, and the traffic controller. The connectors shall be of the spade tongue type and shall be affixed to the conductors using a tool designed specifically for the connection of the connectors to the conductors. Wire nuts shall be used for the connections at all hand holes.

The wiring for each mast arm mounted signal head shall be taped with the appropriate number of bands, color coded by direction, to indicate signal head number, with the head furthest from the pole being number one.

Unused conductors in each cable shall be folded back on the cable and securely taped.

B. Wiring Installation

City Of Greeley

21 Conductor Cable Wiring

MAII	N STREET	SIDE	STREET
CONDUCTOR	INDICATION	CONDUTOR	INDICATION
RED	RED	RED/BLK	RED
ORANGE	YELLOW	ORANGE/BLK	YELLOW
GREEN	GREEN	GREEN/BLK	GREEN
RED/WHT	RED ARROW	BLACK	RED ARROW
ORANGE/RED	YELLOW ARROW	WHITE/BLACK	YELLOW ARROW
GREEN/WHT	GREEN ARROW	BLUE	GREEN ARROW
BLACK/WHT	DON'T WALK	BLACK/RED	DON'T WALK
BLUE/WHT	WALK	BLUE/RED	WALK
WHITE	SIGNAL NEUTRAL	BLUE/BLACK	SPARE / FYA
WHITE/RED	PED NEUTRAL	RED/GRN	SPARE
ORANGE/GRN	SPARE / FYA		
	SEVEN CONDUCTO	OR CABLE WIRING	
CONDUCTOR	INDICATION		
RED	RED BALL OR ARROW [3 SECTION] OR MAIN STREET DON'T WALK		
ORANGE	YELLOW BALL OR ARROW [3 SECTION]		
GREEN	GREEN BALL OR ARROW [3 SECTION] OR MAIN STREET WALK		
WHITE/BLK	YELLOW ARROW [5 SECTION] OR FLASHING YELLOW ARROW		
BLUE	GREEN ARROW [5 SECTION] OR SIDE STREET WALK		
WHITE	NEUTRAL		
BLACK	SPARE OR SIDE STREET DON'T WALK		

CABLE COLOR [TAPE] CODES				
NORTHBOUND	RED	LEFT TURN	WHITE	
SOUTHBOUND	GREEN	PEDESTRIAN	YELLOW	
EASTBOUND	ORANGE	RIGHT TURN	GRAY	
WESTBOUND	BLUE			

Separate Multi conductor cables shall be provided for each signal phase. Each mast arm mounted signal face shall be wired separately back to the pole base. The signal face farthest from the pole shall always be wired to accept a five-section signal face, whether that face is installed or not.

Unused conductors in each cable shall be folded back on the cable and securely taped. Opticom lead-in cables shall not be spliced.

Connections to signal heads, pushbuttons, and traffic controllers shall be secured to the screw type terminals in the traffic signal heads, pedestrian pushbuttons, and the traffic controller. The connectors shall be of the spade tongue type and shall be affixed to the conductors using a tool designed specifically for the connection of the connectors to the conductors. Wire nuts shall be used for the connections at all pull boxes.

Sheath for detectors shall not be grounded.

The wiring for each mast arm mounted signal head shall be taped with the appropriate number of bands, color coded by direction, to indicate signal head number, with the head furthest from the pole being number one.

Seven conductor cable wiring

CONDUCTOR COLOR **INDICATION TAPE COLOR** Northbound through Vehicles: Green Green Red Orange Yellow Red Red Red Red Northbound Left Turns: Blue Red + White Green Arrow White/Blk Yellow Arrow Red + White Red Red Arrow Red + White Northbound Right Turns: Green Green Arrow Red + Gray Orange Yellow Arrow Red + Gray Red Red Arrow Red + Gray Northbound Pedestrians: Blue Walk Red + Yellow Black Don't Walk Red + Yellow Southbound through Vehicles: Green Green Green Orange Yellow Green Red Red Green Southbound Left Turns: Green Green + White Green Arrow Orange Yellow Arrow Green + White Red Green + White Red Arrow Southbound Right Turns: Green Green Arrow Green + Gray Orange Yellow Arrow Green + Gray Red Green + Gray Red Arrow

Southbound Pedestrians: Blue Black Don't Walk Green + Yellow Grange Green Green + Green + Green Green + Green + Green + Green Green +			-, -
Black Black Black Bon't Walk Don't Walk Bon't Walk Westbound Right Turns: Green Green Green Arrow Green Borange Hwhite Borange Horay B	Southbound Pedestrians:		
Don't Walk Green + Yellow	Blue		
Don't Walk Green + Yellow	Black	Walk	Green + Yellow
Green Orange Red Pestbound Left Turns: Green Orange Red Red Red Red Red Red Red Red Red Re		Don't Walk	Green + Yellow
Green Orange Red Orange Red Red Orange Red Orange Red Orange Red Orange Red Orange Orange Red Orange Orange White Orange White Orange White Orange White Orange Hite Orange Hite Orange Hite Orange Horay Horay Orange Horay			
Green Orange Red Pestbound Left Turns: Green Orange Red Red Red Red Red Red Red Red Red Re	Fasthound through Vehicles:		
Orange Red Yellow Red Orange Eastbound Left Turns: Green Orange Green Arrow Red Arrow Orange + White Eastbound Right Turns: Green Orange Green Arrow Orange + Gray Orange + Foray Eastbound Pedestrians: Blue Black Orange + Yellow Orange + Yellow Orange + Yellow Orange + Yellow Orange + Green Orange Green Orange Green Orange Green Blue Red Blue Red Blue Westbound Left Turns: Green Orange Green Arrow Blue + White Blue + White Blue + White Blue + Gray Blue + Yellow Blue + Yellow Other: White White/Black Common Signal	_		
Red Yellow Red Orange Eastbound Left Turns: Green Orange Green Arrow Orange + White Orange + Green Orange Green Arrow Orange + Gray Orange + Yellow Blue Blue Red Blue Blue Blue Westbound Left Turns: Green Orange Green Arrow Blue + White Blue + Gray Blu		Green	Orange
Red Orange Eastbound Left Turns: Green Orange Red Yellow Arrow Red Arrow Orange + White Eastbound Right Turns: Green Orange Green Arrow Orange + Gray Orange + Yellow Orange + Green Orange Orange Green Orange Green Orange Green Blue Blue Westbound Left Turns: Green Orange Green Arrow Orange Blue + White Blue + White Blue + White Blue + White Blue + Gray Westbound Pedestrians: Blue Black Other: White White White White White/Black Common Signal			
Castbound Left Turns: Green Green Arrow Orange + White	Red		
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Red Arrow Orange + White Eastbound Right Turns: Green Orange Red Green Arrow Orange + Gray Orange + Yellow Orange Blue Red Blue Westbound through Vehicles: Green Orange Red Green Arrow Orange Red Orange Green Arrow Orange Red Orange Green Arrow Orange Red Orange Green Arrow Blue + White Blue + White Blue + White Blue + White Blue + Gray Yellow Arrow Red Arrow Blue + Gray Blue + Gra			
Castbound Right Turns: Green Green Arrow Orange + Gray	Red		
Green Green Arrow Orange + Gray Orange O		Ked Arrow	Orange + White
Orange Red Green Arrow Yellow Arrow Red Arrow Orange + Gray Walk Don't Walk Orange + Yellow Orange Blue Blue Blue Westbound Left Turns: Green Orange Green Arrow Orange Green Arrow Orange Red Yellow Arrow Blue + White Blue + Gray Bl			
Red Yellow Arrow Red Arrow Orange + Gray Eastbound Pedestrians: Blue Walk Orange + Yellow Black Don't Walk Orange + Yellow Westbound through Vehicles: Green Orange Green Blue Blue Westbound Left Turns: Green Orange Green Arrow Blue + White Blue + White Red Yellow Arrow Blue + White Red Yellow Arrow Blue + White Red Arrow Blue + Gray Westbound Right Turns: Green Orange Green Arrow Blue + Gray Blu	Green		
Red Yellow Arrow Red Arrow Orange + Gray Orange + Yellow Orange + Yellow Orange + Yellow Orange + Yellow Orange	Orange		
Red Arrow Orange + Gray			
Blue Walk Orange + Yellow		Red Arrow	Orange + Gray
Blue Black Walk Don't Walk Orange + Yellow Orange + Yellow Orange + Yellow Westbound through Vehicles: Green Orange Red Westbound Left Turns: Green Orange Red Green Arrow Fellow Arrow Red Arrow Blue + White Blue + Gray Blue + Gra	Eastbound Pedestrians:		
Black Don't Walk Orange + Yellow Westbound through Vehicles: Green Orange Red Westbound Left Turns: Green Orange Red Green Arrow Orange Red Westbound Right Turns: Green Orange Red Westbound Pedestrians: Blue Black Walk Don't Walk Blue + Yellow	Blue	Walk	Orange + Vellow
Westbound through Vehicles: Green Blue Orange Green Red Yellow Red Blue Westbound Left Turns: Green Arrow Green Blue + White Red Yellow Arrow Blue + White Red Arrow Blue + White Westbound Right Turns: Green Arrow Blue + Gray Green Green Arrow Blue + Gray Red Yellow Arrow Blue + Gray Red Arrow Blue + Gray Westbound Pedestrians: Walk Blue + Yellow Blue Don't Walk Blue + Yellow Other: White White/Black Common Signal	Black		
Green	2 inch	Don't Walk	Orange + Tenow
Green	Wasthound through Vahialas		
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Red Arrow Blue + White	Orange		
Westbound Right Turns: Green Green Arrow Blue + Gray Orange Yellow Arrow Blue + Gray Red Red Arrow Blue + Gray Westbound Pedestrians: Walk Blue + Yellow Blue Don't Walk Blue + Yellow Other: White White Common Signal	Red		
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Orange Green Arrow Blue + Gray Red Yellow Arrow Blue + Gray Red Arrow Blue + Gray Westbound Pedestrians: Walk Blue + Yellow Blue Don't Walk Blue + Yellow Other: White White Common Signal	Westbound Right Turns:		
Red Yellow Arrow Red Arrow Red Arrow Blue + Gray Blue + Gray Blue + Yellow Common Signal	Green		
Red Yellow Arrow Red Arrow Red Arrow Blue + Gray Blue + Gray Blue + Yellow Common Signal	Orange		
Red Arrow Westbound Pedestrians: Blue Black Walk Don't Walk Blue + Yellow Blue + Yellow Blue + Yellow Other: White White/Black Common Signal			
Westbound Pedestrians: Walk Blue + Yellow Blue Blue + Yellow Other: White White Common Signal		Red Arrow	Blue + Gray
Blue + Yellow Other: White White/Black Common Signal	Westbound Pedestrians:	XX7 11	
Black Other: White White/Black Common Signal	Blue		
Other: White White/Black Common Signal		Don't Walk	Blue + Yellow
White White/Black Common Signal			
White/Black Common Signal			
	White		
Unused or Common Ped	White/Black		
Chused of Common 1 ed		Unused or Common Ped	

Opticom lead-in shall be color coded Purple.

The Contractor shall install two single conductor #6 AWG wire from the controller to the service connection pull box or service pole, leaving three extra feet of wire in the pull box.

TS-8 SERVICE SYSTEMS

A. General

Service points shown on the plans are approximate only. The exact location will be determined in the field by the Contractor, the Superintendent, and Xcel Energy Company.

Xcel Energy Company will make the electrical service connections. The Contractor shall be

responsible for coordinating the service connection with Xcel Energy Company.

B. Service Pole

Conduit shall be strapped to the pole with rigid two-hole straps with #8 or #9 12" wood screws, or as shown on the plans. Plumber's tape, wire nails, or other means of fastening conduit shall not be used. In locations where it is necessary, conduits, covers, and gaskets shall be furnished and installed by the Contractor.

Conduit used in the service installation above ground shall be GRC of the size specified on the plans or special provisions. In areas where the GRC is coupled to PVC conduit used for the underground portion of the service run, the joining of the two conduits shall take place 18 inches underground utilizing a GRC factory elbow.

The conduit shall be securely bonded to the service pole when deemed necessary by the Superintendent, and shall also be bonded in a like manner to the service pole ground system.

A. General

Separate Purchase Orders may be issued for individual work projects. All invoices by the Contractor for work done shall be itemized by work item and location, and shall reference the applicable Purchase Order.

Items listed as **Furnish and Install** shall mean that the Contractor shall furnish and install the item, and shall furnish all other materials, equipment, and labor to complete the item.

Items listed as **Remove** shall mean that the Contractor shall remove the item and return it to the City at the Municipal Service Center, 1300 A Street, and exercising care not to damage or lose the removed item. The Contractor shall furnish all materials, equipment, and labor to complete the item.

Items listed, as **Reset** shall mean that the Contractor shall remove the item and install it in its relocated position. The Contractor shall furnish all other materials, equipment, and labor to complete the item.

Items listed as **Replace** shall mean that the Contractor shall remove the existing item and return it to the City at the Municipal Service Center, exercising care not to damage or lose the removed item. The Contractor shall install in its place a similar but different item, as shown in the plans. The Contractor shall furnish all other materials, equipment, and labor to complete the item.

B. Trench, Backfill, and Restore

Trenching and backfilling shall not be paid for separately but included in the price of the conduit. Price and payment shall include all materials, equipment, and labor to remove and dispose of spoils and improvements, furnish and install backfill material, and replace and restore removed improvements

C. Bored or Pushed Conduit

Bored or pushed conduit will be paid for at the contract unit price per linear foot, measured from end point to end point. Price and payment shall include furnishing and installing conduit as shown on the plans or as directed by the Superintendent.

D. Conduit

Conduit installation will be paid for at the contract unit prices per linear foot. Prices and payment shall include furnishing and installing as shown on the plans or as directed by the Superintendent.

E. Pot Holing

All potholes in concrete or asphalt shall be restored per MEGPEC Item 18.3.7 (special provision) that states Pot Holes "shall be filled with flow fill up to the bottom of the existing pavement. The rest of the hole shall be filled to within one quarter (1/4) inch of the finished grade with a non-shrink grout." Other requirements for potholing work as specified in the City of Greeley's Design Criteria and Construction Specifications shall apply.

F. Pull Box

Pull box installation will be paid for at the contract unit price per each. Price and payment shall include installation as shown on the plans or as directed by the Superintendent. All pull boxes shall meet the ANSI/SCTE 77 2013-Tier 22 specification (or an approved equal) with the sizes as specified on the plans.

G. Cabinet Foundation (Furnish and Install)

Cabinet foundations will be paid for at the contract unit price per each. Price and payment shall include forming the foundation, furnishing and placing the ground rod, placing the anchor bolts, and furnishing and pouring the concrete. Cabinet foundation may be of the fiberglass type at the discretion of the Superintendent.

H. Cabinet Step Pad

Cabinet step pads will be paid for at the contract unit price per each. Price and payment shall include a concrete and/or a strong polymer concrete and reinforced pad with a heavy-weave.

I. Cabinet

Cabinet installations will be paid for at the contract unit price per each including the cost of the traffic signal controller and UPS unit. Price and payment shall include mounting the cabinet on the base and making all connections to render the cabinet fully operable. The traffic controller will be configured and provided by the City of Greeley. The cabinet will contain a UPS unit and generator connector specified by the City of Greeley.

J. Mast Arm Pole or Combination Pole

Mast arm pole or combination mast arm and street light pole installations will be paid for at the contract unit price per each. Price and payment shall include installing either a precast or field-poured foundation in conformance with current City of Greeley Standards or Colorado Department of Transportation Standards, the traffic signal pole associated mast arm as shown on the plans.

K. Pedestal Pole

Pedestal pole installations will be paid for at the contract unit prices per each for each size listed. Prices and payment shall include furnishing and installing a concrete foundation with two 2-inch conduits, furnishing and installing the ground rod, and installing the pole as shown on the plans.

L. Traffic Signal Head

Traffic signal head installations will be paid for at the contract unit price per each. Price and payment shall include making sure all hardware in and out of the head is tight. Assembling and attaching all mounting hardware, mounting the signal head as shown on the plans (including back plate). Furnishing and installing the cable to the pole base hand-hole, at the hand-hole splices shall be made with the appropriate size wire nuts. Signal head cabling shall extend 18" out of the hand hole. All splices and connections to render the traffic signal head fully operable.

Signal heads shall be mounted 18' from the bottom of the signal head to pavement crown (left most head) when installed on the mast arm, the remaining heads on the arm to be level with this head. Skybrackets (part # SB59- SCK) will be used to mount the traffic heads to the mast arms. Side of pole signal heads to be 10' from the bottom of the head to grade.

Pedestrian signal heads to be 8' from the bottom of the head to grade. Side of Pole Signals shall be mounted using 3/4" Band-it. Holes to facilitate wiring of signal and pedestrian heads are to be drilled and shall be a minimum of 3/4" in diameter. All holes will be deburred by filing with rat-tail file. Traffic signal heads shall be McCain traffic signal heads. Back plates shall have a 2" yellow retroreflective outer border.

M. Traffic Signal Head Removal

Traffic signal head removals will be paid for at the contract unit price per each.

N. Pedestrian Push-button Assembly

Push-button assembly installations will be paid for at the contract unit price per each. Price and payment shall include furnishing, mounting the push-button assembly and making all connections to render the pushbutton fully operable. Buttons shall be mounted 38" from the ground. Mounting of the assembly shall be by drilling and tapping 1/4" X 20 holes and the hole for wiring shall be drilled a minimum of 3/4" diameter. Pedestrian push buttons shall be specified by the City of Greeley.

O. Pedestrian Instructional Sign

Pedestrian instructional sign (R10-3) shall not be paid for separately but included in the cost of the pedestrian push button. Price and payment shall include the following: drill and tap holes for 5/16" screws provided with the sign, and mount 9" x 12" sign, as shown on the plans.

P. Pedestrian Push-button Wire

Pedestrian push-button wire will be paid for at the contract unit price per linear foot, measured from the termination at the push-button assembly to the controller termination. Price and payment shall include making all connections to render the item fully operable. All wiring shall be paid for as a lump sum under the Wiring item.

Q. Multi Conductor

Multi conductor will be paid for at the contract unit price per linear foot, measured from the controller to the final hand-hole splice prior. (Multi conductor from the final hand-hole splice to the signal head is included in signal head installation unit pricing.) Price and payment shall include making all connections to render the item fully operable. All wiring shall be paid for as a lump sum under the Wiring item.

R. Grounding and Bonding Wire

8 AWG CU stranded wire will be paid for at the contract unit price per linear foot, measured from pull box to pull box and multiplied times the number of conduits. All wiring shall be paid for as a lump sum under the Wiring item.

S. Service Entrance Wire

One each black and white # 8 AWG CU stranded will be paid for at the contract unit price per linear foot, measured from the Utility termination point to the cabinet. All wiring shall be paid for as a lump sum under the Wiring item.

T. Fire Preemption Unit and Timer

Fire Preemption Unit and Timer installations will be paid for at the contract unit price per each. Price and payment shall include making all connections and configurations to render the item fully operable. The unit and timer shall use Global Traffic Technologies 722 dual-channel detectors and 764 Phase Selector card. The cost of the item shall also include troubleshooting services for 30 days after the traffic signal is operational.

U. Fire Preemption Unit Wire

Fire Preemption unit wire shall not be paid for separately but shall be included in the cost of the Fire Preemption Unit and Timer. Price and payment shall include furnishing and installing the wire and making all terminations necessary to make the Fire Preemption Unit fully operable. All fire preemption unit lead-in wire shall be continuous and un-spliced.

V. LED Signal Indication

LED signal indication will be paid for at the contract unit price per each.

W.Intersection Detection System

Intersection detection system shall be specified by the City of Greeley, installations for four approaches will be paid for at the contract unit price per each. Price and payment shall include making all connections and configurations to render the item fully operable. The cost of the item shall also include troubleshooting services for 30 days after the traffic signal is operational.

X. Detection Cabling

Video detection cables will not be paid for separately but shall be included in the cost of the Intersection Detection System. Price and payment shall include installing the wire as shown on the plans or as directed by the Superintendent.

Y. Communications Radio

If Communication Radio is specified, installation will be paid for at the contract unit price per each. Price and payment shall include making all connections to render the item fully operable. The communication radio shall be an Encom 5.8 GHz Broadband radio and antenna.

ADA Ramp/Sidewalk Reconstruction Specifications

1. Sidewalk/ADA Ramp Removal Specifications

- A. Removal of Asphalt Mat (Thickness Varies) The specified locations for the incidental removal of asphalt surface areas in streets/parking lots/bike paths/roadways shall be a minimum of thirty-six inches (36") wide and pavement will be removed to clean, straight, vertical lines. Contractor will saw-cut the pavement to obtain a straight edge. Removal of Asphalt Mat work for the project shall conform to the City of Greeley Design Standards and Construction Specifications in addition to the CDOT Standard specifications. The existing asphalt mat shall be removed in a manner that minimizes contamination of the removed mat with underlying material. The removed mat shall become the property of the Contractor.
- B. Remove Curb & Gutter (0 to 2' pan) This incidental work shall comply with City specifications and includes Vertical-Face Curb and Gutter (Detail S-16); Median Curb and Gutter (Detail S-18); 6" Vertical-Face Barrier Curb (Detail S-18); Drive-Over Curb and Gutter (Detail S-15A); and includes sections with high-back curb and occasionally typical curb and gutter sections.
- C. Removal of Sidewalk This incidental work shall comply with the City specifications and includes all concrete sidewalks, driveways, alley aprons, access ramps, cross pans, aprons, and concrete pavements and any portion of a gutter pan in excess of the typical two-foot (2') wide gutter pan normally associated with "curb and gutter." Included is saw cutting clean joints. The removed concrete slabs shall become the property of the Contractor.

- D. <u>Removal of Truncated Domes</u> This incidental work includes the removal and disposal of the truncated domes anchored in existing sidewalk ramps. The removed material shall become the property of the Contractor.
- E. All other work to complete removal work is also incidental to the project.

3. Sidewalk/ADA Ramp Construction Specifications

- A. Hot Mix Asphalt (Grade SX) (75) (PG 64-28) This incidental work to complete Hot Mix Asphalt (HMA) pavement for the project shall follow the City of Greeley Design and Construction Specifications, Section 02575, Bituminous Paving and 02576, Street Pavement Patching.
- B. Hot Mix Asphalt (Grade S) (75) (PG 64-22) This incidental work to complete Hot Mix Asphalt (HMA) pavement for the project shall follow the City of Greeley Design and Construction Specifications, Section 02575, Bituminous Paving and 02576, Street Pavement Patching.
- C. <u>Class 6 Aggregate Base Course</u> This incidental work to install Class 6 Aggregate Base Course material for sidewalk construction shall follow the City of Greeley Design and Construction Specifications. Materials shall conform to the City of Greeley's Construction Specifications, Streets, Section 02229, Aggregate Base Course. Where possible the City would recommend the usage of recycled crushed concrete. RAP is not an acceptable material.
- D. New 5" Concrete Sidewalk/Grading/Excavation This incidental work includes completing concrete sidewalk construction that shall be constructed as shown in the details and other information provided in the plans and specification and according to the City of Greeley Roadway Design and Construction Specifications, Section 03310, Curbs, Gutters, Sidewalks, Valley Gutters, Bikeways, Driveway and Alley Approaches. This includes the excavation/fill required for the sidewalk construction. Expansion and contraction joints will also be incidental to the project.
- E. New 6" C&G 2' Pan (i.e., Vertical Curb and Gutter) This incidental work includes constructing curb and gutter as shown in the details and other information provided in the plans and specification and according to the City of Greeley Roadway Design and Construction Specifications, Section 03310, Curbs, Gutters, Sidewalks, Valley Gutters, Bikeways, Driveway and Alley Approaches.
- F. <u>ADA Detectable Warning Plates/Domes.</u> This incidental work hall be ADA compliant. The plates are to provide integral lugs or anchors such that anchorage is provided to mechanically secure the plates into the concrete. The plates are to be approved by the City Project Manager prior to use. Detectable warnings (truncated dome panels) will be Davis Brick Red and match ADA requirements.
- G. Patterned Concrete. This incidental work includes constructing 5" red colored "stamped" PCC Concrete (4000 PSI). It includes a form liner finish to replicate a brick finish. The concrete shall be tinted with primary pigment as a red brick color. Joints shall be tooled and finished to a neat and uniform appearance. This item also includes completing concrete sidewalk type construction that shall be constructed as shown in the details and other information provided in the plans and specification and according to the City of Greeley Roadway Design and Construction Specifications, Section 03310, Curbs, Gutters, Sidewalks, Valley Gutters, Bikeways, Driveway and Alley Approaches. The contractor shall pour a thickened edge at construction joints and use dowels to connect concrete pours. Expansion and contraction joints will not be paid separately.
- H. <u>Seeding</u> This incidental work includes furnishing and proper seeding disturbed areas resulting from the construction of sidewalks and other installations. Salvaging topsoil and other requirements in Section 02920 (Soil Prep and Seeding) of the City of Greeley's Parks Division Standards. The addition of

manure or soil amendments needed to bring the topsoil into conformance with the specifications will not be measured and paid for separately but shall be included in the work.

H. All other work to complete the sidewalk and ADA ramp work is also incidental to the project.

4. Other Specifications for Incidental work items include the following:

- A. Storm Drain Inlet Protection (Type 1) 144 inches This incidental work includes furnishing and installing temporary sediment control device at inlet locations adjacent to construction activities. These inlet devices shall be properly installed per the City of Greeley Roadway Design and Construction Specifications and the Project Stormwater Management Plan. 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.
- B. <u>Traffic Control</u> This incidental work includes all work area traffic control placed as part of the project under the direct supervision of a Traffic Control Supervisor (TCS). Work Zone traffic control shall comply with the FHWA's Manual of Uniform traffic control and the City of Greeley's MHT Manual. Adjusting work zone traffic control subject to meet safety standards will not be paid separately. Payment for individual traffic control devices, including installation, equipment, labor, materials necessary to complete the work shall not be paid for separately and shall be included in the lump sum (LS) total for the combined project work item.

<u>Storm Water Protection/Erosion Control Specifications (STREET, CURB, AND GUTTER REPLACEMENT AND CONSTRUCTION)</u>

Activities involving the replacement and construction of streets, curbs, and gutters have the potential to impact Stormwater quality. Materials involved in these activities should be used efficiently and disposed of properly.

Applicable sediment and erosion controls should be installed; such as: inlet protection, silt fence, sediment traps, erosion control logs, check dams, and vehicle tracking control. Sediment and erosion controls will be installed and maintained in accordance with approved design criteria and/or industry standards.

When saw cutting, ensure that no slurry enters the storm drain.

Block gutters

- To contain slurry and minimize the containment area.
- Protect inlets and pool water away from the drains.

> Minimize Slurry Movement

- Confine slurry and sediment from saw cutting to immediate work area by using temporary berms, sand
 - bags, or diversion structures.
- Minimize the tracking of slurry from the job site by cars and pedestrians.

> Remove Slurry

- Sweep or vacuum slurry and properly dispose of the sweepings or vacuum while saw cutting.
- Monitor construction equipment for leaks and use drip pans as necessary.
- Leaking material containers should be properly discarded and replaced.
- Store materials in containers under cover when not in use and away from any storm drain inlet.
- Wash out mixers, delivery trucks, or other equipment in the designated concrete washout area only.
- Locate concrete washout, portable toilets, and material storage away from storm drain inlets.
- Material stockpiles will not be stored in or near storm water flow lines. Temporary sediment controls will be

used during temporary, short-term placement while work is actively occurring.

- Sweep or vacuum the roadway as needed, during construction and once construction is complete.
- Best management practices will be periodically inspected and maintained as necessary.
- Where practicable, non-structural controls will be used, such as phased construction, dust control, good
 - Housekeeping practices, and spill prevention and response.
- Absorbent material should be kept on job site.

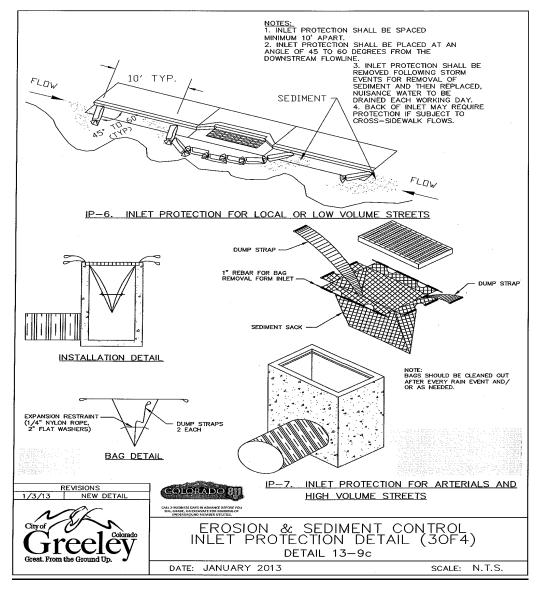
as close to the concrete surface as possible.

> Concrete Work

- Minimize the drift of chemical cure on windy days by using the curing compound sparingly and applying
- Ensure that there is a concrete truck washout area available or require the contractor to wash out at the batch plant.

> Asphalt Work

- Control the placement of road base or asphalt used in embankments or shoulder backing; do not allow these materials to fall into any storm drain or watercourse.
- Whenever possible, recycle unused asphalt.
- Traffic Control Devices; such as cones, may be needed to guard inlet protection devices during certain traffic setup and flows.





DEPARTMENT OF PUBLIC WORKS STORMWATER MANAGEMENT DIVISION REQUIREMENTS: MANDATORY AS INDICATED BELOW

Activities such as asphalt application, slurry saw cutting, and directional boring can contribute high concentrations of toxic hydrocarbons, other toxic organic compounds, oils and greases, solids, and heavy metals to stormwater runoff. Concrete pouring can contribute suspended solids and heavy metals to stormwater runoff and cause pH increases in receiving waters.

The following Best Management Practices, (BMPs), or equivalent measures, methods, or practices are required if you are engaged in saw cutting, concrete pouring or asphalt application in right-of-ways within the City Of Greeley.

Slurry from Sawcutting:

Storm drains can carry saw cutting slurry and other pollutants from the streets and gutters directly to local waterways. This slurry can be toxic to fish and wildlife. The slurry can clog storm drains and catch basins which increase maintenance costs and could cause flooding.

If saw cut slurry from your job runs down the gutter uncontained, you have violated City Code. This also is a violation of state and federal regulations. Offenders may be subject to fines and clean up costs.

Concrete Pouring and Asphalt Applications EFFECTIVE IMMEDIATELY

Use drip pans, ground cloths, and perhaps heavy plywood whenever concrete, asphalt, and asphalt emulsion chunks and drips are likely to fall unintentionally, such as beneath exit points from mixing equipment.

- 2. Place storm drain barriers or similarly effective containment devices over all nearby drains at the beginning of the work day. All accumulations of runoff, aggregate chunks, and other solids must be collected with a shovel or other mechanism for proper disposal at the end of the work day (or more frequently) prior to removing the containment device(s). Drain barriers and other containment devices are commercially available.
- 3. Contain and collect the slurry from exposed aggregate washing, where the top layer of unhardened concrete is hosed or scraped off to leave a rough finish. Use a storm drain barrier or other containment device, as mentioned above. All collected runoff must be properly disposed.
- 4. Concrete and concrete pumping vehicles shall not, under any circumstances, discharge any concrete, slurry, or rinse water into street gutters, storm drains or drainage ditches. and detention ponds. GREELEY CODE 14.16.170

Designate a wash-out area on-site where cleaning of application and mixing equipment can take place and where the rinse water is controlled. It is also acceptable to dispose of rinse water and slurry in a hole in the ground big enough to contain the slurry and rinse material. Commercial products and services are also available for concrete, slurry, and rinse water disposal

Routine Maintenance: Sweep the pouring area at the end of each day to collect loose aggregate chunks and dust. DO NOT hose down the area to a storm drain.

Saw Cut Slurry And Directional Boring Mud

1. Block Gutters: EFFECTIVE IMMEDIATELY

Dam up gutters to contain slurry and minimize the containment area.

Know the location of all nearby storm drain inlets, culverts, and catch basins through which slurry discharges may enter a waterway.

If you are within access of a storm drain inlet, block the path to the nearest drain. Either divert flows or berm inlets to pool water away from the drains.

2. Minimize Slurry Movement: EFFECTIVE IMMEDIATELY

Slurry and sediment from saw cutting or boring operations should be confined to the immediate work area by using temporary berms, sand bags or diversion structures. Minimize the tracking of slurry off site by cars and pedestrians.

3. Remove Slurry: MANDATORY JANUARY 1, 2005

Efficiently and effectively collect and remove all slurry and runoff from the saw cutting operation as soon as possible. Be sure to include removal of any slurry collected in or near storm drain inlets by pumping to a collection vessel or using a wet/dry vac. It may be necessary to use a street sweeper or wash down the area and collect the water.

No slurry or wash water is allowed to drain off site. Slurry and wash water may be disposed of on site, with owners permission, where it can filter into bare soil. Otherwise, dispose of all collected slurry and wash water properly. One way is to allow collected slurry to settle and decant the water onto the ground or, with approval, into the sanitary sewer. Contact Water Pollution Control Facility for approval at 350-9360. Must obtain approval prior to discharging to sanitary sewer. Dispose of the solids appropriately.

DO NOT HOSE DOWN WORK AREAS INTO THE GUTTER, STREET, OR STORM DRAIN. DO NOT WASH IT DOWN PAST THE PROJECT AREA WHERE IT BECOMES "SOME ONE ELSES PROBLEM".

Issued: 4/20/2004 Revised: 3/25/2008