

**SECTION 00110
BID #FD20-02-025**

INVITATION FOR BID

The City of Greeley, Colorado is requesting **sealed bids for 65th Avenue Road Widening before March 12, 2020 at 2:00 p.m.** at the Public Works Building, 1001 9th Avenue, Greeley, Colorado 80631 at which time and place all bids will be publicly opened and read aloud. No late, faxed or electronic bids will be accepted.

The City of Greeley disseminates all bids and requests for proposals through the Rocky Mountain E-Purchasing System site. Go to <http://www.RockyMountainBidSystem.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.

A pre-bid meeting will be held on February 26, 2020 at 3:30 pm at the Public Works Building, 1001 9th Avenue, 2nd Floor Conference Room, Greeley, Colorado. All prospective bidders are encouraged to attend.

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No bid shall be withdrawn after the opening on the bids without the consent of the City of Greeley, Colorado, for a period of sixty (60) days after the scheduled time of the receiving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

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 Doug Clapp via email – doug.clapp@greeleygov.com and are due in by March 2, 2020 at 3:00pm.

Doug Clapp
Purchasing Manager

Greeley Website
February 13, 2020

Section 00120

BID PROPOSAL

PROJECT: 65th Ave Road Widening – FD20-02025

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 and further agrees to complete the contract within ninety (90) Calendar Days from Notice to Proceed. 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.

NOTE: Bidders should not add any conditions or qualifying statements to this bid as otherwise the bid may be declared irregular as being non responsive to the Invitation for bids. The following numbered Addenda have been received and the bid, as submitted, reflects any changes resulting from those Addenda: _____

ATTEST

DATE

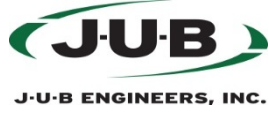
COMPANY NAME

BY

SIGNATURE

TITLE

SECTION 00130 BID SCHEDULE



BASE BID TAB SHEET



PROJECT: 65th Avenue Road Widening

PROJECT DESCRIPTION: Base Bid Quantities - 65th Ave Road Widening

City of Greeley

ITEM NO.	CDOT SECTION NUMBER (If Applicable)	CONTRACT ITEM	UNIT	QUANTITY	UNIT COST	TOTAL COST
Item No.'s may be missing. These missing Item No's are included in the Alternative Bid Tab Sheet						
1		Mobilization	LS	1		\$0.00
2		Clearing and Grubbing	LS	1		\$0.00
3		Unclassified Excavation (Complete In Place)	CY	6,032		\$0.00
4		Potholing	HOUR	20		\$0.00
5		Removal of Tree (6" or larger)	EA	14		\$0.00
6		Removal of Inlet	EA	1		\$0.00
7		Removal of Pipe - Storm Related	LF	442		\$0.00
8		Removal of Flared End Section (FES)	EA	5		\$0.00
9		Remove 6" Waterline	LF	230		\$0.00
10		Removal of Delineator	EA	27		\$0.00
11		Removal of Curb and Gutter	LF	37		\$0.00
12		Removal of Concrete Pavement	SY	391		\$0.00
13		Removal of Asphalt Mat	SY	7,680		\$0.00
14		Removal of Pavement Marking (Symbols)	SF	16		\$0.00
15		Removal of Pavement Striping	LF	5,170		\$0.00
16		Removal of Ground Sign	EA	3		\$0.00
17		Removal of Fence	LF	788		\$0.00
18		Abandon in Place - Storm Manhole/Inlet	EA	3		\$0.00
19		Abandon 18" Storm Pipe in Place - Flow Fill	LF	399		\$0.00
20		Relocate Water Meter Behind Curb	EA	1		\$0.00
21		Reset Water Valve to Proposed Grade	EA	6		\$0.00
22		Relocate Fire Hydrant Behind Curb	EA	2		\$0.00
23		Reset Junction Box to Proposed Grade	EA	3		\$0.00
24		Relocate Ground Sign	EA	7		\$0.00
25		Relocate Sign (Special) "65th Ave Next Street"	EA	1		\$0.00
26		Reset Survey Monument to Proposed Grade	EA	3		\$0.00
27		Relocate Mailbox Structure	EA	8		\$0.00
29		Transplant Tree (3 to 6 Inch)	EA	5		\$0.00
30		Subgrade Preparation	SY	11,659		\$0.00
31		Aggregate Base Course (Class 6)	TON	4,149		\$0.00
32		Asphalt Patch	SY	636		\$0.00
33		Hot Mix Asphalt (Grading SX) (100) (PG 64-22)	TON	2,463		\$0.00
34		Hot Mix Asphalt (Grading SX) (100) (PG 76-28)	TON	163		\$0.00
35		Concrete Pavement (7 inch)	SY	1,496		\$0.00
36		Concrete Sleeper Slab Transition	SY	101		\$0.00
37		Concrete Curb Ramp (truncated dome separate item)	SY	16		\$0.00
38		Truncated Domes	SF	100		\$0.00
39		Curb and Gutter (2.5', Vertical Face)	LF	1,792		\$0.00
40		Curb and Gutter Island (Vertical Face) (Reverse Slope)	LF	301		\$0.00
41		Concrete Cross Pan	SY	173		\$0.00
42		Concrete Shared Use Path	SY	152		\$0.00
43		Median Cover Material (Concrete)	SF	3,623		\$0.00
44		Connect to Existing Storm Pipe with Concrete Collar	EA	1		\$0.00
45		Connect to Existing Storm Structure with Concrete Collar	EA	2		\$0.00
46		18" Reinforced Concrete Pipe	LF	336		\$0.00
47		23"x14" Reinforced Concrete Pipe Elliptical	LF	164		\$0.00
48		24" Corrugated Metal Pipe	LF	48		\$0.00
49		24" Reinforced Concrete Pip (Class III)	LF	90		\$0.00
50		18" Concrete Flared End Section (FES)	EA	2		\$0.00
51		Reset existing 18" Concrete Flared End Section (FES)	EA	4		\$0.00
52		24" Metal End Section (FES)	EA	2		\$0.00
53		24" Concrete Flared End Section (FES)	EA	4		\$0.00
54		Inlet Type C - Mesh Cover	EA	1		\$0.00
55		5' Type R Inlet	EA	2		\$0.00
56		10' Type R Inlet	EA	2		\$0.00
57		Outlet Structure at Pond	EA	1		\$0.00
58		Manhole Slab Base (5 Foot) (4' DIA)	EA	2		\$0.00
59		18" Carbon Steel Pipe (Auger Bored) - Includes all tasks related to this segment of Stom Line D and not limited to Open Pits, Shoring, Traffic Control and Materials.	LS	1		\$0.00
60		Riprap (D50=9")	CY	14		\$0.00
61		Removal and Replace Riprap (D50=9")	CY	0		\$0.00
62		2" PVC Orange Conduit	LF	95		\$0.00
63		6" Gate Valve	EA	1		\$0.00
64		6" Blind Flange Cap	EA	1		\$0.00
65		6" 22.5° Bend	EA	2		\$0.00
66		6" 45° Bend	EA	2		\$0.00
67		6" Ductile Iron Pipe	LF	218		\$0.00
68		6" Wet-Tap Connection to 16" Water	EA	1		\$0.00
69		6" Cut and Connect to Existing 6" Water	EA	1		\$0.00
70		Disconnect Water Service Connection	EA	1		\$0.00
71		Reestablish Water Service Connection	EA	1		\$0.00
72		16" x 6" Water Tee	EA	1		\$0.00
73		16" Gate Valve	EA	1		\$0.00

74		16" Water 45° Bend	EA	4		\$0.00
75		16" Ductile Iron Pipe	LF	14		\$0.00
76		16" Lowering	EA	1		\$0.00
77		Erosion Control Maintenance	LS	1		\$0.00
78		Silt Fence	LF	1,058		\$0.00
79		Plastic Construction Fence - 500-FT added for contingency	LF	662		\$0.00
80		Wattle	LF	264		\$0.00
81		Rock Sock	LF	70		\$0.00
82		Inlet Protection	EA	5		\$0.00
83		Concrete Washout Area	EA	1		\$0.00
84		Vehicle Tracking Pad	EA	1		\$0.00
85		Soil Retention Blanket - Biodegradeable Straw/Coconut	SY	3,307		\$0.00
86		Seeding (Native)	SF	50,626		\$0.00
87		Sign Anchor	EA	21		\$0.00
88		Sign Panel (Class I)	SF	91		\$0.00
89		Steel Sign Post (1.75x1.75 " Tubing)	LF	270		\$0.00
90		Replace Private Barbed Wire Fence	LF	584		\$0.00
91		Replace Private Wood Fence	LF	55		\$0.00
92		Barricade (Type 3 F-A) (12')	EA	2		\$0.00
93		Epoxy Pavement Marking	GAL	35		\$0.00
94		Preformed Thermoplastic Pavement Marking	SF	488		\$0.00
95		Flagging	HR	64		\$0.00
96		Traffic Control Inspection & Management	LS	1		\$0.00
97		Barricade (Type 3 M-A) (Temporary)	EA	5		\$0.00
98		Construction Traffic Sign	EA	88		\$0.00
99		Temporary Pavement Marking - Including Removal	LS	1		\$0.00
100		Portable Message Sign Panel	EA	4		\$0.00
101		Traffic Cone	EA	200		\$0.00
102		Drum Channelizing Device	EA	108		\$0.00
103		Concrete Barrier (Temporary)(Includes resets)	LF	2,559		\$0.00
104		Impact Attenuator (Temporary)	EA	2		\$0.00
105		Construction Surveying	LS	1		\$0.00
106		F/A Minor Contract Revisions	FA	1		\$0.00
SUBTOTAL:						\$0.00
SIGNAL QUANTITIES						
107	202-00828	REMOVAL OF EXISTING SIGNAL EQUIPMENT	LS	1		\$0.00
108	210-00831	RESET TRAFFIC SIGNAL HEAD	EA	1		\$0.00
109	210-00858	RESET PEDESTAL POLE	EA	1		\$0.00
110	210-00860	RESET PEDESTRIAN PUSH BUTTON	EA	8		\$0.00
111	210-00865	RESET PEDESTRIAN SIGNAL HEAD	EA	2		\$0.00
112	613-00200	2 " ELECTRICAL CONDUIT	LF	150		\$0.00
113	613-00300	3 " ELECTRICAL CONDUIT	LF	100		\$0.00
114	613-07199	PULL BOX (24X36X18)	EA	1		\$0.00
115	613-10000	WIRING	LS	1		\$0.00
116	614-70336	TRAFFIC SIGNAL FACE (12-12-12)	EA	2		\$0.00
117	614-75848	TRAFFIC SIGNAL CONTROLLER & CABINET	EA	1		\$0.00
118	614-72858	PEDESTAL POLE (3 FOOT 6 INCH)	EA	7		\$0.00
119	614-84000	TRAFFIC SIGNAL PEDESTAL POLE STEEL	EA	1		\$0.00
SUBTOTAL:						\$0.00
BASE BID						\$0

ALTERNATIVE NO 1 - EAST BIKE/PEDESTRIAN PATH

PROJECT: 65th Avenue Road Widening

PROJECT DESCRIPTION: Construction of bike/pedestrian path east of 65th Ave

Date: 02.04.2020

City of Greeley

ITEM NO.	SECTION NUMBER	CONTRACT ITEM	UNIT	QUANTITY	UNIT COST	TOTAL COST
Item No.'s may be missing. These missing Item No's are included in the Ultimate OPCC						
2		Clearing and Grubbing	LS	1		\$0
3		Unclassified Excavation (Complete In Place)	CY	392		\$0
7		Removal of Pipe - Storm Related	LF	58		\$0
10		Removal of Delineator	EA	-1		\$0
13		Removal of Asphalt Mat	SY	410		\$0
15		Removal of Pavement Striping	LF	308		\$0
27		Relocate Mailbox Structure	EA	2		\$0
28		Relocate Mailbox Structure - Custom Brick	EA	1		\$0
30		Subgrade Preparation	SY	6,010		\$0
31		Aggregate Base Course (Class 6)	TON	140		\$0
32		Asphalt Patch	SY	72		\$0
33		Hot Mix Asphalt (Grading SX) (100) (PG 64-22)	TON	-146		\$0
37		Concrete Curb Ramp (truncated dome separate item)	SY	9		\$0
38		Truncated Domes	SF	40		\$0
42		Concrete Shared Use Path	SY	1,316		\$0
44		Connect to Existing Storm Pipe with Concrete Collar	EA	2		\$0
46		18" Reinforced Concrete Pipe	LF	159		\$0
51		Reset existing 18" Concrete Flared End Section (FES)	EA	4		\$0
54		Inlet Type C - Mesh Cover	EA	1		\$0
58		Manhole Slab Base (5 Foot) (4' DIA)	EA	1		\$0
60		Riprap (D50=9")	CY	2		\$0
61		Removal and Replace Riprap (D50=9")	CY	3		\$0
77		Erosion Control Maintenance	LS	1		\$0
78		Silt Fence	LF	209		\$0
80		Wattle	LF	40		\$0
81		Rock Sock	LF	10		\$0
82		Inlet Protection	EA	1		\$0
85		Soil Retention Blanket - Biodegradeable Straw/Coconut	SY	2,389		\$0
86		Seeding (Native)	SF	10,317		\$0
94		Preformed Thermoplastic Pavement Marking	SF	5		\$0
105		Construction Surveying	LS	1		\$0
106		F/A Minor Contract Revisions	FA	1		\$0
TOTAL:						\$0

ALTERNATIVE NO 2 - WEST BIKE/PEDESTRIAN PATH

PROJECT: 65th Avenue Road Widening

PROJECT DESCRIPTION: Construction of bike/pedestrian path west of 65th Ave

Date: 02.04.2020

City of Greeley

ITEM NO.	SECTION NUMBER	CONTRACT ITEM	UNIT	QUANTITY	UNIT COST	TOTAL COST
Item No.'s may be missing. These missing Item No's are included in the Ultimate OPCC						
2		Clearing and Grubbing	LS	1		\$0
3		Unclassified Excavation (Complete In Place)	CY	491		\$0
10		Removal of Delineator	EA	11		\$0
13		Removal of Asphalt Mat	SY	410		\$0
15		Removal of Pavement Striping	LF	312		\$0
27		Relocate Mailbox Structure	EA	6		\$0
28		Relocate Mailbox Structure - Custom Brick	EA	1		\$0
30		Subgrade Preparation	SY	6,010		\$0
31		Aggregate Base Course (Class 6)	TON	1,000		\$0
32		Asphalt Patch	SY	564		\$0
33		Hot Mix Asphalt (Grading SX) (100) (PG 64-22)	TON	326		\$0
42		Concrete Shared Use Path	SY	2,728		\$0
44		Connect to Existing Storm Pipe with Concrete Collar	EA	2		\$0
45		Connect to Existing Storm Structure with Concrete Collar	EA	-1		\$0
46		18" Reinforced Concrete Pipe	LF	159		\$0
49		24" Reinforced Concrete Pip (Class III)	LF	98		\$0
53		24" Concrete Flared End Section (FES)	EA	3		\$0
60		Riprap (D50=9")	CY	2		\$0
77		Erosion Control Maintenance	LS	0		\$0
78		Silt Fence	LF	857		\$0
80		Wattle	LF	-40		\$0
81		Rock Sock	LF	10		\$0
82		Inlet Protection	EA	1		\$0
85		Soil Retention Blanket - Biodegradeable Straw/Coconut	SY	13		\$0
86		Seeding (Native)	SF	6,452		\$0
87		Sign Anchor	EA	1		\$0
89		Steel Sign Post (1.75x1.75 " Tubing)	LF	12		\$0
93		Epoxy Pavement Marking	GAL	4		\$0
105		Construction Surveying	LS	1		\$0
106		F/A Minor Contract Revisions	FA	1		\$0
SUBTOTAL:						\$0

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.

SECTION 00140

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 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,

65th Ave Road Widening – FD20-02025

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.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals this _____ day of _____, 20_____, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

PRINCIPAL

SURETY

Name: _____

Address: _____

By: _____

Title: _____ 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.

SECTION 00160

NOTICE OF PRE-BID CONFERENCE

65TH AVE ROAD WIDENING – FD20-02025

A pre-bid conference will be held:

On February 26, 2020 at 3:30 p.m., Public Works Building, 1001 9th Avenue, 2nd Floor Conference Room, Greeley, CO 80631. All bidders are highly encouraged to attend.

Representatives of the City of Greeley will be present to answer questions.

Each bidder shall submit the following declaration of attendance, along with the other bid documents.

I have attended the pre-bid conference _____

I have not attended the pre-bid conference _____

Name of Contracting Organization

Authorized Signature _____ Date _____

SECTION 00210

NOTICE OF AWARD

DATE:

TO:

Re: **65th Ave Road Widening – FD20-02025**

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: Joel Hemesath

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: _____

SECTION 00310

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: **65th Ave Road Widening – FD20-02025**

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. That the above enumerated work shall begin within ten (10) days of the official "Notice to Proceed". (Contract shall become void if work is not started at specified time.)

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.
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

Addenda Number _____ Inclusive

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.

City of Greeley, Colorado

Contractor_____

Approved as to Substance

Authorized Signature

City Manager-Roy Otto

Printed Name

Reviewed as to Legal Form
OFFICE OF THE CITY ATTORNEY

Title

By: _____
City Attorney-Doug Marek

Certification of Contract
Funds Availability

Director of Finance-Renee Wheeler

SECTION 00320

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,

65th Ave Road Widening – FD20-02025

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.

IN WITNESS WHEREOF, this instrument is executed this _____ day of _____, 20____.

PROVIDED, FURTHER, that no final settlement between the Owner and Contractor shall abridge the right of any beneficiary hereunder, 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

_____ By: _____

_____ (Attorney-in-Fact)

_____ (SURETY SEAL) _____ (Address)

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

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

SECTION 00330

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

_____ 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 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

65th Ave Road Widening – FD20-02025

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.

IN WITNESS WHEREOF, this instrument is executed this _____ day of _____,
20____.

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)

(SURETY SEAL)

(Address)

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

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

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.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) 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).

PRODUCER ABC Insurance Company P. O. Box 1234 Anywhere, USA	CONTACT NAME:		
	PHONE (A/C, No, Ext):	FAX (A/C, No):	
	E-MAIL ADDRESS:		
	PRODUCER CUSTOMER ID #:		
	INSURER(S) AFFORDING COVERAGE		NAIC #
	INSURED Sample Certificate	INSURER A : Financial Rating of A	INSURER B :
	INSURER C :	INSURER D :	
	INSURER E :	INSURER F :	

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR _____ GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$ \$
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DEDUCTIBLE RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$ \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y / N <input type="checkbox"/> N/A					<input checked="" type="checkbox"/> WC STATU-TORY LIMITS <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 100,000 E.L. DISEASE - EA EMPLOYEE \$ 100,000 E.L. DISEASE - POLICY LIMIT \$ 500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is 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.

CERTIFICATE HOLDER City of Greeley 1000 10th St Greeley, CO 80631-3808	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE
--	--

SECTION 00350

LIEN WAIVER RELEASE

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

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

PROJECT: **65th Ave Road Widening – FD20-02025**

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.

7. In addition to the foregoing, this instrument shall constitute a *** (full, final and complete)
***(partial) release of all rights, claims and demands of the CONTRACTOR against the OWNER
arising out of or pertaining to the above referenced project. If partial, all rights and claims on
the project are released up to and including the _____ day of Month, 20 ____.

Dated this _____ day of _____, 20____.

CONTRACTOR

By: _____

Title: _____

STATE OF _____)
)ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____,
20__ by _____.

My Commission expires:

Notary Public

***Strike when not applicable

SECTION 00360

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.

DUNS # (Optional) _____

Name of Organization _____

Address _____

Authorized Signature _____

Title _____

Date _____

SECTION 00410

NOTICE TO PROCEED

Month , 20

TO: NAME

PROJECT: **65TH AVE ROAD WIDENING – FD20-02025**

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

SECTION 00420

PROJECT MANAGER NOTIFICATION

_____, 20____

TO:

PROJECT: **65th Ave Road Widening – FD20-02025**

The Owner hereby designates _____ 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: _____

SECTION 00430

CERTIFICATE OF SUBSTANTIAL COMPLETION

TO: CONTRACTOR

PROJECT: 65TH AVE ROAD WIDENING – FD20-02025

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.

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

(Note--Owner's and Contractor's legal and insurance counsel should review and determine insurance requirements and coverage; Contractor shall secure consent of surety company, if any.)

SECTION 00440

CERTIFICATE OF FINAL ACCEPTANCE

TO: CONTRACTOR

PROJECT NAME: 65TH AVE ROAD WIDENING – FD20-02025

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): Describe Amendments.

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

CITY OF GREELEY GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION (REVISED NOVEMBER 2016)

ARTICLE 1 DEFINITIONS

- 1.1 **Bidder:** An architect, engineer, individual, firm, partnership, corporation or combination thereof, submitting a Bid for the Work.
- 1.2 **Change Notice:** A document issued to the Contractor specifying a proposed change to the Contract Documents. Unless otherwise expressly stated on the face of the Change Notice, a Change Notice is a proposal which may result in a Change Order.
- 1.3 **Change Order:** A document issued to the Contractor modifying the Contract.
- 1.4 **Construction Contract:** The Contract Documents, including the Contract for construction (hereinafter "the contract") executed by the Contractor and the Owner covering the performance of the Work including the furnishing of labor, superintendence, materials, tools and equipment as indicated in the Contract Documents.
- 1.5 **Contract Documents:** Documents applicable to and specific to the construction of an individual Project, including the Contract and all other documents executed by the Contractor and Owner covering the performance of the work including but not limited to Specifications, Insurance Requirements, Contract Drawings, Conditions of the Contract (General and Supplementary), Owner-Contractor Agreement, all Addenda, all change orders issued after execution of the Contract, Performance and Payment Bonds, and any other special provisions.
- 1.6 **Contract Drawings(Project Drawings):** Contract drawings, The plans, to include but not limited to plans, profiles, typical cross sections, general cross-sections, elevations, schedules, schematics, notes and details which show locations, character, dimensions, and details of the Work.
- 1.7 **Contractor:** The individual, firm, partnership, or corporation, or combination thereof, private, municipal, or public, including joint ventures, which, as an independent contractor, has entered into a contract with the Owner, who is referred to throughout the Contract Documents by singular number and masculine gender.
- 1.8 **Days:** Unless otherwise designated, days mean calendar days.
- 1.9 **Extra Work:** Work not provided for in the Contract as awarded but found to be essential to the satisfactory completion of the Contract, within its intended scope. Reimbursement for extra work is governed by Article 28, CHANGES, or Article 31, CONTRACTOR PROPOSALS.

- 1.10 **Field Order:** A written order issued to a contractor by the Owner, or Project Manager, effecting a minor change or clarification with instructions to perform work not included in the contract. The work will eventually become a Change Order. A field Order is an expedient process used in an emergency or need situation that in many cases does not involve an adjustment to the contract sum or an extension of the contract sum or an extension of the contract time.
- 1.11 **Final Acceptance:** The formal written acceptance by the Owner of the completed Work.
- 1.12 **Force Account:** A method of payment, other than lump sum or unit price, for Work ordered by Change Order or by written notice from the Owner. Reimbursement for force account work is governed by Article 36, FORCE ACCOUNT WORK.
- 1.13 **Furnishing:** Manufacturing, fabricating and delivering to the site of the Work materials, plant, power, tools, patterns, supplies, appliances, vehicles and conveyances necessary or required for the completion of the Work.
- 1.14 **General Conditions (GC):** A section of the Contract Documents which specifies, in general, the contractual conditions.
- 1.15 **General Terms:** Directed, required, permitted, ordered, designated, selected, prescribed or words of like import shall be understood to mean the direction, requirement, permission, order, designation, selection or prescription of the Project Manager. Approved, satisfactory, equal, necessary or words of like import shall be understood to mean approved by, acceptable to, satisfactory to, equal, necessary in the opinion of the Project Manager.
- 1.16 **Indicated:** A term meaning as shown on the Contract Drawings, or as specified and detailed in the Contract Documents.
- 1.17 **Installation, Install, or Installing:** Completely assembling, erecting and connecting material, parts, components, appliances, supplies and related equipment specified or required for the completion of the Work.
- 1.18 **Limit of Work:** Boundary within which the Work, excepting utility and drainage work in Public Right Of Way and Easements, is to be performed.
- 1.19 **Notice to Proceed:** Written notice from the Owner to the Contractor to proceed with the Work.
- 1.20 **Notice of Termination:** Written notice from the Owner to the Contractor to stop work under the Contract on the date and to the extent specified in the Notice of Termination.
- 1.21 **Owner:** The City of Greeley.
- 1.22 **Permanent Drainage Easement:** Area required to construct and maintain permanent drainage facilities for retention, release, and passage of surface water.
- 1.23 **Permanent Utility Easement:** Area required to construct and maintain utility facilities.

- 1.24 **Project:** That specific portion of the Work indicated in the Contract Documents.
- 1.25 **Project Manager:** The Owner's designated representative. The Project Manager has the authority to delegate portions of his responsibilities to others.
- 1.26 **Provide:** In reference to work to be performed by the Contractor, provide means furnish and install completely in place.
- 1.27 **Punch List:** Work determined to be incomplete or unacceptable at time of inspection for substantial completion.
- 1.28 **Samples:** Physical examples which illustrate materials, equipment, fixtures and workmanship which establish standards by which the Work will be judged.
- 1.29 **Schedule:** Acceptable schedules are BAR or GANTT Chart or CPM schedule.
- 1.30 **Shop Drawings:** Documents furnished by the Contractor to illustrate specific portions of the Work. Shop Drawings include drawings, diagrams, illustrations, schedules, charts, brochures, tables and other data describing fabrication and installation of specific portions of the Work.
- 1.31 **Specifications:** A document applicable to construction contracts containing the Technical Provisions.
- 1.32 **Subcontractor:** Any person, firm or corporation, other than the employees of the Contractor, who contracts with the Contractor to furnish labor, material or labor and materials, under this Contract.
- 1.33 **Special Provisions:** Provisions especially applicable to this Contract which invoke, modify and supplement the General Conditions which are included in the Contract Documents.
- 1.34 **Substantial Completion:** The state in the progress of Work when the Work, or a designated portion thereof, is sufficiently complete in accordance with the Contract Documents, so that Owner may access, occupy, use, and enjoy the Project, or designated portion thereof, for its intended purpose. Substantial Completion shall not occur until a temporary or permanent Certificate of Occupancy is issued and only minor punch list items remain for such Work.
- 1.35 **Technical Provisions:** Those provisions which specify the materials and execution of construction for work entering into the project.
- 1.36 **Work:** The construction, labor, materials, equipment, and contractual requirements as indicated in the Contract Documents, including alterations, amendments, or extensions thereto made by authorized changes.
- 1.37 **Work Site:** The area enclosed by the Limit of Work indicated in the Project Drawings and boundaries of local streets and public easements in which the Contractor is to perform work under the Contract. It shall also include areas obtained by the Contractor for use in connection with the Contract, when contiguous to the Limit of Work.

ARTICLE 2 INTERPRETATION

- 2.1 The documents comprising the Contract Documents are complementary and indicate the construction and completion of the Work. Anything mentioned in the Contract Specifications and not shown on the Contract Drawings, or shown on the Contract Drawings and not mentioned in the Contract Specifications, shall be of like effect as if shown or mentioned in both.
- 2.2 Where "as indicated", "as detailed", or words of similar import are used, it shall be understood that the reference is made to the specifications or drawings accompanying this Contract unless stated otherwise.
- 2.3 References to Articles or Sections include sub articles or subsections under the Article Reference (for example, a reference to Article 2 is also a reference to 2.1 through 2.9, and references to paragraphs similarly include references to subparagraphs).
- 2.4 Referenced Standards: Material and workmanship specified by the number, symbol, or title of a referenced standard shall comply with the latest edition or revision thereof and amendments and supplements thereto in effect on the date of the Invitation to Bid except where a particular issue is indicated.
- 2.5 Precedence of Contract Documents: Except as provided by Paragraph 2.1 of this Article, the Construction Contract governs over other Contract Documents, except that a Change Order governs over the Contract and previously issued Change Orders. The Contract Conditions govern over the General Conditions.
- 2.6 Explanations: Should it appear that the Work to be done or any of the matters relative thereto are not sufficiently detailed or explained in the Contract Documents, the Contractor shall apply to the Owner for such explanation provided as part of the Contract. Disputes over questions of fact which are not settled by agreement shall be decided by Owner. Such decision thereon will be final, subject to remedies under Article 35, DISPUTES.
- 2.7 Should there be any conflict, detailed instructions govern over general instructions, detail drawings have precedence over small scale drawings, and dimensions have precedence over scale.
- 2.8 Omissions and Misdescriptions: The Contractor shall carefully study and compare all drawings, specifications, Contract Documents and other instructions; shall verify all dimensions on the Contract Drawings before laying out the Work; shall notify the Project Manager of all errors, inconsistencies or omissions which he may discover; and obtain specific instructions in writing before proceeding with the Work. The Contractor shall not take advantage of apparent errors or omissions which may be found in the Contract Documents, but the Project Manager shall be entitled to make such corrections therein and interpretations thereof as he may deem necessary for the fulfillment of their intent. The Contractor shall be responsible for all errors in construction which could have been avoided by such examination and notification, subject to remedies under Article 35, Disputes.

**ARTICLE 3
ENTITY OF CONTRACTOR**

3.1 If the Contractor hereunder is comprised of more than one legal entity, each such entity shall be jointly and severally liable hereunder.

**ARTICLE 4
LIABILITY AND INDEMNIFICATION**

4.1 It is agreed that the Contractor assumes responsibility and liability for damages, loss or injury of any kind or nature whatever to persons or property caused by or resulting from or in connection with any act, action, neglect, omission, or failure to act when under a duty to act on the part of the Contractor or any of his officers, agents, employees, or subcontractors in his or their performance of the Work. The Contractor shall indemnify and hold harmless the Government, the State, the Owner and the Project Manager and their members, officers, agents, or employees from claims, losses, damages, charges, costs, or expenses, including attorney's fees, whether direct or indirect, to which they or any of them may be put or subjected to by reason of any such loss or injury.

**ARTICLE 5
PROTECTION OF EXISTING VEGETATION, STRUCTURES, UTILITIES,
AND IMPROVEMENTS AND LAND SURVEY MONUMENTS**

5.1 A Contractor shall preserve and protect existing vegetation such as trees, shrubs, and grass on or adjacent to the work site which are not indicated to be removed and which do not unreasonably interfere with the construction work and he shall replace in kind any vegetation, shrubs and grass damaged by him at his own expense.

5.2 The Contractor shall protect from damage all utilities, structures, or improvements on or near the site of the Work and shall repair or restore any damage to such utilities, structures, or improvements resulting from failure to comply with the requirements of the Contract or the failure to exercise reasonable care in the performance of the Work. If the Contractor fails or refuses to repair any such damage promptly, the Owner may have the necessary work performed and charge the cost thereof to the Contractor.

5.3 All land survey monuments shall be protected from any damage by any work and/or shall be replaced by a licensed land surveyor licensed in the state of Colorado at the contractor's expense before final acceptance is issued.

**ARTICLE 6
CONTRACTUAL RELATIONSHIPS**

6.1 No contractual relationship will be recognized under the Contract other than the contractual relationship between the Owner and the Contractor.

ARTICLE 7 ASSIGNMENT

7.1 The performance of the Work under the Contract shall not be assigned except upon written consent of the Owner. Consent will not be given to any proposed assignment which would relieve the Contractor or his surety of their responsibilities under the Contract. The Contractor shall not assign any monies due or to become due to him under the Contract without the previous written consent of the Owner.

ARTICLE 8 SUBCONTRACTORS

8.1 Unless otherwise required by the Contract Documents or the Bidding Documents, the Contractor, as soon as practicable after the award of the Contract, not to exceed 3 days, shall furnish to the Owner and the Project Manager, in writing the names of the subcontractors, persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work. The Project Manager will promptly reply to the Contractor in writing whether or not the Owner or the Project Manager, after due investigation, has reasonable objection to any such proposed person or entity. Failure of the Owner or Project Manager to reply promptly shall constitute notice of no reasonable objections.

ARTICLE 9 CONDITIONS AFFECTING THE WORK

9.1 The Contractor shall be responsible for taking steps reasonably necessary to ascertain the nature and location of the Work, and the general and local conditions which can affect the Work or the cost thereof. Failure by the Contractor to do so will not relieve him from responsibility for successfully performing work without additional expense to the Owner. The Owner will not be responsible for any understanding or representations concerning conditions, unless such understanding or representations are expressly stated in the Contract.

ARTICLE 10 GRATUITIES AND CONFLICTS OF INTEREST

10.1 The Owner may, by written notice to the Contractor terminate the right of the Contractor to proceed under this Contract if it is found that gratuities (in the form of entertainment, gifts, or otherwise) were offered or given by the Contractor, or any agent or representative of the Contractor or any director, officer or employee of the Owner or its Project Manager with a view toward securing a contract or securing favorable treatment with respect to the awarding or amending, or the making of any determinations with respect to the performance of such contract. The Owner's determination shall be final subject only to judicial review.

10.2 In the event this Contract is terminated for any reason, the Owner shall be entitled to pursue the same remedies against the Contractor as it could pursue in the event of a breach of the Contract by the Contractor.

10.3 No member, officer or employee of the Owner or of a local public body during his tenure or for one year thereafter shall have any interest, direct or indirect, in this Contract or the proceeds thereof. "Local public body" means the State, any political subdivision of the State, or any agency of the State or any political subdivision thereof.

10.4 The rights and remedies of the Owner provided in this article are not exclusive and are in addition to any other rights and remedies provided by law or under the Contract.

ARTICLE 11 WARRANTY OF WORK

11.1 Except where longer periods of warranty are indicated for certain items, the Contractor warrants work under the Contract to be free from faulty materials and workmanship for a period of not less than two years from date of Final Acceptance, which two year period shall be covered by the Performance Bond and Payment Bond as specified in this Contract. The Contractor shall immediately remedy, repair, or replace, without cost to the Owner and to the entire satisfaction of the Owner, defects, damages, or imperfections due to faulty materials or workmanship appearing in said work within said period of not less than two years. Remedied work shall carry the same warranty as the original work starting with the date of acceptance of the replacement or repair. Payment to the Contractor will not relieve him of any obligation under this Contract.

11.2 The Contractor, at no additional expense to the Owner, shall also remedy damage to equipment, the site, or the building or the contents thereof which is the result of any failure or defect in the Work, and restore any work damaged in fulfilling the requirements of the Contract. Should the Contractor fail to remedy any such failure or defect within a reasonable time but no longer than ten (10) days after receipt of notice thereof, the Owner will have the right to replace, repair, or otherwise remedy such failure or defect at the Contractor's expense.

11.3 Subcontractors', manufacturers', and suppliers' warranties and guarantees, expressed or implied, respecting any part of the Work and any material used therein shall be deemed obtained and shall be enforced by the Contractor for the Benefit of the Owner without the necessity of separate transfer or assignment thereof.

11.4 The rights and remedies of the Owner provided in this Article are in addition to and do not limit any rights and remedies afforded by the Contract or by law.

ARTICLE 12 MATERIAL

12.1 Unless otherwise indicated in this Contract, equipment, material and products incorporated in the Work covered by this Contract shall be new and of the grade specified in the Contract for the purpose intended. Unless otherwise specifically indicated, reference to equipment, material, product or patented process by trade names, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition, and the Contractor may, at his option, use any equipment, material, article, or process which is equivalent to that named, subject to the requirements of Paragraph 12.2 of this Article.

12.2 Within the scope of his authority, the Project Manager shall be the sole judge of the quality and suitability of proposed alternative equipment, material, article or process. The burden of proving the quality and suitability of the alternative shall be upon the Contractor. Information required by the Project Manager in judging an alternative shall be submitted for approval by the Contractor at the Contractor's expense prior to installation.

12.3 Where use of an alternative material involves redesign of or changes to other parts of the Work, the cost and the time required to affect such redesign or change will be considered in evaluating the suitability of the alternative material. Redesign and changes in other parts of the Work shall be at the Contractor's expense.

12.4 No action relating to the approval of alternative materials will be taken by the Project Manager until the request for substitution is made in writing by the Contractor accompanied by complete data as to the quality and suitability of the materials proposed. Such request shall be made in ample time to permit approval without delaying the Work.

12.5 Disposal of material outside the Work Site: The Contractor shall make his own arrangements for legally disposing of waste and excess materials outside the Work Site and he shall pay costs therefore.

12.6 Property rights in materials: The Contractor shall have no property right in materials after they have been attached or affixed to the Work or the soil, or after payment has been made by the Owner to the Contractor for materials delivered to the site of the Work, or stored subject to or under the control of the Owner as provided in Article 24, PROGRESS PAYMENTS.

ARTICLE 13 WORKMANSHIP AND UNAUTHORIZED WORK

13.1 Work under this Contract shall be performed in a skillful and workmanlike manner. The Project Manager may, in writing, require the Contractor to remove from the work any employee the Project Manager determines incompetent, careless or otherwise objectionable.

13.2 Unauthorized work: Work performed beyond the lines and grades shown on the Contract Drawings, approved Working and Shop Drawings and Extra work done without written authorization, will be considered as unauthorized work, and the Contractor will receive no compensation therefore. If required by the Owner, unauthorized work shall be remedied, removed, or replaced by the Contractor at the Contractor's expense. Upon failure of the Contractor to remedy, remove or replace unauthorized work, the Owner may take courses of action set out in Paragraph 15.3 of Article 15, INSPECTION.

ARTICLE 14 SUPERINTENDENCE BY CONTRACTOR

14.1 The Contractor shall give his personal superintendence to the Work or have a competent foreman or superintendent, hereinafter designated his authorized representative, satisfactory to the Owner, on the Work Site at all times during progress, with authority to act for him. There shall be provided at all times, a reasonable method of communication directly to the Contractor if the Owner experiences any problems or difficulties with the Superintendent.

ARTICLE 15 INSPECTION/TESTING

15.1 Work (which term includes but is not restricted to materials, workmanship and manufacture and fabrication of components) will be subject to inspection and test by the Project Manager at all reasonable times and at all places prior to acceptance. Such inspection and test is for the sole benefit of the Owner and shall not relieve the Contractor of the responsibility of providing quality control measures to assure that the Work strictly complies with the Contract Documents. No inspection or test by the Project Manager shall be construed as constituting or implying acceptance. Inspection or test shall not relieve the Contractor of responsibility for damage to or loss of the material prior to acceptance, nor in any way affect the continuing rights of the Owner after acceptance of the completed Work.

15.2 The Contractor shall, at his own expense, replace any material or correct any workmanship found not to conform to the contract requirements, unless the Owner consents in writing to accept such material or workmanship with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises at his own expense.

15.3 If the Contractor does not promptly replace rejected material or correct the rejected workmanship, the Owner (1) may, by separate contract or otherwise, replace such material or correct such workmanship and charge the cost thereof to the Contractor, or (2) may terminate the Contractor's right to proceed in accordance with Article 38, TERMINATION FOR DEFAULT-- DAMAGES FOR DELAY--TIME EXTENSIONS.

15.4 The Contractor shall give the Project Manager ample notification of inspections and tests, and the Project Manager will perform, except as otherwise specifically provided, said inspections and tests in such manner as not to unnecessarily delay the work. The Owner will have the right to charge to the Contractor any additional cost of inspection or test or when reinspection or retest is necessitated by prior rejection.

15.5 Should it be considered necessary, before acceptance of the entire work, to make an examination of work already completed by removing or tearing out same, the Contractor shall on request promptly furnish all necessary facilities, labor and material therefore. If such work is found to be defective or nonconforming in any material respect, due to the fault of the Contractor or his subcontractors, he shall defray the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, an equitable adjustment will be made in the contract price to compensate the Contractor for the additional services involved in such examination and reconstruction. If completion for the work has been delayed thereby, he will, in addition, be granted an equitable extension of time.

15.6 The Project Manager shall have access to the work during its construction. Work done and materials provided will be subject to the Project Manager's on-site and off-site inspection and approval. When work is to be performed during hours other than during his normal schedule, the Contractor shall so advise the Project Manager not less than 24 hours in advance. The Contractor shall provide access to the work for authorized representatives of the Owner.

15.7 The Project Manager's inspection and approval of work or materials shall not relieve the Contractor of any of his obligations to fulfill the requirements of the Contract Documents. Work and materials not meeting the requirements of the Contract shall not be incorporated in the Work. Unsuitable or substandard work or materials may be rejected by the Project Manager, notwithstanding that such work or materials may have been previously inspected by the Project Manager, or that payment therefore has been included in a progress payment.

ARTICLE 16 PERMITS AND COMPLIANCE WITH LAWS

16.1 The Contractor shall without additional expense to the Owner be responsible for obtaining necessary licenses and permits and for complying with applicable Federal, State, County and Municipal laws, codes and regulations in connection with the commencement of the work. The Contractor is required to supply the Project Manager with complete and final copies of license and permits including final inspection documentation. The Contractor shall be required to obtain permits at his own expense. The Contractor shall protect, indemnify and hold harmless the Owner and the Project Manager and their members, officers, agents and employees against claims and liabilities arising from or based on the violation of requirements of law or permits whether by the Contractor, his employees, agents or subcontractors.

ARTICLE 17 RIGHTS IN LAND IMPROVEMENT

17.1 The Contractor shall make no arrangements with any person to permit occupancy or use of any land, structure or building within the work site for any purpose whatsoever, either with or without compensation, in conflict with any agreement between the Owner and any owner, former owner or tenant of such land, structure or building. The Contractor shall not occupy Owner property outside the work site without obtaining prior written approval from the Owner.

ARTICLE 18 DAMAGE TO THE WORK AND RESPONSIBILITY FOR MATERIALS

18.1 The Contractor shall be responsible for materials delivered and work performed until completion and final acceptance of the entire construction thereof.

18.2 The Contractor shall bear the risk of injury, loss or damage to any and all parts of the work for whatever cause, whether arising from the execution or from the non-execution of work. The Contractor shall rebuild, repair or restore work and materials which have been damaged or destroyed from any cause before completion and acceptance of the work and shall bear the expense thereof. The Contractor shall provide security and drainage and erect temporary structures as necessary to protect the work and materials from damage.

18.3 The Contractor shall be responsible for materials not delivered to the site for which any progress payment has been made to the same extent as if the materials were so delivered.

ARTICLE 19 EMERGENCIES

19.1 In an emergency affecting the safety of life, the work, or adjacent property, the Contractor shall notify the Project Manager as early as possible that an emergency exists. In the meantime, without special instruction from the Project Manager as to the manner of dealing with the emergency, the Contractor shall act at his own discretion to prevent such threatened loss or injury. As emergency work proceeds, the Project Manager may issue instruction, which the Contractor shall follow. The amount of compensation to which Contractor is entitled on account of emergency work will be determined in accordance with Article 28, CHANGES.

ARTICLE 20 NOTICE TO PROCEED

20.1 The Owner will issue a Notice to Proceed to the Contractor within 15 days after the Contractor has executed the Contract and has delivered the specified bonds and Certificates of Insurance as required by the Owner. Except as specifically authorized in writing by the Owner, the Contractor is not authorized to perform work under the Contract until the effective date of the Notice to Proceed. Within 10 days after the effective date of such Notice to Proceed, the Contractor shall commence work and shall diligently prosecute the Work to completion within the time limits specified. These time periods may be modified by mutual written agreement of both the Owner and Contractor.

ARTICLE 21 PROGRESS SCHEDULE AND REQUIREMENTS FOR MAINTAINING PROGRESS

21.1 The Contractor shall, at the pre-construction meeting, prepare and submit to the Project Manager for approval a practicable schedule, showing the order in which the Contractor proposes to carry on the work, the date on which he will start the several salient features (including procurement of materials, plant and equipment) and the contemplated dates for completing the same. The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion at any time. The Contractor shall update the chart with the actual progress monthly or at such intervals as directed by the Project Manager, and shall immediately deliver three copies thereof. If the Contractor fails to submit a progress schedule within the time herein prescribed, the Project Manager may withhold approval of progress payment estimates until such time as the Contractor submits the required progress schedule.

21.2 The Contractor shall prosecute the work in accordance with the latest approved Progress Schedule. In the event, that the progress of items along the critical path is delayed, the Contractor shall revise his planning to include additional forces, equipment, shifts or hours as necessary to meet the time or times of completion specified in this Contract. Additional costs resulting therefrom will be borne by the Contractor. The Contractor shall make such changes when his progress at any check period does not meet at least one of the following two tests:

21.2.1 The percentage of dollar value of completed work with respect to the total amount of the Contract is within ten percentage points of the percentage of the Contract time elapsed, or;

21.2.2 The percentage of dollar value of completed work is within ten percentage points of the dollar value which should have been performed according to the Contractors own network analysis previously approved by the Project Manager.

21.3 Failure of the Contractor to comply with the requirements under this provision will be grounds for determination that the Contractor is not prosecuting the work with such diligence as will ensure completion within the time of completion specified in this Contract. Upon such determination, the Owner may terminate the Contractor's right to proceed with the work, or any separate part thereof, in accordance with Article 38, TERMINATION FOR DEFAULT--DAMAGES FOR DELAY--TIME EXTENSIONS of these General Conditions.

ARTICLE 22 SUSPENSION OF WORK

22.1 The Owner reserves the right to suspend, delay or interrupt execution of the whole or any part of the work for such period of time as he may determine to be appropriate for his convenience.

22.2 If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted by an act of the Owner in the administration of this Contract or by his failure to act within the time specified in this Contract (or if no time is specified, within a reasonable time), an adjustment shall be made for any increase in the cost of performance of this Contract (excluding profit) necessarily caused by such unreasonable suspension, delay, or interruption and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent (1) that performance would have been so suspended, delayed or interrupted by any other cause, including the fault or negligence of the Contractor or (2) for which an equitable adjustment is provided for or excluded under any other provision of this Contract.

22.3 No claim under this clause shall be allowed (1) for any costs incurred more than 20 days before the Contractor shall have notified the Owner in writing of the act of failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order), and (2) unless the claim, in an amount stated is asserted in writing as soon as practicable after the termination of such suspension, delay, or interruption, but not later than the date of final payment under the Contract.

ARTICLE 23 FINAL INSPECTION AND ACCEPTANCE

23.1 Final inspection: When the Contractor notifies the Project Manager in writing that the work has been completed, the Owner will make the final inspection for the purpose of ascertaining that the work has been completed in accordance with the requirements of the Contract Documents.

23.2 Acceptance of the work: When the Owner has made the final inspection and has determined that the work has been completed in accordance with the Contract Documents, the Owner will accept the work. Immediately upon and after Final Acceptance, the Contractor will be relieved of the duty of maintaining and protecting the work as a whole. The Contractor will be relieved of his responsibility for injury to persons or property or damage to the work which occurs after Final Acceptance, except that the Contractor will not be relieved of his responsibility for injury to persons or property arising from his duties and obligations under Article 4, LIABILITY AND INDEMNIFICATION.

23.3 Final Acceptance shall be final and conclusive, and no further performance of work shall be required except with regards to latent defects, fraud or such gross mistakes as may amount to fraud, or with regard to the Owner's rights under any warranty or guarantee. All punch list items must be completed and building permits provided to Owner before final acceptance is issued.

23.4 Date of Substantial Completion for all Work shall be within the number of calendar days bid by the Contractor on the Bid proposal.

23.5 Date of Final Completion shall be the date specified on the Certificate of Final Completion.

ARTICLE 24 PROGRESS PAYMENTS

24.1 The Owner will make progress payments monthly as the work proceeds, on estimates approved by the Project Manager. Payment will be made within 15 days after progress estimates are approved by the Project Manager and Department Head. On request of the Project Manager, the Contractor shall furnish a detailed estimate of the total contract price each showing the amount included therein for each principal category of the work, to provide a basis for determining the amount of progress payments. In the preparation of estimates, the Owner, at its sole discretion, may authorize material delivered on the site and preparatory work done to be taken into consideration which is to be submitted at the pre-construction meeting.

24.2 In making such progress payments, five percent of the estimated amount will be retained until Final Acceptance of the Contract work; in addition, the Owner shall retain from all Progress payments an amount equal to all statutory claims filed against the Contractor. Also, whenever the work is substantially complete, the Owner if it considers the amount retained to be in excess of the amount adequate for its protection, may release to the Contractor all or a portion of such excess amount. Substantial completion as used in this Paragraph 24.2 shall mean the following: Substantial completion of the work or a portion thereof shall be when, as determined by both the Project Manager and the Owner, the construction is sufficiently completed in accordance with the Contract Documents and any modification thereto as provided in the Contract to permit the Owner to occupy the work or a portion of the work for the use which it is intended.

24.3 Material and work covered by progress payments shall become the sole property of the Owner. This provision shall not be construed as relieving the Contractor from the sole responsibility for material and work upon which payments have been made, the restoration of damaged work or as waiving the right of the Owner to require the fulfillment of the terms of the Contract.

ARTICLE 25 PAYMENT TO SUBCONTRACTORS

25.1 The Contractor shall pay all subcontractors for and on account of work performed by such subcontractors in accordance with the terms of their respective subcontract. Prior to final payment an unconditional lien waiver release form will be required by the Owner.

**ARTICLE 26
PAYMENT OF TAXES**

26.1 The price or prices for the work will include full compensation for taxes that the Contractor is or may be required to pay. The Contractor shall bear the risk of any added or increased taxes occurring during the prosecution of the work. A change in taxes shall under no circumstances entitle the Contractor to an adjustment under the Contract.

26.2 The Contractor's attention is directed to the fact that this project is exempt from payment of City of Greeley Sales and Use taxes, and such taxes must not be included in the amount of bid.

26.3 The Contractor shall pay all sales and use taxes required to be paid, shall maintain such records in respect of his work, which shall be separate and distinct from all other records maintained by the Contractor and shall be available for inspection by the Owner at any and all reasonable times, and shall furnish the Owner with such data, as may be necessary to enable the Owner to obtain any refunds of such taxes which may be available to the Owner under the laws, ordinances, rules or regulations applicable to such taxes. The Contractor shall require each of his subcontractors to pay all sales and use taxes required to be paid and to maintain such records and furnish the Contractor with such data as may be necessary to enable the Owner to obtain a refund of the taxes paid by such subcontractors.

**ARTICLE 27
FINAL PAYMENT**

27.1 After the Work has been accepted by the Owner, subject to the provisions of Article 11, WARRANTY OF WORK and Article 23, FINAL INSPECTION AND ACCEPTANCE of these General Conditions, a final payment due the Contractor under this Contract shall be paid upon the presentation of properly executed voucher and after the Contractor shall have furnished the Owner with a release of all claims against the Owner arising by virtue of this Contract, other than claims in stated amounts as may be specifically excepted by the Contractor from the operation of the release. If the Contractor's claim to amounts payable under the contract has been assigned under the assignment of Claims Act of 1940, as amended (31 U.S.C. 203, 41 U.S.C. 15), a release may also be required of the assignee.

27.2 If any mechanic's or material man's lien or notice of claim of such lien is filed or recorded against the project for labor, materials, supplies or equipment claimed to have been furnished to or incorporated into the Work, or for other alleged contribution thereto, the Owner will have the right to retain from payments otherwise due the Contractor, in addition to other amounts properly withheld under this Article or under other provisions of the Contract, an amount equal to such lien or liens claimed.

27.3 Further, the Owner will have the right to retain from final payment an amount equal to all liquidated damages claimed by the Owner.

27.4 Retainages held by the Owner for any state or federal statutory claim arising out of the project will be held by the Owner in addition to all retainages held under the provisions of the Contract.

ARTICLE 28 CHANGES

28.1 The Owner may, at any time, without notice to the sureties, by written notice or order designated or indicated to be a Change Notice or Change Order, make any change in the work within the general scope of the Contract in accordance with all of the Owner's processes and procedures whether or not set forth herein, including but not limited to changes:

28.1.1 In the Contract (including drawings and designs);

28.1.2 In the method or manner of performance of the work;

28.1.3 In Owner furnished facilities, equipment, materials, services, or site; or

28.1.4 Directing acceleration in performance of the work.

28.2 Any other order (which terms as used in Paragraph 28.2 of this Article shall include direction, instruction, interpretation, or determination) from the Project Manager, which causes any change, shall be treated as a Change Notice under this Article provided that the Contractor gives the Project Manager written notice stating the date, circumstances and source of the order, and that the Contractor regards the order as a Change Notice. The Contractor shall notify the Project Manager when he receives direction, instruction, interpretation or determination from any source which may cause any change in the work. Such notification shall be given to the Project Manager before the Contractor acts on said direction, instruction, interpretation or determination.

28.3 Except as herein provided, no order, statement, or conduct of the Architect/ Project Manager or any other person shall be treated as a change under this Article or entitle the Contractor to an equitable adjustment hereunder.

28.4 If any change under this Article causes an increase or decrease in the Contractor's cost of, or the time required for, the performance of any part of the Work under this Contract, whether or not changed by an order, an equitable adjustment will be made and the Contract modified accordingly by a written Change Order; provided, however, that except for claims based on errors in the Contract Documents, no claim for change under Paragraph 28.2 of this Article will be allowed for costs incurred more than 20 days before the Contractor gives written notice as herein required; and provided that in the case of errors in the Contract Documents for which the Owner is responsible, the adjustment will include increased cost, reasonably incurred by the Contractor in attempting to comply with such errors in the Contract Documents. No claim shall be made for the type of errors in the Contract Documents which are set forth in Article 2, INTERPRETATION.

28.5 If the Contractor intends to assert a claim for an equitable adjustment under this Article, he shall, within 30 days after receipt of a written Change Order under Paragraph 28.1 of this Article or the furnishing of a written notice under Paragraph 28.2 of this Article, submit to the Project Manager a written statement setting forth the general nature and monetary extent of such claim, unless this period is extended in writing by the Owner. The statement of claim hereunder may be included in the notice under Paragraph 28.2 of this Article.

28.6 No claim by the Contractor for an equitable adjustment hereunder will be allowed unless asserted as described in Paragraphs 28.4 and 28.5 above.

28.7 Payment will not be made under the provisions of this Article for such work or materials which are so required to be done or furnished in or about or for the performance of the Work and which are not mentioned, specified or indicated or otherwise provided for in this Contract or in the Contract Documents so far as such work or materials may be, in the opinion of the Project Manager, susceptible of classification under or reasonably inferred to be included in the Bid Items of the Bid Form.

28.8 In case the Contractor is ordered to perform work under this Article for which payments are not determined under Paragraph 28.7 of this Article, which in the opinion of the Owner it is impracticable to have performed by the Contractor's own employees, the Contractor will, subject to the approval of the Owner, be paid the actual cost to him of such work and, in addition thereto, a negotiated amount to cover the Contractor's superintendence, administration and other overhead expenses. The terms and conditions of any subcontract which the Contractor may propose to enter into in connection with work under the provision of this Article shall be subject to the written approval of the Project Manager before such subcontract is made. The contractor shall be responsible for the work of the subcontractors and shall be liable therefore as if he had performed the work directly.

28.9 In cases other than those described in Paragraphs 28.7 and 28.8 above, the Owner and the Contractor (on his own behalf and on behalf of his subcontractors) shall endeavor to negotiate a reasonable contract price and line adjustment in a Change Order on terms appropriate to the changed work. The Contractor will be required to submit a sufficiently detailed price proposal supported with sufficient documentation that (1) the Owner can determine that the proposal reflects all impacts on the Contract from work additions, deletions and modifications shown in the Change Notice being priced, (2) the proposed prices are set out in such a way that their reasonableness can be evaluated against prices based on adequate price competition, bid unit prices, established catalog or market prices of commercial items sold in substantial quantities to the general public, prices set by law or regulation, recognized published price lists and indices, independently developed cost estimates and other appropriate price comparisons, and (3) contract provisions relating to Contract changes costing over \$100,000.00 are complied with. If any prices or other aspects are conditional, such as on firm orders being made by a certain date or the occurrence or nonoccurrence of an event, the Contractor shall identify these aspects in his proposal. A negotiated Change Order shall set out prices, scheduling requirements, time extensions and all costs of any nature arising out of the issuance of a Change Notice except for those cost and time aspects explicitly reserved on the face of the Change Order. Except for these explicit reservations, the execution of a Change Order by both parties will be deemed accord and satisfaction of all claims of any nature arising from the issuance of the Change Notice negotiated.

28.10 In the event the Contractor and the Owner are unable to agree upon the Contractor's entitlement to an equitable adjustment or upon the amount thereof, or in the event that it is in the best interest of the Owner to have the Work proceed pending negotiation of amount of an equitable adjustment, the Owner may direct the Contractor to perform the Work in accordance with the Owner order, direction, instruction, interpretation, or determination, with any Contract price adjustments and progress payments for the Work to be determined on a Force Account basis in accordance with Article 36. The Contractor shall continue diligently to perform the Contract in accordance with the Owner's order, direction, instruction, interpretation, or determination during negotiations with respect to the Contractor's entitlement to an equitable adjustment hereunder or to the amount of any Contract price adjustment or time extension. The Contractor and the Owner may agree on certain aspects of an equitable adjustment and take those aspects out of operation of Force Account provisions. In the

event a mutually agreeable equitable adjustment cannot be made, the Contractor shall continue diligently to perform the orders as he proceeds with his remedies under Article 35, DISPUTES, and shall continue to receive compensation on a Force Account basis.

28.11 For contract changes, the Owner, State and Government or their representative shall have the audit and inspection rights as described below:

28.11.1 Where the agreed payment method for any contract changes is to be by cost reimbursement, time and material, labor hours or any combination thereof, the Contractor shall maintain and the Owner or its representatives shall have the right to examine books, records, documents and other evidence and accounting principles and practices sufficient to reflect properly all direct and indirect costs of whatever nature claimed to have been incurred and anticipated to be incurred for the performance of the contract changes under this sub article.

28.11.2 Contract changes exceeding \$100,000.00 in cost: For submitted cost and pricing data in connection with pricing a contract modification referred to in this sub article, unless such pricing is based on bid unit prices, adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the public, or prices set by law or regulation, the Owner or his representatives and the Comptroller General of the United States and his representatives who are employees of the United States shall have the right to examine all books, records, documents and other data of the Contractor related to the negotiation of or performance under the contract Change Orders for the purpose of evaluating the accuracy, completeness and currency of the cost or pricing data submitted. The right of examination shall extend to all documents necessary to permit adequate evaluation of the cost or pricing data submitted, along with the computations and projections used therein.

28.11.3 Contract changes exceeding \$10,000.00 but not \$100,000.00 in cost: The Owner or his representatives prior to the execution of any contract Change Order in this sub article or for a period of twelve months after execution shall, unless such pricing is based on bid unit prices, adequate price competition, established catalog of market prices or commercial items sold in substantial quantities to the public, or prices set by law or regulation, have the right to examine all books, records, documents, and other data of the Contractor relating to the negotiation and contract Change Order for the purpose of evaluating the accuracy, completeness, and currency of the data is submitted upon which negotiation is or has been based. To the extent the examination reveals inaccurate, incomplete or noncurrent data, the Project Manager may renegotiate the contract Change Order price based on such data.

28.11.4 Contract changes of less than \$10,000.00 in cost: The Owner may require from the Contractor appropriate documentation to support the prices being negotiated for contract changes under this sub article, and may refuse to complete negotiations until satisfactory documentation is submitted.

28.11.5 Availability: The materials described in Paragraphs 28.11.1 and 28.11.2 above shall be available at the office of the Contractor at all reasonable times for inspection, audit or reproduction until three years from the date of final payment under this Contract and for records which relate to Article 35, DISPUTES, or litigations or the settlement of claims arising out of the negotiation or the performance of contract changes over 100,000.00, records shall be made available until such litigations or claims have been resolved.

28.11.6 The Contractor shall insert a clause containing all the provisions in this Paragraph 28.11, including this subparagraph 28.11.6, in all subcontracts hereunder except altered as necessary for proper identification of the contracting parties and Owner.

28.11.7 For the purposes of Paragraph 28.11 of this Article, costs shall include liquidated damages which would be assessed if extension(s) of time were not granted by contract Change Order.

28.11.8 The requirements of this audits and records article are in addition to other audit, inspection and record keeping provisions elsewhere in the Contract Documents.

28.12 Changes involving aggregate increases and decreases in excess of \$100,000.00 shall be subject to the following:

28.12.1 A change involves aggregate increases and decreases in excess of \$100,000.00 if the total value of work affected, without regard to the arithmetic sign, exceeds this amount; for example, a change order adding work in the amount of \$75,000.00 and deleting work in the amount of \$50,000.00 will be considered to involve aggregate increases and decreases of \$125,000.00.

28.12.2 The Contractor shall submit in support of all items not based upon unit prices or lump sum prices contained in the Contract or upon the established prices at which commercial items are sold in substantial quantities to the public, statements by his vendors that the prices charged the Contractor are not greater than the prices charged by the respective vendors to their most favored customers for the same items in similar quantities.

28.12.3 Price reductions for Defective Cost or Pricing Data--Pricing Adjustments: If any price, including profit and fee, negotiated in connection with any price adjustment was increased by any significant sums because:

28.12.3.1 The Contractor furnished cost or pricing data which were not complete, accurate, and current as certified in the Contractor's Certificate of Current Cost or Pricing Data;

28.12.3.2 A subcontractor, pursuant to Paragraph 28.13 of this Article entitled Subcontractor Cost or Pricing Data--Pricing Adjustments or any subcontract provision therein required, furnished costs or pricing data which were not complete, accurate, and current as certified in the Subcontractor's Certificate of Current Cost or Pricing Data;

28.12.3.3 The subcontractor or his prospective subcontractor furnished cost or pricing data which were required to be complete, accurate, and current and to be submitted to support a subcontract cost estimate furnished by the Contractor but which were not complete, accurate, and current as of the date certified in the Contractor's Certificate of Current Cost or Pricing Data; or

28.12.3.4 The Contractor or a subcontractor or his prospective subcontractor furnished any data, not within subparagraphs 28.12.3.1, 28.12.3.2, or 28.12.3.3 above, which were not complete, accurate, and current as submitted, the price shall be reduced accordingly and the Contract shall be modified in writing as may be necessary to reflect such reduction. Any reduction in the Contract Price due to defective subcontract data of a prospective subcontractor, when the subcontract was not subsequently awarded to such subcontractor, will be limited to the amount (plus applicable overhead

and profit markup) by which the actual subcontract, or actual cost to the Contractor if there was no subcontract, was less than the prospective subcontract cost estimate submitted by the Contractor, provided the actual subcontract price was not affected by defective cost or pricing data.

28.13 Subcontract Cost of Pricing Data-- Pricing Adjustment:

28.13.1 When negotiating a change involving increases or decreases in excess of \$100,000.00, the Contractor shall require subcontractors hereunder to submit cost or pricing data under the following circumstances. Prior to award of any cost-reimbursement type, incentive or price redeterminable subcontract;

28.13.1.2 Prior to the award of any subcontract the price of which is expected to exceed \$100,000.00;

28.13.1.3 Prior to the pricing of any subcontract change modifications for which the price is expected to exceed \$100,000.00, except in the case of 28.13.1.2 and 28.13.1.3 where the price is based on adequate price competition, established catalog or market prices, commercial items sold in substantial quantities to the general public, or prices set by law or regulation.

28.13.2 The Contractor shall require subcontractors to certify to the best of their knowledge and belief that the cost and pricing data submitted under subparagraph 28.13.1 of this Article are accurate, complete, and current as of the date of execution, which date shall be as close as possible to the date of agreement on the negotiated price of the contract Change Order.

28.13.3 The Contractor shall insert the substance of Paragraph 28.13 of this Article, including this subparagraph 28.13.3, in each subcontract hereunder which exceeds \$100,000.00.

**ARTICLE 29
PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND**

29.1 The Contractor shall furnish a Performance Bond in the amount equal to one hundred percent (100%) of the Contract Sum as security for the faithful performance of this Contract and also a Labor and Material Payment Bond in an amount not less than one hundred percent (100%) of the Contract Sum or in a penal sum not less than that prescribed by State, or local law, as security for the payment of all persons performing labor on the Project under this Contract and furnishing materials in connection with this Contract. The Performance Bond and the Labor and Material Payment Bond may be in one or in separate instruments in accordance with local law and shall be delivered to the Owner not later than the date of execution of the Contract.

29.2 Performance Bonds, Labor and Material Payment Bonds and other such sureties shall provide that the surety and the Contractor are both jointly and severally liable and obligated under respective Bond or other surety agreement and shall incorporate acknowledge of applicable provisions of state law into all documents furnished in connection with the project.

**ARTICLE 30
DIFFERING SITE CONDITIONS**

30.1 The Contractor shall within 10 days of actual or constructive notice of a differing site condition, promptly, and before such conditions are disturbed, notify the Project Manager in writing of: (1) subsurface or latent physical conditions at the site differing materially from those indicated in

the Contract Documents, or (2) unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract. The Project Manager will promptly investigate the conditions, and if such conditions materially differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the work under the Contract, whether or not changed as a result of such conditions, an equitable adjustment may be made subject to Owner's approval and the Contract modified in writing accordingly.

30.2 No claim of the Contractor under this Article will be allowed unless the Contractor has given the notice required in Paragraph 30.1 of this Article.

30.3 No claim by the Contractor for an equitable adjustment hereunder will be allowed if asserted after final payment under this Contract.

ARTICLE 31 CONTRACTOR PROPOSALS

31.1 The Contractor may at any time submit to the Project Manager for his review proposed modifications to the Contract Documents, supported by a cost/price proposal. Upon acceptance of the proposed modifications by the Owner, a Change Order will be issued. Denial of the proposed modification will neither provide the Contractor with any basis for claim for damages nor release the Contractor from contractual responsibilities. An equitable adjustment in the form of a contract price reduction will be made if the change results in a reduction of the cost of performance and the Contractor will not be entitled to share in said savings unless the proposal is made under Paragraph 31.2 of this Article. Except as provided in Paragraph 31.2 of this Article, the Contractor will not be compensated for any direct, incidental or collateral benefits or savings the Owner receives as a result of the proposal.

31.2 Value Engineering Change Proposals: The Contractor may submit to the Project Manager one or more cost reduction proposals for changing the Contract requirements. The Proposals shall be based upon a sound study made by the Contractor indicating that the proposal:

31.2.1 Will result in a net reduction in the Total Contract amount;

31.2.2 Will not impair any essential function or characteristic of the Work such as safety, service life, reliability, economy of operation, ease of maintenance and necessary standardized features.

31.2.3 Will not require an unacceptable extension of the contract completion time; and

31.2.4 Will require a change in the Contract Documents and such change is not already under consideration by the Owner.

31.3 The Owner may accept in whole or in part any proposal submitted pursuant to the previous Paragraph 31.2 by issuing a Change Order which will identify the proposal on which it is based. The Change Order will provide for an equitable adjustment in the Contract Price and will revise any other affected provisions of the Contract Documents. The equitable adjustment in the Contract price will be established by determining the net savings resulting from the accepted change. The net savings resulting from the change will be shared between the Contractor and the Owner on the basis of 50 percent for the Contractor and 50 percent for the Owner and will be limited to this

contract for any one Value Engineering Change Proposal. Net savings will be determined by deducting from the estimated gross savings, the Contractor's costs of developing and implementing the proposal (including any amount attributable to a subcontractor) and the estimated amount of increased costs to the Owner resulting from the change, such as evaluation, implementation, inspection, related items, and the Owner-furnished material. Estimated gross savings will include Contractor's labor, material, equipment, overhead, profit and bond. The Contract price will be reduced by the sum of the Owner's costs and share of the net savings. For the purpose of this Article, the applicable provisions of Article 28, CHANGES, shall be used to determine the equitable adjustment to the Contract price.

31.4 The Owner will not be liable for delay in acting upon, or for failure to act upon, any proposal submitted pursuant to Paragraph 31.2 of this Article. The decision of the Owner as to the Acceptance or rejection of any such proposal under the Contract will be final. The submission of a proposal by the Contractor will not in itself affect the rights or obligations of either party under the Contract.

31.5 The Contractor shall have the right to withdraw part or all of any proposal he may make under Paragraph 31.2 of this Article at any time prior to acceptance by the Owner. Such withdrawal shall be made in writing to the Project Manager. Each such proposal shall remain valid for a period of 60 days from the date submitted. If the Contractor wishes to withdraw the proposal prior to the expiration of the 60-day period, he will be liable for the cost incurred by the Owner in reviewing the proposal.

31.6 The Contractor shall specifically identify any proposals under Paragraph 31.2 of this Article with the heading "Value Engineering Change Proposal", or the proposal will be considered as made under Paragraph 31.1 of this Article.

31.7 The Contractor, in connection with each proposal he makes for a Contract Change Notice under this Article shall furnish the following information:

31.7.1 a description of the difference between the existing Contract requirement and the proposed change, and the comparative advantages and disadvantages of each, justification when a function or characteristic of an item is being altered, and the effect of the change on the performance of the end item;

31.7.2 an analysis and itemization of the requirements of the Contract which must be changed if the Value Engineering Change Proposal is accepted and a recommendation as to how to make each such change (e.g., a suggested specification revision);

31.7.3 a separate detailed cost estimate for both the existing Contract requirement and the proposed change to provide an estimate of the reduction in costs, if any, that will result from acceptance of the Value Engineering Change Proposal taking into account the costs of development and implementation by the Contractor;

31.7.4 a prediction of any effects the proposed change would have on collateral costs to the Owner such Government-furnished property costs, costs of related items, and costs of maintenance and operation;

31.7.5 a statement of the time by which a contract modification accepting the Value Engineering Change Proposal must be issued so as to obtain the maximum cost reduction, noting any effect on the contract completion time or delivery schedule; and

31.7.6 identification of any previous submission of the Value Engineering Change Proposal to the Owner, including the dates submitted, the numbers of contracts involved, and the previous actions by the Owner, if known.

ARTICLE 32 EXTENSION OF TIME

32.1 In addition to the provisions stated in Article 38, the Contractor will be granted an extension of time and will not be assessed liquidated damages for any portion of the delay in completion of the Work, performed under the latest approved progress schedule, arising from acts of God, war, fires, floods, epidemics, quarantine restrictions, freight embargoes, or weather more severe than the norm, provided that the aforesaid causes were not foreseeable and did not result from the fault or negligence of the Contractor, and provided further that the Contractor has taken reasonable precautions to prevent further delays owing to such causes, and has notified the Project Manager in writing of the cause or causes of delay within five days from the beginning of any such delay. Within 15 days after the end of the delay, the Contractor shall furnish the Project Manager with detailed information concerning the circumstances of the delay, the number of days actually delayed, the appropriate Contract Document references, and the measures to be taken to prevent or minimize the delay. Failure to submit such information will be sufficient cause for denying the delay claims. The Owner will ascertain the facts and the extent of the delay, and its findings thereon will be final and conclusive to provisions under Article 35, DISPUTES. The extension of time granted for these reasons shall not be the basis for additional compensation for any costs incurred during the time of delay.

32.1.1 Every effort shall be made by the Contractor to complete the project within the "Contract Time". The "Contract Time" anticipates "Normal" weather and climate. The Contractor's schedule must anticipate normal adverse weather delays on all weather dependent activities. The following specifies the procedure for determining time extensions for unusually severe weather. Listed below are the anticipated numbers of calendar days lost to normal adverse weather for each month.

Monthly Anticipated Calendar Days Lost to Adverse Weather Conditions

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
(7)	(4)	(4)	(4)	(6)	(3)	(4)	(2)	(3)	(3)	(2)	(5)

The above schedule of anticipated adverse weather days will constitute the base line for monthly (or portion thereof) weather time evaluations. It is assumed that the work will be carried out Mondays through Fridays (holidays excepted) unless and approved construction schedule or written authorization from the Owner indicates otherwise.

An actual adverse weather day must prevent work for 50 percent or more of the Contractor's workday. When the Contractor anticipates documenting a weather day, he/she shall first notify the Project Manager or his/her designee observing the construction to determine whether or not work can proceed or if work is delayed due to adverse weather or the effects thereof. If in agreement, the Contractor shall formally request a weather day in writing to the Owner's Project Manager or his/her designee. The Contractor shall also notify the Owner's Project Manager in writing or his/her

designee of any disagreement as to whether or not work could have proceeded on a given date within 2 calendar days of that date. The final decision regarding an adverse weather day will be made by the Project Manager or his/her designee.

The number of workdays delayed due to adverse weather or the effects thereof will then be converted to Calendar Days. Weekends and holidays will only count as calendar day delays if a workday delayed due to adverse weather is counted before and after the weekend/holiday. The number of calendar days of delay due to adverse weather or the impact thereof will then be compared to the monthly adverse weather schedule above. The Contract time period will then be increased by change order for the number of calendar days that are in excess of the above schedule and a new Contract Completion day and date will be set.

32.1.2 An extension of time will not be granted for a delay caused by a shortage of materials, except Owner-furnished materials, unless the Contractor furnishes to the Project Manager documentary proof that he has diligently made every effort to obtain such materials from every known source within reasonable reach of the Work. The Contractor shall also submit proof that the inability to obtain such materials when originally planned did in fact cause a delay in final completion of the Work which could not be compensated for by revising the sequence of his operations. Only the physical shortage of material will be considered under these provisions as a cause for extension of time. No consideration will be given to any claim that material could not be obtained at reasonable, practical, or economical costs, unless it is shown to satisfaction of the Project Manager that such material could have been obtained only at exorbitant prices, entirely inconsistent with current rates taking into account the quantities involved and the usual practices in obtaining such quantities.

32.2 A Change Order will be furnished to the Contractor within a reasonable period of time after approval of a request for extension of time, specifying the number of days allowed, if any, and the new date for completion of the Work or specified portions of the Work.

32.3 See also Article 38, TERMINATION FOR DEFAULT--DAMAGES FOR DELAY--TIME EXTENSIONS.

ARTICLE 33 NOTICE OF POTENTIAL CLAIM

33.1 The Contractor will not be entitled to additional compensation otherwise payable for an act or failure to act by the Owner, the happening of any event or occurrence, or any other cause, unless he shall have given the Project Manager a written notice of potential claim therefore as specified in this Article.

33.2 The written notice of potential claim shall set forth the reasons for which the Contractor believes additional compensation will or may be due, the nature of the costs involved, and insofar as possible, the amount of the potential claim. If based on an act or failure to act by the Owner, such notice shall be given to the Project Manager prior to the time that the Contractor has started performance of work giving rise to the potential claim for additional compensation. Notice shall be given within five days after the happening of the event or occurrence giving rise to the potential claim.

33.3 It is the intention of this Article that differences between the parties arising under and by virtue of the contract shall be brought to the attention of the Project Manager at the earliest possible time in order that such matters may be settled, if possible, or other appropriate action promptly taken.

33.4 The notice requirements of this Article are in addition to those required in other Articles of the General Conditions.

ARTICLE 34 SUBMITTAL OF CLAIMS

34.1 Claims filed by the Contractor shall contain sufficient detail to enable the Owner to ascertain the basis and amount of said claims. The Owner will review and evaluate the Contractor's claims. It will be the responsibility of the Contractor to furnish when requested by the Project Manager such further information and details as may be required to determine the facts or contention involved in his claims. Failure to submit such information and details will be sufficient cause for denying the Contractor's claims.

34.2 Each claim the Contractor may make for equitable adjustment on account of delay for any cause shall be accompanied by a progress schedule reflecting the effects of the delay and proposals to minimize these effects. If no progress schedule has been submitted to the Project Manager reflecting conditions prior to the delay for which relief is sought, then a progress schedule so reflecting these conditions shall be prepared and submitted with the claim.

34.3 Depending upon the grounds for relief and the nature of relief sought, additional submittals and conditions upon submitting claims may be required elsewhere in these General Conditions.

34.4 In no event shall claims be made after final payment is made under Article 27, FINAL PAYMENT, of these General Conditions.

34.5 Inasmuch as notice of potential claim requirements of Article 33, NOTICE OF POTENTIAL CLAIM, are intended to enable the Project Manager to investigate while facts are fresh and to take action to minimize or avoid a claim which might be filed thereafter, the Contractor's failure to make the required notice on time is likely to disadvantage the Owner. Therefore no claim for which a notice of potential claim is required will be considered unless the Contractor has complied with the notice of Article 33, NOTICE OF POTENTIAL CLAIM.

ARTICLE 35 DISPUTES

35.1 General: Notwithstanding any other provisions of this Contract, disputes and disagreements by and between the Owner and the Contractor shall be resolved through progressive, sequential process of negotiation, mediation, and in certain cases, arbitration. For contracts which are for \$250,000 or less, amounts in dispute which are less than \$10,000 shall not progress beyond negotiation and shall ultimately be decided by the Owner if not by mutual agreement. For contracts which are for more than \$250,000, amounts in dispute which are less than \$25,000 should not progress beyond negotiation. For all contracts, amounts in dispute greater than those amounts set forth above, but less than \$100,000 shall be resolved through a sequential process of negotiation, mediation, and binding arbitration. Amounts in dispute which are \$100,000 or more shall be resolved through a sequential process of negotiation, mediation, and thence either arbitration or litigation.

35.2 Negotiation: In the event of disputes, unsettled claims, questions or disagreements between the contractor and the City relating to or arising out of the provisions of this Contract, the representatives of those parties shall meet promptly in recognition of mutual interests and in a good

faith effort to resolve the dispute. Either the Contractor or the City shall arrange for this meeting at a time and place within the City of Greeley, mutually acceptable to both parties, within fifteen (15) days of notification of the dispute, unsettled claim, question, or disagreement between the parties. Seven (7) days prior to the meeting, the initiating party shall deliver to the other party, a written and complete summary of the evidence and arguments substantiating its claim. If the parties do not reach a solution within thirty (30) days after said initial meeting, then upon notice of either party to the other, the dispute, claim, question, or difference, may be referred to a mediator pursuant to Section 35.3. The parties can extend the negotiation period by mutual written agreement.

35.3 Mediation: If the dispute, claim, question, or difference is not resolved by negotiation within thirty (30) days after the initial meeting between the parties or within the extended period agreed upon, the parties agree to next request that the American Arbitration Association provide a mediator to assist the Owner and Contractor in resolving the dispute, claim, question, or difference. The rules of mediation shall be the Construction Industry Mediation Rules of the American Arbitration Association. A different mediation/dispute resolution agency may be selected for mediation upon the mutual written agreement between the parties. The dispute resolution agency shall select a qualified mediator who shall have a background in construction. The selected mediator may be rejected by the parties only for bias. The mediator shall have thirty (30) days from the time of appointment to meet with the parties and sixty (60) days from the time of the appointment to resolve the dispute unless the parties mutually consent to an extension of the sixty day deadline. All reasonable fees, costs, and expenses of the mediator, the mediator's association and the mediation agency, shall be borne equally by the parties. Each party shall bear the expense of its own counsel, experts, witnesses, and preparation and presentation of proofs at mediation.

The Contractor shall not cause a delay of work during mediation proceedings except by mutual agreement. All mediation proceedings shall be conducted in the City of Greeley, unless an alternate location is agreed upon in writing by the Owner and the Contractor.

Amounts in dispute which are less than \$10,000 shall not progress beyond mediation.

35.4 Litigation prerequisites: The procedures enumerated in Sections 35.2 and 35.3 shall be a prerequisite to the filing of any litigation between the parties to the Contract. Failure of the Contractor to follow the provisions of Section 35.2 and Section 35.3 shall be a complete defense, and grounds for immediate dismissal of any litigation filed prior to Contractor engaging in negotiation and mediation with the City of Greeley as provided above. Litigation may be filed only if the amount in dispute is \$100,000 or more. In the event litigation is filed by and between the parties after mediation, venue and jurisdiction of any and all suits and causes of action in connection with this Contract shall lie exclusively in Weld County, Colorado.

35.5 Arbitration: After mediation, instead of litigation, any remaining unresolved controversy or claim arising out of or relating to this Contract or the performance or breach thereof, may be settled by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association. For amounts in dispute which are \$100,000 or more, arbitration shall be engaged only upon mutual written agreement by the Owner and the Contractor, and the written agreement shall specify whether the arbitration shall be binding or nonbinding; however, amounts in dispute which are less than \$100,000 shall necessarily be settled by binding arbitration. The sole arbitrator shall be appointed by the Arbitration Association, unless a different arbitrator or dispute resolution agency is mutually agreed upon. The award of the arbitrator shall be accompanied by a reasoned opinion, and shall include findings of fact and conclusions. All fees and expenses of

the arbitration, including the expense of each party's counsel, experts, witnesses, and preparation and presentation of proofs, shall be borne by the party against whom arbitration judgment is made.

35.6 Litigation: Each party shall bear its own litigation fees and expenses, including the expense of its counsel, experts, witnesses, and preparation and presentation of proofs, regardless of the prevailing party.

ARTICLE 36 FORCE ACCOUNT WORK

36.1 This Article shall become operative upon failure of the Contractor and the Owner to arrive at an amount of compensation under Article 28, CHANGES. In the event that no equitable adjustment is arrived at either by mutual agreement or pursuant to the Article 35, DISPUTES, the compensation paid hereunder will be the total compensation.

36.2 Work Performed by or for Contractor: The Contractor will be paid for labor, materials, and equipment as hereinafter provided, except where agreement has been reached to pay in accordance with Paragraph 36.3 of this Article. The following percentages, as full compensation for profit, overhead and small tools, will be added to the totals computed as provided in subparagraphs 36.2.1 through 36.2.3 of this Article.

Labor	25 percent
Materials	20 percent
Equipment	10 percent

Labor, materials, and equipment shall be furnished by the Contractor or by a subcontractor. When work paid on a force account basis is performed by forces other than the Contractor's, the Contractor shall reach agreement with such other forces as to the distribution of the payment made by the Owner for such work and, except as specified herein, no additional payment therefore will be made by the Owner by reason of performance of work by a subcontractor or by others. In addition to the markups, if any, for labor, equipment, and materials, for subcontracted work, the Contractor may add an additional five percent markup. The cost of subcontracted work will be the actual cost to the contractor for work performed by a subcontractor as computed in accordance with this Paragraph 36.2 and its subparagraphs 36.2.1, 36.2.2, and 36.2.3.

36.2.1 Labor: The cost of labor used in performing the work, whether the employer is the Contractor or a subcontractor, will be the sum as determined on the basis of the following three subparagraphs:

36.2.1.1 The gross actual wages, including income tax withholdings but not including employer payments to or on behalf of workmen for health and welfare, pension, vacation, insurance and similar purposes.

36.2.1.2 To the gross actual wages, as defined in the previous subparagraph,

36.2.1.1, will be added a percentage based upon current State and Federal laws and applicable labor contracts concerning payments made to or on behalf of workmen other than actual wages, which percentage will constitute full compensation for all payments imposed by State and Federal laws and for all other payments made to or on behalf of the workmen, other than actual wages as defined in the previous subparagraph 36.2.1.1 and the subsistence and travel allowance as specified

in the following subparagraphs 36.2.1.3. The Contractor shall compute a separate percentage for each craft, or a composite percentage for all crafts, if so approved by the Owner. Computed percentages shall be submitted to the Project Manager for approval by the Owner.

36.2.1.3 Subsistence and travel allowance paid to workmen as required by established agreements.

36.2.1.4 The charges for labor shall include all classifications up to but not including foremen, and when authorized by the Owner, shall include foremen engaged in the actual and direct performance of the work. Labor charges shall not include charges for assistant superintendents, office personnel, timekeepers, and maintenance mechanics, unless authorized by the Owner in advance of the start of work.

36.2.2 Materials: The cost of materials required for the accomplishment of the work will be delivered cost to the purchaser, whether contractor or subcontractor, from the supplier thereof, except as the following are applicable:

36.2.2.1 If a cash or trade discount by the actual supplier is offered or available to the Contractor, it shall be credited to the Owner notwithstanding the fact that such discount may not have been taken.

36.2.2.2 If materials are procured by the Contractor by a method which is not a direct purchase from and a direct purchase from and a direct billing by the actual supplier, the cost of such materials will be deemed to be the price paid to the actual supplier, as determined by the Owner. No additional markup for supplier work will be allowed except to the extent of actual cost to the Contractor in handling the material, not to exceed five percent of the price paid to actual supplier.

36.2.2.3 If the materials are obtained from a supply or source owned wholly or in part by the Contractor, payment therefore will not exceed the price paid for similar materials furnished from said source on Contract Items or the current wholesale price for such materials delivered to the work site, whichever price is lower.

36.2.2.4 If the cost of the materials is, in the opinion of Owner, excessive, then the cost of such materials will be deemed to be the lowest current wholesale price at which such materials are available in the quantities concerned, delivered to the job site, less discounts as provided in subparagraph 36.2.2.1 of this Article.

36.2.2.5 If the Contractor does not furnish satisfactory evidence of the cost of such materials from the actual supplier thereof, the cost will be determined in accordance with subparagraph 36.2.2.4 of this Article.

36.2.2.6 The Contractor shall have no claims for costs and profit on Owner-furnished materials.

36.2.3 Equipment: The Contractor will be paid for the use of contractor-owned or rented equipment at the rental rates shown in the Colorado State Department of Highways Construction Equipment Rental Rate Schedule, except as modified below, which edition shall be the latest edition in effect at the time of commencement of the Force Account work. For equipment used in excess of eight hours per day, the rental rate shall be 60 percent of the listed hourly rate. If it is deemed

necessary by the Contractor to use equipment not listed in the C.D.O.H. Construction Equipment Rental Rate Schedule, the Contractor shall furnish the necessary cost data and paid invoices to the Project Manager for his use in establishment of such rental rate.

36.2.3.1 The rates paid as above provided will include the cost of fuel, oil, lubricants, supplies, small tools, necessary attachments, repairs and maintenance, depreciation, storage, insurance and incidentals.

36.2.3.2 Equipment operators will be paid for as stipulated in subparagraph 36.2.1 of this Article.

36.2.3.3 Equipment shall be in good working condition and suitable for the purpose for which the equipment is to be used.

36.2.3.4 Unless otherwise specified, manufacturer-approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment which has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer of that equipment.

36.2.3.5 Individual pieces of equipment or tools having a net individual value of \$300 or less, whether or not consumed by use, will be considered to be small tools and no payment will be made therefore.

36.2.3.6 Compensation will not be allowed while equipment is inoperative due to breakdown. Except as specified in paragraph 36.2.3.7 of this Article, time will be computed in half and full hours. In computing the time for use of equipment, less than 30 minutes shall be considered one half hour.

36.2.3.7 Equipment at the Work Site: The time to be paid for use of equipment on the work site will be the time the equipment is in operation on the force account work being performed. The time will include the time required to move the equipment to location of the force account work and return it to the original location or to another location requiring no more time than that required to return it to its original location. Moving time will not be paid for if the equipment is used at the site of the force account work on other than such force account work. Loading and transporting costs will be allowed, in lieu of moving time, when the equipment is moved by means other than its own power. No payment for loading and transporting will be made if the equipment is used at the site of the force account work on other than such force account work.

36.3 Special Items of Work: If the Owner and the Contractor, by agreement, determine that (a) an item of force account work does not represent a significant portion of the total Contract price, and (b) such items of work cannot be performed by the forces of the Contractor or the forces of any of his subcontractors, and (c) it is not in accordance with the established practice of the industry involved to keep the records which the procedure outlined in Paragraph 36.2 of this Article would require, charges for such special force account work items may be made on the basis of invoices for such work without complete itemization of labor, materials, and equipment rental costs. To such invoiced price, less a credit to the Owner for any cash or trade discount offered or available, will be added five percent of the discounted price, in lieu of the percentages provided in Paragraph 36.2 of this Article. In no event will the price paid exceed the current fair market value of such work plus five percent.

36.4 Records: The Contractor shall maintain his records to provide a clear distinction between the direct costs of work paid for on a force account basis and costs of other operations.

36.4.1 The Contractor shall prepare and furnish to the Project Manager, on the following work day, report sheets in duplicate of each day's work paid for on a force account basis. The daily report sheets shall itemize the materials used and shall cover the direct cost of labor and the charges for equipment, whether furnished by the Contractor, subcontractor, or other forces, except for charges described in Paragraph 36.3 of this Article. The daily report sheets shall provide names or identifications and classifications of workmen and the hourly rate of pay and hours worked. In addition, a report of the size, type and identification number of equipment and hours operated shall be furnished to the Project Manager. Daily report sheets shall be signed by the Contractor or his authorized agent.

36.4.2 Material changes shall be substantiated by valid copies of vendor's invoices or conformed copies, certified true by the Contractor. Such invoices shall be submitted with the daily report sheets. Should the vendor's invoices not be submitted within 20 days after the date of delivery of the material or 15 days after acceptance of the work, whichever comes first, the Owner reserves the right to establish the cost of such materials at the lower current wholesale prices at which such materials are available in the quantities concerned delivered to the location of the work, less any discounts provided in subparagraph 36.2.1. of this Article.

36.4.3 The Project Manager will compare his records with the daily report sheets furnished by the Contractor, make any necessary adjustment and compile the costs of work paid for on a force account basis on daily force account work report forms. When these daily reports are agreed upon and signed by the Project Manager, they shall become the basis of payment for the work performed, but shall not preclude subsequent adjustment based on a later audit.

36.4.4 The Contractor's original cost records pertaining to work paid for a on a force account basis shall be retained and shall be open to inspection and audit as required by Article 28, CHANGES, and any other provisions of the Contract.

36.5 If, in the Project Manager's opinion, the Contractor or any of his subcontractors, in performing Force Account work, is not making efficient use of labor, material or equipment or is proceeding in a manner which makes Force Account work unnecessarily more expensive to the Owner, the Project Manager may, in whole or part, direct the Contractor in the deployment of labor, material and equipment. By way of illustration, inefficiency may arise in the following ways: (1) the timing of the work, (2) the use of unnecessary labor or equipment, (3) the use of a higher percentage of apprentices than in non-force account work, (4) failure to procure materials at the lowest price, or (5) using materials of quality higher than necessary.

ARTICLE 37 TERMINATION FOR CONVENIENCE OF THE OWNER

37.1 The performance of Work under this contract may be terminated by the Owner in accordance with this Article in whole, or from time to time in part, whenever such termination is in the best interest of the Owner. Such termination shall be effected by delivery to the Contractor of a Notice of Termination specifying the extent to which performance of work under the Contract is terminated, and the date upon which such termination becomes effective.

37.2 After receipt of a Notice of Termination, and except as otherwise directed by the Owner, the Contractor shall:

37.2.1 Stop work under the Contract on the date and to the extent specified in the Notice of Termination.

37.2.2 Place no further orders or subcontracts for materials, services or facilities, except as may be necessary for completion of such portion of the work under the Contract as is not terminated;

37.2.3 Terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the Notice of Termination;

37.2.4 Assign to the Owner in the manner, at the times, and to the extent directed by it, all of the rights, title and interest of the Contractor under the orders and subcontracts so terminated, in which case the Owner will have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;

37.2.5 Settle outstanding liabilities and claims arising out of such termination of orders and subcontracts, with the approval or ratification of the Owner to the extent it may require, which approval or ratification shall be final for the purposes of this Article;

37.2.6 Transfer title and deliver to the Owner in the manner, at the times, and to the extent, if any directed by it, (a) the fabricated or unfabricated parts, work in process, completed work, supplies and other material procured as part of, or acquired in connection with the performance of, the work terminated by the Notice of Termination, and (b) the completed or partially completed plans, drawings, information, and other property, which, if the Contract had been completed, would have been required to be furnished to the Owner;

37.2.7 Use his best efforts to sell, in the manner, at the times, to the extent, and at the price or prices direction or authorized by the Owner, property of the types referred to in (37.2.5) above; provided, however, that the Contractor (a) shall not be required to extend credit to any purchaser and (b) may acquire any such property under the conditions prescribed by and at a price or prices approved by the Owner; provided further that the proceeds of any such transfer or disposition will be applied in reduction of any payments to be made by the Owner to the contractor under this Contract or will otherwise be credited to the price or cost of the work covered by this Contract or paid in such other manner as the Owner may direct;

37.2.8 Complete performance of each part of the work as shall not have been terminated by the Notice of Termination; and

37.2.9 Take such action as may be necessary, or as the Project Manager may direct, for the protection and preservation of the property related to this Contract which is in the possession of the Contractor and in which the Owner has or may acquire an interest.

37.3 After receipt of a Notice of Termination, the Contractor shall submit to the Project Manager his termination claim, in the form and with certification prescribed by the Owner. Such claims shall be submitted promptly but in no event later than the earliest of the following: (1) one year from the effective date of termination or (2) thirty days after the remainder of the project has been accepted by the owner.

37.4 Subject to the provision of Paragraph 37.3, the contractor and the Owner may agree upon the whole or any part of the amount or amounts to be paid to the Contractor by reason of the total or partial termination of work pursuant to this Article, which amount or amounts may include an allowance for profit on work done; provided that such agreed amount or amounts, exclusive of settlement costs, shall not exceed the total contract price as reduced by the amount of payments otherwise made and as further reduced by the Contract price of work terminated. The Contract will be amended accordingly, and the Contractor will be paid the agreed amount.

37.5 In the event of failure of the Contractor and the Owner to agree, as provided in Paragraph 37.4, upon the whole amount to be paid the Contractor by reason of the termination of work pursuant to this Article, the Owner will pay the Contractor the amounts determined by the Owner as follows, but without duplication of any amounts agreed upon in accordance with Paragraph 37.4;

37.5.1 With respect to contract work performed prior to the effective date of the Notice of Termination, the total (without duplication of any items) of:

37.5.1.1 The cost of such work;

37.5.1.2 The cost of settling and paying claims arising out of the termination of work under subcontracts or orders as provided in subparagraph 37.2.5 above, exclusive of the amounts paid or payable on account of supplies or materials delivered or services furnished by the subcontractor prior to the effective date of the Notice of Termination of work under this Contract, which amounts shall be included in the cost on account of which payment is made under 37.5.1 above.

37.5.1.3 A sum, as profit on 37.5.1.1 above, determined by the Owner to be fair and reasonable; provided, however, that if it appears that the Contractor would have sustained a loss on the entire Contract had it been completed, no profit shall be included or allowed under this subparagraph 37.5.1.3 and an appropriate adjustment shall be made by reducing the amount of the settlement to reflect the indicated rate of loss.

37.5.2 The reasonable cost of the preservation and property incurred pursuant to subparagraph 37.2.9 and any other reasonable cost incidental to termination of work under this Contract, including expense incidental to the determination of the amount due to the Contractor as the result of the termination of work under this Contract.

37.5.3 The total sum to be paid to the contractor under paragraph 37.5.1 above will not exceed the total contract price as reduced by the amount of payments otherwise made and as further reduced by the Contract price of the work terminated.

37.6 In arriving at the amount due the Contractor under this Article, there will be deducted (1) any claim which the Owner may have against the Contractor in connection with this Contract, (2) the agreed price for, or the proceeds of sale, of materials, supplies or other things acquired by the contractor or sold, pursuant to the provisions of this Article, and not otherwise recovered by or credited to the Owner and (3) the full amount of any statutory or other claim against the Contractor filed with the Owner.

37.7 Unless otherwise provided for in this Contract, or by applicable statute, the Contractor, from the effective date of termination and for a period of three years after final settlement under this Contract, shall preserve and make available to the Owner at all reasonable times at the office of the Contractor but without direct charge to the Owner, all his books, records, documents, electronic/digital media and other evidence bearing on the costs and expenses of the Contractor under this Contract and related to the work terminated hereunder, or to the extent approved by the Owner, or other authentic reproductions thereof.

37.8 The Contractor shall insert in all subcontracts that the subcontractor shall stop work on the date of and to the extent specified in a Notice of Termination from the Owner and shall require that any tier subcontractors insert the same provision in any tier subcontracts.

37.9 Under no circumstances is the Contractor entitled to anticipatory, unearned profits or consequential damages as a result of a termination or partial termination under this Article.

ARTICLE 38 TERMINATION FOR DEFAULT

38.1 If, in the opinion of the Owner, the Contractor has failed to prosecute work, the Owner will notify the Contractor. The Contractor will then have 5 days to remedy the failure to prosecute work or to obtain the Owner's authorization for the delay or an extension of time as set forth in Article 32.

38.2 If the Contractor refuses or fails after reasonable notice as set forth above to prosecute Work, or any separable part thereof, with such diligence as will insure its completion within the time specified in this Contract, or refuses or fails to complete said Work within such time, the Owner may, by written notice to the Contractor, terminate for default his right to proceed with the Work or such part of the Work as to which there has been unauthorized delay. In such event the Owner may take over the work and prosecute the same to completion, by Contractor or otherwise, and may take possession of and utilize in completing the Work such materials, appliances, and plant as may be on the Work Site and necessary therefore. Whether or not the Contractor's right to proceed with the Work is terminated, he and his sureties shall be liable for any damage to the Owner resulting from his refusal or failure to complete the Work in the specified time.

38.3 If the Owner so terminates the Contractor's right to proceed, the resulting damage will consist of liquidated damages until such time as may be required for final completion of the Work together with any increased costs incurred by the Owner in completing the Work as further set forth in Article 41.

38.4 If, after Notice of Termination of the Contractor's right to proceed under the provisions of this Article, it is determined for any reason that the Contractor was not in default under the provisions of this Article or that the Contractor was entitled to an extension of time under Article 32,

EXTENSION OF TIME, the rights and obligations of the parties shall be the same as if the Notice of Termination had been issued pursuant to Article 37, TERMINATION FOR CONVENIENCE OF THE OWNER.

38.5 The right to terminate for default and any other rights and remedies of the Owner provided in this clause are in addition to any other rights and remedies provided by law or under this Contract.

ARTICLE 39 TERMINATION OF RIGHT TO PROCEED FOR CERTAIN DEFAULTS

39.1 In addition to the Owner's right to terminate for default under other Articles of this Contract, the Owner will have the right to terminate the Contractor's performance of work in whole or in part for default for any of the following reasons:

39.1.1 The Contractor's or subcontractor's performance of work is in violation of the terms of the Contract.

39.1.2 The Contractor or subcontractor has violated an authorized order or requirement of the Owner.

39.1.3 Abandonment of Contract.

39.1.4 Assignment or subcontracting of the Contract or any work under the Contract without approval of the Owner.

39.1.5 Bankruptcy or appointment of a receiver for the Contractor's property.

39.1.6 Performance of the Contractor in bad faith.

39.1.7 Contractor allowing any final judgment to stand against him for a period of 48 hours (excluding weekends and legal holidays).

39.2 If, in the opinion of the Owner, the Contractor is in default of the Contract, the Owner will notify the Contractor. If the Contractor fails to remedy or commence to remedy the default within five days after receipt of such notice, the Owner may terminate the Contractor's right to proceed with the Work or that portion of the Work which the Owner determines is most directly affected by the default.

39.3 If, after Notice of Termination of Contractor's right to proceed under this Article it is determined for any reason Contractor was not in default, the rights and obligations of the parties shall be the same as if the Notice of Termination had been issued pursuant to Article 37, TERMINATION FOR CONVENIENCE OF THE OWNER.

ARTICLE 40 RIGHTS AND OBLIGATIONS OF PARTIES AT TERMINATION FOR DEFAULTS

40.1 This Article shall apply to terminations for defaults covered in Article 15, 38, and 39 of these General Conditions.

- 40.2 On receipt of a Notice of Termination from the Owner, the Contractor shall:
- 40.2.1 Stop all work under the Contract on the date and to the extent specified in the Notice of Termination.
- 40.2.2 Place no further orders or subcontracts for materials, equipment or services except as they relate to the performance of work covered by the Notice of Termination.
- 40.2.3 Cancel or terminate all orders or subcontracts to the extent that they relate to the performance of work covered by the Notice of Termination.
- 40.2.4 Comply with all other requirements of the Owner as may be specified in the Notice of Termination.
- 40.3 Upon the Owner termination of the Contractor's right to proceed with the Work because of the Contractor's default under the Contract, the Owner will have the right to complete the Work by whatever means and method it deems advisable. The Owner shall have the right to take possession of and use any or all the Contractor's materials, plat, tools, equipment and property of any kind provided by or on behalf of the Contractor for the purpose of the Work, or a portion of them, without being responsible to the Contractor for fair wear and tear. The Contractor shall have no rights in such property during their use by the Owner. The Owner will not be required to obtain the lowest prices for completing the Work but shall make such expenditures as, in the Owner's sole judgment, best accomplish such completion.
- 40.4 The expense of completing the Work, together with a reasonable charge for engineering, managerial and administrative services, as certified by the Owner, will be charged to the Contractor and the expense so charged will be deducted by the Owner out of such monies as may be due or may at any time thereafter become due to the Contractor. In case such expense is in excess of the sum which otherwise would have been payable to the Contractor under the Contract, the Contractor or his surety shall promptly pay the amount of such excess to the Owner upon notice from the Owner of the excess so due. The Owner may, in its sole discretion, withhold all or any part of any progress payments otherwise due the Contractor until completion and final settlement of the Work covered by the Notice of Termination of Contractor's right to proceed.
- 40.5 The Contractor shall insert in all subcontracts that the subcontractor will stop work on the date of or to the extent specified in a Notice of Termination from the Owner and shall require the subcontractors to insert the same provision in any tier subcontracts.
- 40.6 The Contractor shall immediately upon receipt communicate any Notice of Termination issued by the Owner to the affected subcontractors and suppliers at any tier.
- 40.7 Rights of Surety: The Surety on the Performance Bond provided for in this Contract shall not be entitled to take over the Contractor's performance of work in case of termination under this Article, except with the consent of the Owner.

ARTICLE 41 LIQUIDATED DAMAGES

41.1 Time is of the essence of the Contract. In the event the Contractor fails to achieve Substantial Completion of the Work within the Contract Time, or fails to meet any other time requirement or the time limit set forth in the Contract, after due allowance for any extension or extensions of time made in accordance with the Contract, the Contractor shall pay to the Owner as fixed, agreed and liquidated damages, pursuant to the clause of the Contract entitled TERMINATION FOR DEFAULT—DAMAGES FOR DELAY—TIME EXTENSIONS, the sum of \$500.00 for each calendar day of delay unless otherwise stated in the Special Provisions. Such liquidated damages shall be assessed for each and every day that the Contractor shall be in default. The Owner shall have the right to deduct said liquidated damages from any amount due or that may become due the Contractor, or to collect such liquidated damages from the Contractor or its surety.

41.2 Liquidated damages in the amount stipulated do not include any sums of money to reimburse the City for actual damages which may be incurred between Substantial Completion and Final Completion because of the Contractor's failure to achieve Final Completion within the Contract Time. For such delay in Final Completion, the Contractor shall reimburse the City, as a mitigation of City damages and not as a penalty, those administrative costs incurred by the City as a result of such failure.

41.3 Liquidated damages in the amounts stipulated do not include any sums of money to reimburse the City for extra costs which the City may become obligated to pay on other contracts which were delayed or extended because of the Contractor's failure to complete the Work within the Contract Time. Should the City incur additional costs because of delays or extensions to other contracts resulting from the Contractor's failure of timely performance, the City will assess these extra costs against the Contractor, and these assessments will be in addition to the stipulated liquidated damages.

41.4 The City reserves all of its rights to actual damages from the Contractor for injury or loss suffered by the City from actions or omissions of the Contractor, including but not limited to any other breach or default of the Contract, outside of the scope of the above sections.

ARTICLE 42 USE AND POSSESSION PRIOR TO COMPLETION

42.1 The Owner shall have the right to take possession of or use any completed or partially completed parts of the Work. Such possession or use will not be deemed an acceptance of Work not completed in accordance with the Contract. While the Owner is in such possession, the Contractor, notwithstanding the provisions of Article 18, DAMAGE TO WORK AND RESPONSIBILITIES FOR MATERIALS, will be relieved of the responsibility for loss or damage to the work other than that resulting from the Contractor's fault or negligence or breach of warranty. If such prior possession or use by the Owner delays the progress of the Work or causes additional expense to the Contractor, an equitable adjustment in the Contract price or the time of completion will be made, and the Contract will be modified in writing accordingly.

ARTICLE 43
RIGHTS IN SHOP DRAWINGS AND WORKING DRAWINGS

43.1 Shop Drawings and Working Drawings, submitted to the Project Manager by the Contractor, subcontractor or any lower tier subcontractor pursuant to the Work, may be duplicated by the Owner and the Owner may use and disclose, in any manner and for any purpose, Shop Drawings and Working Drawings delivered under this Contract.

43.2 This Article, including this Paragraph 43.2, shall be included in all subcontracts hereunder at all tiers.

ARTICLE 44
PATENT AND COPYRIGHT

44.1 The Contractor shall warrant that the materials, equipment or devices used on or incorporated in the Work shall be delivered free of any rightful claim of any third party for infringement of any United States patent or copyright. If notified promptly in writing and given authority, information and assistance, the Contractor shall defend, or may settle, at his expense, any suit or proceeding against the Owner or the Project Manager based on a claimed patent or copyright infringement which would result in a breach of his warranty. The Contractor shall pay all damages and costs awarded therein against the Owner or the Project Manager due to such breach. If any use of materials, equipment or devices is held to constitute an infringement and such use is enjoined, the Contractor shall, at his expense and option, either procure for the Owner the right to continue using said materials, equipment or devices, or replace same with noninfringing materials, equipment or devices, or modify same so it becomes noninfringing. The Contractor shall report to the Owner promptly and in reasonable written detail, each notice or claim of patent or copyright infringement based on the performance of this Contract of which the Contractor has knowledge. In the event of any claim or suit against the Owner on account of any alleged patent or copyright infringement arising out of the performance of this Contract or out of the use of any supplies furnished or work or services performed hereunder, the Contractor shall furnish to the Owner when requested by the Owner, all evidence and information in possession of the Contractor pertaining to such suit or claim. Such evidence and information shall be furnished at the expense of the Owner except where the Contractor has agreed to indemnify the Owner. This clause shall be included in all subcontracts.

ARTICLE 45
HISTORICAL, SCIENTIFIC AND ARCHAEOLOGICAL DISCOVERIES

45.1 All articles of historical, scientific or archaeological interest uncovered by the Contractor during progress of the Work shall be preserved in accordance with applicable law and reported immediately to the Project Manager. Further operations of the Contractor with respect to the find, including disposition of the articles, will be decided by the Owner in accordance with applicable law.

ARTICLE 46
SUBSTITUTIONS

46.1 Where reference is made to one or more proprietary products but restrictive descriptive material of only one manufacturer is used, it is understood that the products of other manufacturers will be accepted, provided they equal or exceed the standards set forth in the plans and

specifications and are compatible with the intent and purpose of the design, subject to the written approval of the Owner and the Project Manager. If the descriptive material is not restrictive, the products of other manufacturers specified will be accepted without prior approval provided they are compatible with the intent and purpose of the design.

46.2 The Contractor may propose the substitutions of any material as a supplement to his bid with the monetary amount, additive or deductive as may be the case, clearly stated. Manufacturer's information, catalog numbers, and complete descriptive information shall be included with the proposed substitution. This shall be completely apart and separate from the base bid quotation and shall be solely for the information of the Owner, and the use of such proposed substitutions shall be strictly at the decision of the Owner. If substitution is accepted by the Owner, the Contract sum shall be adjusted from the base bid either up or down as indicated on the supplementary list.

ARTICLE 47 INSURANCE

47.1 General

47.1.1 The Contractor shall provide from insurance companies, acceptable to the Owner, the insurance coverage designated hereinafter and pay all costs. The Contractor also indemnifies the Owner as further described in Article 4.

47.1.2 Before commencing work under this Agreement, the Contractor shall furnish the Owner with certificates of insurance specified herein showing the type, amount, class of operations covered, effective dates, and date of expiration of policies. Furthermore, each such certificate shall contain a valid provision or endorsement that the policy may not be cancelled, terminated, changed or modified without first giving ten (10) days written notice to the Owner, which notice must be sent registered mail, return receipt requested, to the Project Manager.

47.1.3 In case of the breach of any provision of this Article, the Owner, at his option, may take out and maintain, at the expense of the Contractor, such insurance as the Owner may deem proper at the Contractor's expense and may deduct the cost of such insurance from any monies which may be due or become due the Contractor under this Agreement.

47.1.4 The Contractor shall either: (1) require each of his subcontractors to procure and maintain during the life of his subcontract, subcontractors' comprehensive General Liability, Automobile Liability and Property Damage Liability Insurance of the type and in the same amounts as specified in this subparagraph, or (2) insure the activity of his subcontractors in his own policy.

47.1.5 Co-Insurance: The Contractor herein agrees to name the Owner as an insured party on all liability insurance policies provided for by this Article 47, INSURANCE.

47.1.6 No insurance shall be cancelled or otherwise voided during the Contract period, without at least 10 days prior written notice to the Owner, nor shall any insurance be invalidated should the insured waive any or all right of recovery against any party.

47.1.7 Liability insurance may be arranged by Comprehensive General Liability and Comprehensive Automobile Liability policies for the full limits required; or by a combination of underlying Comprehensive Liability policies for lesser limits with the remaining limits provided by an Excess or Umbrella Liability policy.

47.1.8 The Owner shall purchase and maintain such boiler and machinery insurance as may be required by the Contract Documents or by law. This insurance shall include the interest of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Work.

47.1.9 Any loss insured under Article 47 is to be adjusted with the Owner and made payable to the Owner as trustee for the insured, as their interests may appear, subject to the requirements of any applicable mortgage clause. The Contractor shall pay each subcontractor a just share of any insurance monies received by the Contractor, and by appropriate share of any insurance monies received by the Contractor, and by appropriate agreement, written where legally required for validity, shall require each subcontractor to make payments to his subcontractors in similar manner.

47.1.10 If the Contractor requests in writing that insurance for risks other than those described in this Article or other special hazards be included in the Owner's property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

47.1.11 The Owner as trustee shall have power to adjust and settle any loss with the insurers.

47.1.12 If the Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion thereof, such occupancy or use shall not commence prior to a time mutually agreed to by the Owner and Contractor and to which the insurance company or companies providing the property insurance have consented by endorsement to the policy or policies. This insurance shall not be cancelled or lapsed on account of such partial occupancy or use. Consent of the Contractor and of the insurance company or companies to such occupancy or use shall not be unreasonably withheld.

47.2 Workmen's Compensation and Employer's Liability Insurance:

47.2.1 The Contractor shall provide coverage and amounts as required by the Workmen's Compensation Act of the State of Colorado.

47.2.2 The Contractor shall provide Employer's Liability Insurance in an amount not less than \$100,000 for each occurrence.

47.2.3 The Contractor shall require any subcontractor to provide Workmen's Compensation and Employer's Liability Insurance in the same amounts for all of the subcontractor's employees to be engaged in work under this Agreement.

47.3 General Liability

47.3.1 General Liability Insurance shall be on a Comprehensive General Liability form and shall provide coverage for the following: Premises and Operations, Owners and Contractors Protective, Elevators, Independent Contractors, Products and Completed Operations, Contractual, Personal Injury, and Broad Form Property Damage; "XCU" exclusions must be deleted.

47.3.2 Minimum requirements for Comprehensive General Liability are: bodily injury, \$1,000,000.00 each person, \$2,000,000.00 each occurrence; property damage, \$1,000,000.00 each occurrence.

47.4 Automobile Liability

47.4.1 Comprehensive Automobile Liability Insurance shall include coverage for all owned motor vehicles and hired and non-owned motor vehicles.

47.4.2 Minimum requirements for Comprehensive Automobile Insurance are: bodily injury, \$1,000,000.00 each person, \$2,000,000.00 each occurrence; property damage, \$1,000,000.00 each occurrence.

47.5 Property Insurance:

47.5.1 The Owner may require the Contractor to purchase and maintain "Builder's Risk" Property Insurance for all work at the site to the full insurable value thereof. The Owner and the Project Manager shall be named as co-insured.

ARTICLE 48 UNCOVERING AND CORRECTION OF WORK

48.1 During construction, whenever materials requiring inspection in place by the Project Manager and the Owner to be permanently covered up, it shall be Contractor's responsibility to notify the Project Manager at least 24 hours in advance of commencement of such covering operation. In the event of failure by Contractor to give such notification, Contractor shall, at his own expense, uncover such portions of work as required by the Project Manager or the Owner, and reinstall such covering after satisfactory inspection and correction of any and all deficiencies.

ARTICLE 49 EQUAL OPPORTUNITY

49.1 The Contractor agrees to comply with the letter and spirit of the Colorado Anti-discrimination Act of 1957, as amended, and other applicable laws respecting discrimination and unfair employment practices (24-34-402, CRS 1973, as amended). The Contractor shall be responsible for any discriminatory or unfair employment practices of his subcontractors. Neither the Contractor nor any subcontractor will discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, religion, ancestry, mental or physical handicap, or age. Contractor shall take affirmative action to insure that applicants are employed, and that employees are treated during employment without regard to their race, creed, color, national origin, sex, religion, ancestry, mental or physical handicap, or age. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment, or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of non-discrimination.

49.2 Contractor and all subcontractors shall, in all solicitations or advertisement for employees placed by them or on their behalf, state that qualified applicants will receive consideration for employment without regard to race, creed, color, national origin, sex, religion, ancestry, mental or physical handicap, or age.

ARTICLE 50 CLAIMS

50.1 The Contractor shall not assert any claim arising out of any act or omission by any officer, agent or employee of the Owner in the execution or performance of this Contract against such officer, agent or employee in his or her individual or official capacities.

50.2 The Contractor shall require each Separate Contract Design Professional or Contractor to agree in his Contract not to make any claim against the Owner, its officers, agents or employees, by reason of such Contract with the contractor.

50.3 Nothing in this Contract shall be construed to give any person other than the Owner and the Contractor any legal or equitable right, remedy or claim under this Contract; and it shall be held to be for the sole and exclusive benefit of the Owner and the Contractor.

ARTICLE 51 NOTICES

51.1 Except as otherwise provided herein, any notice, approval, acceptance, request, bill, demand or statement hereunder from either party to the other shall be in writing and shall be deemed to have been given when either delivered personally or deposited in a U.S. mailbox in a postage-prepaid envelope, addressed to the other party via certified mail. Notices to the Owner shall be addressed to the Project Manager by name. Either party may at any time change such address by delivering or mailing, as aforesaid, to the other party a notice stating the change and the changed address.

ARTICLE 52 LEGAL INSERTIONS, ERRORS, INCONSISTENCIES, OR DISCREPANCIES IN CONTRACT

52.1 It is the intent and understanding of the parties to this Contract that each and every provision of law required to be inserted in this Contract shall be and is inserted herein. Furthermore, it is hereby stipulated that every such provision is deemed to be inserted herein, and if through mistakes or otherwise, any such provision is not inserted in correct form, then this Contract shall upon application of either party, be amended by such insertion so as to comply strictly with the law and without prejudice to the right of either party.

52.2 If this Contract contains any errors, inconsistencies, ambiguities, or discrepancies, including typographical errors, the Contractor shall request a clarification of same by writing to the Project Manager whose decision shall be binding upon the parties.

**ARTICLE 53
CAPTIONS OR HEAD NOTES**

53.1 The captions or head notes on articles or sections of this Agreement, and marginal notes are intended for convenience and reference purposes only and in no way define, limit or describe the scope or intent hereof, or of this Agreement not in any way affect this Agreement.

**ARTICLE 54
EFFECTIVE AND BINDING**

54.1 This Contract shall not become effective or binding upon the Owner unless it has been authorized and executed in accordance with the ordinances of the City of Greeley.

**ARTICLE 55
CONTRACTOR**

55.1 All personnel assigned to the Project by the Contractor shall be required to cooperate fully with personnel of the Owner and if in the sole discretion of the Owner the Contractor's personnel fails so to cooperate, the Contractor shall relieve them of their duties on the Project when required by the Owner.

55.2 Within seven (7) consecutive calendar days after date of written notice to commence work, the Contractor shall designate in writing one person who, on his behalf, shall be responsible for coordinating all of the services to be rendered by the Contractor hereunder. Such designee shall be subject to the approval of the Owner. Any change to the approved designee shall be proposed in writing seven (7) days in advance and subject to Owner approval.

55.3 The Contractor shall engage, at his sole expense, all engineers, architects, cost estimators, lawyers, experts and Contractors as may be required for the proper performance of the Contract. The Contractor shall be responsible for the performance of the work of all architects, engineers, cost estimators, lawyers, experts and Contractors so engaged by him, including maintenance of schedules, correlation of their work and resolution of all difference between them. It is understood that all architects, engineers, cost estimators, lawyers, experts and Contractors are employees of the Contractor and not of the Owner, and the Contractor alone is responsible for their work.

55.4 All drawings, tracings, specifications, digital media/electronic files and other material prepared and furnished under and for this Contract shall become the property of the Owner upon substantial completion and/or their acceptance by the Owner and/or upon termination of the services of the Contractor. Such documents shall be promptly delivered to the Owner upon demand and thereafter may be used by the Owner in whole or in part or in modified form, for those purposes it may deem advisable without further employment of, or payment of additional compensation to, the Contractor.

55.5 The Contractor shall not, without the prior written approval of the Owner, specify for the project, or necessarily imply the required use of any article, product, material, fixture or form of construction, the use of which is covered by a patent, or which is otherwise exclusively controlled by a particular firm or group of firms.

55.6 Should any claim be made or any action brought against the Owner relating to the design and satisfactory operation of the Project herein, the Contractor shall diligently render to the Owner without additional compensation any and all assistance which may be requested by the Owner.

55.7 The Owner's Project Manager's decision shall be final and binding upon the Contractor as to all matters arising in connection with or relating to this Contract. The Project Manager shall determine the amount, quality, acceptability and fitness of the work being performed hereunder and shall determine all matters relative to the fulfillment of this Contract on the part of the Contractor and such determination shall be final and binding on the Contractor. Acceptance by the Owner of any document hereunder and all supporting documents shall not relieve the Contractor of sole responsibility for work performed under this contract, including, but not limited to, the final design of the Project, including the plans, specifications and all supporting documents, except as to any feature thereof which the Owner had specifically directed in writing to be included over the written objection of the Contractor. In case any question shall arise, the decision of the Owner's Project Manager, who is hereby accepted by the Contractor as the arbiter, shall be a condition precedent to the right of the Contractor to receive any money under this Contract.

ARTICLE 56 APPEALS

56.1 Except as otherwise provided in this Contract, any dispute concerning a question of fact arising under this Contract which is not disposed of by Agreement shall be decided by the Project Manager, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Contractor. The decision of the Project Manager shall be final and conclusive unless, within fifteen (15) days from the date of receipt of such copy, the Contractor mails or otherwise furnishes to the Project Manager a written notice of appeal.

56.2 In the event a decision of the Project Manager is the subject of an appeal, such dispute may be settled by appropriate legal proceeding, or, if the parties mutually agree, through arbitration or administrative process. Pending any binding arbitative or administrative decision, appeal, or judgment referred to in this section or the settlement of any dispute arising under this Contract, the Contractor shall proceed diligently with the performance of this Contract.

56.3 Venue and jurisdiction of any suit, right, or cause of action arising under or in connection with this Contract shall lie exclusively in Weld County, Colorado.

ARTICLE 57 PROHIBITED INTEREST

57.1 No member, officer or employee of the City of Greeley shall have any financial or pecuniary interest, direct or indirect, in this Contract or the proceeds thereof.

**ARTICLE 58
FINDINGS CONFIDENTIAL**

58.1 Any reports, information, data, etc., available to or prepared or assembled by Contractor under this Contract shall not be made available to any individual or organization by Contractor without consent in writing from the Owner subject to applicable law.

**ARTICLE 59
GENERAL PROVISIONS**

59.1 Services and work performed by Contractor under this Contract shall conform to reasonable and normal professional standards known and accepted within the community.

59.2 No reports, graphics or other material produced directly or indirectly for the Owner under this Contract shall be the subject of an application for copyright or trademark by or on behalf of Contractor.

59.3 The laws of the State of Colorado and applicable Federal, state and local laws, regulations and guidelines shall govern hereunder.

59.4 The headings of the articles, clauses, and paragraphs of this Contract are inserted for reference purposes only and are not restrictive as to content.

59.5 This Contract and any subsequent amendment shall be deemed an original having identical legal effect, and all of which together constitute one and the same instrument.

59.6 Nothing contained herein shall be deemed to give any third party any claim or right of action against the Owner which does not otherwise exist without regard to this Contract.

59.7 Where a number of days is specified in this Contract it shall mean calendar days unless otherwise specified.

59.8 This Contract shall not be assigned, in whole or in part, without the written consent of the Project Manager and Contractor.

59.9 The Owner certifies the following;

A. An amount of money equal to or greater than the Contract amount has been appropriated and budgeted for the Project which this Contract concerns.

B. No Change Order which requires additional compensable work to be performed by the Contractor will be issued by the Owner unless an amount of money has been appropriated and budgeted sufficient to compensate the Contractor for such additional compensable work unless such work is covered under the remedy-granting provisions of this Contract.

C. As used in this paragraph, "remedy granting provision" shall mean any clause of this Contract which permits additional compensation in the event of a specific contingency or event occurs. This term shall include, but not be limited to, change clauses, differing site conditions clauses, variation in quantities clauses, and termination for convenience clauses.

**ARTICLE 60
CONTRACTOR ACCEPTANCE**

60.1 The acceptance by the Contractor, his successors or assigns of any payment made on the final acceptance of the Project under this Contract or of any final payment due on termination of this Contract, shall constitute a full and complete release of the Owner from any and all claims, demands and causes of action whatsoever which the Contractor, his successors or assigns have or may have against the Owner under the provisions of this Contract.

60.2 No action shall be maintained by the Contractor, its successors or assigns, against the Owner on any claims based upon or arising out of this Contract or out of anything done in connection with this Contract unless such action shall be commenced within 180 days after the date of filing of the voucher for final payment hereunder in the office of the Finance Director, or within 180 days of the termination of this Contract.

**ARTICLE 61
SUCCESSORS AND ASSIGNS**

61.1 The Contractor binds itself, its partners, successors, assigns and legal representatives to the other party to this Contract and to the partners, successors, assigns and legal representatives of such other party with respect of all covenants of this Agreement. The Contractor shall not transfer, assign, or subcontract any interest in this Agreement.

**ARTICLE 62
SEVERABILITY CLAUSE**

62.1 If any provision of this Agreement is subsequently declared by legislative or judicial authority to be unlawful, unenforceable, or not in accordance with applicable laws, statutes, and regulations of the United States of America and the State of Colorado, all other provisions of this Agreement shall remain in full force and effect.

ARTICLE 63

63.1 This Agreement represents the entire and integrated Agreement between the Owner and the Contractor and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be amended only by written instrument signed by both Owner and Contractor.

ARTICLE 64

64.1 In accordance with C.R.S. §8-17-101, all parties contracting with the City of Greeley on public works projects shall employ Colorado labor to perform the work to the extent of not less than eighty percent (80%) of each type or class of labor in the several classifications of skilled and common labor employed on this project.

ARTICLE 65

65.1 The Contract Documents may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same document. The Contract Documents, including all component parts set forth above, may be executed and delivered by electronic signature by any of the parties and all parties consent to the use of electronic signatures.



SECTION 00520
SUBCONTRACTORS/MATERIALS SUPPLIERS AND RELATED DATA

Firm Name: _____ City Contractors License # _____

Primary Contractor _____

PROJECT: _____ Address: _____

For each Subcontractor and/or Materials Suppliers to be utilized, please provide the following information (use additional sheets as necessary):

Phone Number: _____ Fax Number: _____

Proposed work and percentage of total work to be assigned _____
Percentage: _____ %

Firm Name: _____ City Contractors License # _____

Address: _____

Phone Number: _____ Fax Number: _____

Proposed work and percentage of total work to be assigned _____
Percentage: _____ %

Firm Name: _____ City Contractors License # _____

Address: _____

Phone Number: _____ Fax Number: _____

Proposed work and percentage of total work to be assigned _____
Percentage: _____ %

Firm Name: _____ City Contractors License # _____

Address: _____

Phone Number: _____ Fax Number: _____

Proposed work and percentage of total work to be assigned _____
Percentage: _____ %

Firm Name: _____ City Contractors License # _____

Address: _____

Phone Number: _____ Fax Number: _____

Proposed work and percentage of 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.

SPECIAL PROVISIONS FOR CITY OF GREELEY

65TH AVENUE ROAD WIDENING

February 4, 2020

PROJECT DESCRIPTION

This project involves roadway reconstruction, pedestrian trail, curb & gutter, pedestrian ramps, signing, pavement markings, traffic signal and pedestrian push-button improvements, storm drain facilities, waterline improvements, existing utility adjustments and detention pond. Work will include:

- Clearing and grubbing
- Earthwork excavation and embankment with excavated “native” and some import topsoil
- Removal of the existing plant-mix pavement mat
- Removal of existing concrete curb & gutter and trees within project limits
- Miscellaneous adjustments of valve and utility covers
- Concrete curb and gutter, curb ramps, and crosspans
- Traffic Signal heads and pedestrian push-buttons
- Storm drain piping, manholes, and inlets
- Detention pond and outlet structure
- Waterline improvements
- Pavement surface repair including aggregate base course compaction and hot bituminous pavement
- Permanent pavement markings and signs
- Erosion and sediment control
- Seed (2 types) in disturbed areas, behind curb and detention pond
- Construction surveying

CONSTRUCTION PLANS

The construction plans for this project are dated February 2020 as prepared by J-U-B ENGINEERS, Inc., 4745 Boardwalk Drive, Building D, Suite 200, Fort Collins, Colorado 80525 and include construction plan sheets #1-102 and includes Traffic Signal Plan as prepared by Fox Tuttle Hernandez Transportation Group, TS-801, Sheet #89, is made a part of these contract documents.

SOILS INVESTIGATION / REPORT

A geotechnical engineering report was prepared for this project: Geotechnical Engineering Study and Pavement Thickness Design, Frontage Road Relocation 65th Avenue and U.S. Highway 34 (Bypass), Project No. 17-3-163, prepared by Kumar & Associates, Inc. dated February 28, 2019 and lastly Revised November 7, 2019.

Copies of this report is available for viewing at the City of Greeley (City). The contractor may obtain digital copies of these reports from the City. It is the contractor’s responsibility to review and become familiar with these reports prior to bidding.

GOVERNING SPECIFICATIONS

This project shall be constructed in accordance with these Special Provisions to the latest edition of the following standard specifications:

- Section 00510, City of Greeley General Conditions of the Contract for Construction, Revised November 2016 (General Conditions)
- City of Greeley Design Criteria and Construction Specifications:
 - Street Volume I, July 2015 (Streets)
 - Storm Drainage Volume II, Amendments June 2019, Addendum Jun 2008, March 2007 (Storm Drainage)
 - Potable Water Distribution, Sanitary Sewer Collection, and Non-Potable Irrigation Systems Volume III, June 2008 (Water).
 - A copy of these specification manuals can be obtained from the City of Greeley, Public Works Department located at 1001 9th Avenue.
- MGPEC Pavement Design Standards and Construction Specifications (MGPEC)
- Manual of Uniform Traffic Control Devices (MUTCD)
- Policy on Geometric Design of Highways and Streets by The American Association of State Highway and Transportation Officials (AASHTO)
- Americans with Disabilities Act (ADA)
- The Colorado Department of Transportation (CDOT) Standard Specifications for Road and Bridge Construction, the CDOT M & S Standards, CDOT Construction Manual and CDOT Materials Manuals, latest editions.

In case of conflict, documents shall have the following priorities: (1) Special Provisions, (2) General Conditions, (3) Plans, (4) City of Greeley Design and Construction Specifications Volumes I-III, (5) CDOT Standard Special Provisions, (6) CDOT Standard Specifications.

CDOT owned Specifications, Pavement Design Manual, Field Materials Manual, Practices, and Testing shall override MGPEC Pavement Design Standards and Construction Practices on CDOT owned roadways. The project is subject to the following CDOT Project Special Specifications pertaining to pavement within CDOT Right-of-Way. These Special Specifications govern for Bid Items #3 – Embankment material, #31 – Aggregate Base Course, and #32 to 35 – Hot Mix Asphalt:

- Section 106 Project Special Hot Mix Asphalt
- Section 203 Project Special Embankment Materials
- Section 304 Project Special Aggregate Base Course
- Section 403 Project Special Hot Mix Asphalt

CERTIFICATE OF INSURANCE – CONCERNING GENERAL CONDITIONS, ARTICLE 4:

The Contractor shall provide from the insurance companies, acceptable to the Owner, the insurance coverage designated hereinafter and pay all costs. The Contractor also indemnifies the Owner according to Article 4 of the General Conditions. Insurance agency certificates will not substitute. The Contractor shall name the “City of Greeley” and “J-U-B Engineer Inc.” on their General Liability, Automobile Liability and Property Damage Liability policies.

PROTECTION OF EXISTING UTILITIES / UTILITY COORDINATION – CONCERNING GENERAL CONDITIONS, ARTICLE 5

This set of plans **do not** meet the full requirements of the Colorado Utility Law SB18-167. Since the project was substantially designed prior to the law taking effect, the owner did not perform an individual subsurface utility investigation on this project. The designer has performed a significant amount of utility investigation for this project but cannot guarantee that all utilities were located to a quality level “B”.

The Contractor shall contact all appropriate utility companies prior to construction to notify of construction, to verify location of utilities in the construction area, and to coordinate utility company relocation, adjustment, or installation work with Contractor’s work. Locations of utilities shown on plans are approximate, only based on “field locates” by the affected utility and limited pothole information. The Contractor shall verify prior to construction.

Refer to Streets, Section 01010 1.3 L for utility coordination; no additional payment will be made for utility coordination.

Refer to Streets, Section 01010 1.3 M for Protection of Existing Underground Utilities.

The Contractor shall notify all affected utilities at least two (2) business days prior to commencing such operations. Contact the Utility Notification Center of Colorado (UNCC) to have locations of UNCC registered lines marked by member companies. Call originating within with Denver metro area use phone no. (303) 534-6700: calls originating outside the Denver metro area use 811. All other underground facilities shall be located by contacting the respective company. Utility service laterals shall also be located prior to beginning excavating or grading.

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

The City will not be responsible for any construction down time due to failure on the Contractor’s part to notify utility companies of conflicts.

Known utilities within the limits of this project are:

- Atmos Energy, Jerry Adams, (970) 304-2075 – Gas
- CenturyLink, Carson Ortega, (970) 392-4837 - Communication
- Comcast, Kevin Young, (303) 284-7541 - Communication
- Poudre Valley Rural Electric Association (PVREA), Ryan Powell, (970) 413-3872 – Power
- Westridge Irrigation Association, Phil Bingham, (970) 347-7001 - Irrigation
- Zayo Bandwidth, Timothy Aragon, (720) 208-6008 – Fiber Optic
- City of Greeley Engineering, Tom Hellen, (970) 350-9793
- City of Greeley Water & Sewer, Adam Prior (970) 350-9875 - Water
- City of Greeley, Traffic, Scott Logan (970) 350-9555 – Traffic
- City of Greeley, Traffic Signal Supervisor, Art Perez (970) 350-9398 – Traffic Signal
- City of Greeley Stormwater, Karen Reynolds (970) 336-4031 - Stormwater

Contractor is responsible for field verifying the location of utilities within the project limits and immediately notifying the City of any potential discrepancies or conflicts between the Work and the existing utility.

City of Greeley Water & Sewer: Numerous waterlines exist within the existing right-of-way along 65th Avenue and W. 28th Street. Any City water markers will be relocated by the City water department. Contractor shall coordinate with the City water department.

Work on City waterlines include the following:

- Lowering of the 16-inch line near the intersection of W. 28th Street and 65th Avenue to accommodate the Installation of Storm Line D.
- Removing a portion of the existing 6-inch line along the north side of W. 28th Street near the intersection with 65th Avenue to accommodate the proposed detention pond.
- Proposed 6-inch water line to replace the removed line described above. New alignment is south of the existing alignment. Proposed connection to the existing water lines.
- Minor relocations of existing meters and fire hydrants.

All new underground utilities must be electronically locatable.

Below ground sanitary sewer system does not exist in the site or within the near vicinity. All lots adjacent and near the site have privately owned septic systems. Privately owned septic systems have been located and annotated in the plans at 6501 W. 28th Street and 6425 W. 28th Street. These two locations are most likely to come into close contact with construction activity. It is the responsibility of the Contractor to not damage any portion of the privately owned septic systems on the two lots identified and any other lots on or near the site. Contractor to coordinate with lot owners and utility locates to identify septic systems as needed.

PVREA shall be responsible for removing overhead power lines, guy wires, and power poles as identified as "Remove ___ (by others)" on the demolition and utility drawings.

PVREA will install a streetlight on this project once the roadway construction is far enough along. The contractor shall coordinate with the City and utility companies during this task.

Contractor shall coordinate with CenturyLink and Comcast for the relocation of the existing communication lines. CenturyLink and Comcast also have several pedestals that they will need to relocate. These are shown on the demolition and utility drawings.

The contractor shall coordinate with Atmos Energy for the relocation of the existing 4-inch line along the east side of 65th Avenue and the relocation of the existing 1-inch residential service line to 6425 W. 28th Street. These are shown on the demolition and utility drawings.

The contractor is hereby notified that there are existing gas lines present under 65th Avenue. It is the responsibility of the contractor to locate these gas lines prior to roadway excavation or subgrade scarification.

The contractor should assume that they will need to perform potholing to visually identify underground utility locations. Potholing is a pay item on this project. The contractor must get approval through the City for all potholing

Abandoned of underground water and storm lines exist within the project limits. Contractor is responsible to coordinate this work and to verify locations of "Active" lines prior to beginning excavating or grading.

There are several existing utility easements within the project limits. These easements are identified within the construction plan set.

PROTECTION OF EXISTING VEGETATION AND STRUCTURES – CONCERNING GENERAL CONDITIONS, ARTICLE 5

Improvements along 65th Avenue are directly adjacent to private lot owners that have been in coordination with the City as part of the design process. Plans indicate specific items such as, but not limited to: fencing, landscape fixtures, mailboxes, gates, driveways, grass landscaping, trees, and walls that shall be modified as indicated on the plans while coordinating with lot owners. Contractor to complete all construction activities within the Right-of-Way, Permanent Easements and Temporary Construction easements as shown on the plans; this includes but is not limited to: staging areas, construction fencing and equipment.

PROJECT WARRANTY – CONCERNING GENERAL CONDITIONS, ARTICLE 11

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. If the concrete fails, spalls, or deteriorates during the first and second year, the concrete shall be replaced under this warranty. There will be no additional cost to the City or the property owner for material, equipment, labor, and/or traffic control for warranty work.

Warranty work will be completed in accordance with these contract specifications and within 30 days of written notification by the City.

Refer to Streets, Section 01010 1.3 S for Completion and Warranty.

CONSTRUCTION MATERIALS SUBMITTALS – CONCERNING GENERAL CONDITIONS, ARTICLE 12

Contractor shall submit manufacturers' information and materials specifications, testing results, and certifications that the materials proposed for this project meet the specification requirements outlined in the Standard Specifications and these Supplemental Specifications. Refer to individual sections within the Standard Specifications and Supplemental Specifications for specific material submittal requirements.

The Contractor shall submit manufacturers' information and certification that all materials conform to materials specifications for the following items. Receive approval in writing before work commences and before confirmation of order. Deliver two (2) copies of all submittals to the Project Manager within 10 working days from the date of Notice to Proceed. Provide information in a 3-ring binder with table of contents and index sheet. Provide sections that are indexed for different components and labeled with the specification section numbered and the name of the component. Submittals must be made for all components on the material list. Indicate which items are being supplied on the catalog cut sheets when multiple items are shown on one sheet. Submittal package must be complete prior to being reviewed by the Project Manager. Incomplete submittals will be returned without review. Submittal are required for the following materials:

- Aggregate Base Course
- Rebar
- Hot Mix Asphalt Pavement mix design
- Concrete mix designs
- Utility and Electrical components/materials
- Storm Drain
- Water Line

TESTING – CONCERNING GENERAL CONDITIONS, ARTICLE 15

The Contractor shall provide Quality Control Sampling and Testing. The types of tests and minimum test frequencies are described in the City “Streets Volume I” Schedule for Quality Control Sampling and Testing Table in the Appendix. Cost shall be included in the bid price for Mobilization.

Quality Acceptance Testing shall be done by the City’s Construction Services or their representative. The City will pay for all Quality Assurance Testing. It is important that the Contractor inform the project Inspector or assigned representative as to when they will be ready for tests. A 24-hour advanced notice will be required.

Streets Section 2.08 – Pavement Thickness Design Criteria; Table 2.08.2 – Contractor to Provide the City with test results from items tested in the Table 2.08.2.

PERMITS – CONCERNING GENERAL CONDITIONS, ARTICLE 16

Per Streets, Section 1.02 D, a pre-construction conference shall be held prior to the issuance of any City permits for construction. Contractor shall have a copy of all necessary permits prior to construction.

CDOT Special Use Permit will be required and must be approved prior to construction activities. Permit includes: USACE Section 404 Permit, SHPO forms 1400 and 1418 and a report.

A storm water discharge permit from State of Colorado, Department of Public Health & Environment, Water Quality Control Division for temporary storm water runoff from the approximate 7.8-acre construction site, will be obtained by the City. City permit fees will be waived. Any required permits fee from other agencies than the City will be at cost from the contractor.

RIGHT OF WAY AND EASEMENTS – CONCERNING GENERAL CONDITIONS, ARTICLE 17

The City has acquired the permanent right-of-way, permanent access, utility, and drainage easements and temporary easements for construction along 65th Avenue and at the intersection of 65th Avenue and W. 28th Street. Construction of transition areas to match proposed roadway improvements on adjacent properties will be permitted within the limits of construction shown on the contract construction plans.

PROPERTY OWNER NOTIFICATION – CONCERNING GENERAL CONDITIONS, ARTICLE 17

The City will provide Contractor with sufficient copies of written notices describing project activity and Contractor’s proposed schedule of work. The Contractor shall deliver notices to all property owners and/or business operators located within 500 feet of project limits and to all other homes or businesses abutting or immediately adjacent to the project.

Contractor shall coordinate with property owners prior to initiating removal / construction activities on areas outside of public right of way and shall provide a minimum of 5 days’ notice to property owners prior to these activities.

Notice shall also be given 24 hours prior to start of any construction activity that will restrict access to the affected property or when construction will be within 500 feet of that business or residence. Re-notify all property owners if the previously noticed schedule is delayed by 3 or more days.

The contractor shall ensure the access to the private lot owners and businesses along 65th Avenue and W. 28th Street is remained opened continuously. Temporary access for Pope Farms at 6501 W. 28th Street must be at least 24’ wide and the vertical profile must be able to safely accommodate commercial delivery trucks (SU-40) and trailers without bottoming out.

CONTRACTOR USE OF SITE – CONCERNING GENERAL CONDITIONS, ARTICLE 17

The Contractor shall, at all times, conduct their work as to insure the least possible inconvenience to the general public and adjacent property owners to the project site, and to ensure safety of persons and property. Fire hydrants on or adjacent to the Work shall be kept accessible to firefighting equipment at all times. Temporary provisions shall be made by the Contractor to insure the use of access roads / driveways to adjacent properties.

The Contractor shall be responsible for providing fencing, barricades and any necessary safety equipment to keep the site and the public safe at all times.

PRE-CONSTRUCTION MEETING – CONCERNING GENERAL CONDITIONS, ARTICLE 21

After Contract Notice of Award, the Contractor shall attend a pre-construction conference with the City prior to commencement of construction. The Contractor shall submit the following information at the preconstruction meeting:

- Storm Water Management Plan (SWMP)
- Traffic Control Plan
- Asphalt Mix Design
- Materials Source submittals
- Materials Suppliers list
- List of Subcontractors
- Insurance Certificates
- Bar graph construction progress schedule
- Preliminary means and methods for underground boring of Strom Line D.

Refer to Streets, Section 1.02 D for Preconstruction Conference.

FINAL CLEANUP – CONCERNING GENERAL CONDITIONS, ARTICLE 23

The Contractor shall, at completion of construction and prior to submitting request for final payment, clean up the site, removing all related debris. The Contractor shall notify the City when final cleanup is ready for inspection. This task includes any cleanup related to the SWPPP.

Refer to Streets, Section 01010 1.3 T for Acceptance.

SCALE TICKETS – CONCERNING GENERAL CONDITIONS, ARTICLE 24 AND 27

The Contractor shall provide certified scale tickets for each truck load of material to be paid by unit weight that is delivered to and incorporated in the project. The Contractor shall submit tickets to the designated City project representative at the time material is delivered to the site.

SALES TAX – CONCERNING GENERAL CONDITIONS, ARTICLE 26

The price or prices for the work will include full compensation for taxes that the Contractor is or may be required to pay.

PROJECT CHANGES – CONCERNING GENERAL CONDITIONS, ARTICLE 28

The City reserves the right to alter the project. Quantities may be added or deleted, and adjustment will be made to the contract price according to the unit prices in the Bidding Schedule. However, if quantities are increased or decreased more than 25%, changes and adjustments may be negotiated so that a mutually agreeable adjustment can be made.

CONTRACT TIME, LIQUIDATED DAMAGES, DELAYS – CONCERNING GENERAL CONDITIONS, ARTICLE 32 AND 59

The Contract Time for completing the contract work is 100-calendar days. The Contract time commences on the date of the Notice to Proceed. Where a number of days is specified in this Contract it shall mean "Calendar Days" unless otherwise specified according to Article 59.7 of the General Provisions. There shall not be any "free time".

The project shall be considered substantially complete when, as determined by the Engineer, the Contractor has completed his work. The liquidated damages amount will be in the amount of \$1,000.00 for each calendar day. Liquidated damages are based on additional costs to the City for delay of project completion and are not a "late penalty".

REMOVALS / RESETS / RELOCATIONS

Saw cutting of existing pavements / concrete shown on the construction plans shall be considered an incidental expense to excavation and no separate payment will be made for this item.

Relocation of existing permanent traffic control signs shall be paid for on a per each basis and shall include all costs for labor, equipment, materials, sign hardware, removal / disposal of existing sign posts and foundations, installation, and all other items of expense required to relocate the existing signs in accordance with City standard specifications and MUTCD requirements.

Removal of Bituminous Pavement shall include all labor, materials, excavation, haul, saw cutting, disposal, grading, and other items of expense necessary to the limits shown on the demolition plans and in accordance with "Streets Volume I" specifications. Payment for this item shall be made in accordance with the Bid Form and shall be per square yard of Bituminous Pavement removed.

Refer to the Bid Form for unit quantities for the respective removal / resets / relocations' items designated within the construction documents.

MEASUREMENT AND PAYMENT:

This contract is a unit price contract in which the Contractor will be reimbursed for the actual quantities of work performed and installed in accordance with the contract documents unless otherwise noted. No additional payment for work described in these documents will be allowed, whether a bid item exists or not. The Contractor shall include the costs of all incidentals of construction, labor, equipment, and materials in the appropriate bid item.

BID ITEMS – GENERAL DESCRIPTION OF MEASUREMENT AND PAYMENT

Measurement and payment for bid items listed in the Bid Form shall be on the basis of the description in the applicable standards specifications or as identified in these supplemental specifications and Construction Drawings. Unless the work to be done is specifically called out to be measured and paid for in the Bid Form Unit Price Schedule, payment for such work shall be included in other applicable items, and there shall be no separate measurement and payment for the work.

It is the intention of the contract documents to describe a complete project. Merge the cost of any and all miscellaneous work items (if not separately identified as bid items) shown on the Plans or implied as standard items of work necessary to achieve a complete and operational system in the unit price contained in the Bid for the nearest related bid item.

Merge all costs of labor, materials, supervision, fuel, equipment, and other incidentals necessary to accomplish each work item into the unit price contained in the Bid for that item. Payment will be made at bid unit price for completed items unless otherwise noted. The basis for payment will be the *measured* in-place quantity, or quantity documented by delivery tickets, unless the item unit is Lump Sum (LS), or *plan quantity* is specified below.

Certain bid items may be clarified as follows:

Unit Quantities: Quantities and measurements (with the exception of 'Unclassified Excavation') indicated in Bid Form are for contract purposes only. Quantities and measurements supplied or placed in the Work shall determine payment. Actual quantities provided shall determine payment. The estimates of quantities are only approximate (the payment method for 'Unclassified Excavation (C.I.P.)' shall be as described under Bid Item 3 of the next section in these specifications). The City reserves the right to increase or decrease individual items in such amounts as may be in their sole judgment to the City's best interests depending upon conditions encountered or observed during the Project. It shall be the Contractor's responsibility to satisfy himself as to the accuracy of the estimates prior to bid.

Payment shall be made at the contract unit bid price listed in the Bid Form. The price listed therein shall be for unit quantities includes full compensation for required labor, tools, equipment, products, materials, haul, disposal, plant and facilities, transportation, services, erection, application or installation of item of the work; overhead and profit required to construct the respective bid items according to the Contract Documents incidental thereto.

ITEMS WITH ADDITIONAL EXPLANATION ARE AS FOLLOWS:

Bid Item 2 – CLEARING AND GRUBBING

Clearing and Grubbing shall include tree removal for trees less than 6” in diameter with the trunk being measured 18” above the adjacent ground surface.

Refer to Streets, Section 02220 3.1 for Clearing and Grubbing.

Bid Item 3 – UNCLASSIFIED EXCAVATION (C.I.P.)

Unit bid price for this item shall include the costs of all labor, supervision, material, and equipment to excavate and place embankment to finish subgrade line and grade as shown on the plans and cross sections and as staked. Plan quantity does not include any allowance for earthen material removed during clearing and grubbing or existing asphalt pavement to be removed; these items are paid for separately. Plan quantity is calculated to the estimated bottom plane of the proposed aggregate base course and proposed topsoil; therefore, this item does not include the quantity of the proposed pavement section or the proposed topsoil to be installed. Plan quantity does not include any allowance for shrinkage or swelling.

Payment for the item shall be at the UNCLASSIFIED EXCAVATION (C.I.P.) plan quantity. Engineer will make no separate measurement of cubic yards of embankment.

Cross sections and earthwork volume calculations indicate that there will be excess embankment material on this project (please refer to Drawing G-010). Excess material shall be hauled off site and legally disposed of as part of this item.

Refer to Streets, Section 02220 for Excavation, Removals and Embankment; except for areas of Embankment within CDOT Right-Of-Way refer to CDOT Project Special 203 described below.

Embankment is not a pay item on this project.

Material from the project deemed unusable by the Engineer shall be removed from the project and legally dispose of at no additional cost to City.

EMBANKMENT (AREAS WITHIN CDOT RIGHT-OF-WAY)

CDOT Section 203 – Excavation and Embankment

CDOT PROJECT SPECIAL 203
EMBANKMENT MATERIAL

Section 203 of the Standard Specifications is hereby revised for this project as follows:
Subsection 203.03, first paragraph, shall include the following:

The upper 2 feet of embankment material below the subgrade elevation shall meet the following requirements for Atterberg limits and gradation:

- (1) Maximum liquid limit of 40
- (2) Maximum plasticity index of 15
- (3) A maximum of 70 percentage of material by dry weight passing the No. 200 sieve.

Bid Items 4 – UTILITY POTHOLING (TEST HOLES)

The contractor shall coordinate and receive approval for all potholing with the City prior to performing the work.

Bid Item 5 – REMOVAL OF TREE

Refer to Streets, Section 02220 3.4 for Tree Removal. Contact Shiloh Hatcher at (970) 371-3766 or current City Forestry Manager.

Bid Items 11 TO 13 – CONCRETE AND ASPHALT REMOVALS

All removed pavement, curb, and inlet removed shall become the property of the contractor and be disposed of properly. Sawcutting to a clean edge is incidental to the items. Engineer shall determine exact removal limits in the field.

Refer to Streets, Section 02220 3.3 C for Concrete Curb, Gutter, Sidewalk, and Driveways.

Refer to Streets, Section 02220 3.3 B for Concrete Pavement.

Refer to Streets, Section 02220 3.3 A for Bituminous Pavement.

Bid Item 15 – REMOVAL OF PAVEMENT STRIPING

Removal of pavement striping shall be measured and paid per linear foot regardless of stripe width.

Bid Item 16 – REMOVAL OF GROUND SIGN

Contractor shall remove existing street signs at the direction of the Engineer and deliver them to a City facility as directed by the Engineer.

Bid Item 17 – REMOVAL OF FENCE

All fence removal is related to the removal of existing private fencing that is located in an area of the lot that was private ownership but has been acquired by the City for this Work. These fences will need to be removed for the Work. Fencing should be stored and re-used as feasible to the proposed locations within the lot and shown on the plans. Length of removals does not equal length of proposed fencing; therefore, Bid Items are included for Removal and Replace Private Fence. Removal of Fence includes all work necessary to remove the fence and store the items for Replacement. The Contractor shall coordinate with lot owners for this Work.

Bid Item 18 AND 19 – ABANDON IN PLACE – STORM MANHOLE / INLET & STORM PIPE

Contractor to remove portions of existing storm pipe that are exposed during construction Work. Portions of storm line abandonment that are shown on the plans at the Intersection of US34 and 65th Avenue are outside the limits of proposed cut and shall be abandoned in place. Ends of CMP shall be crushed and ends of RCP shall be sealed with 12-inch thick concrete cap. Pipes shall be filled with Flash Fill. Inlets and Manholes to be left in place shall have inlet and manhole lids/covers removed and Flash Filled up to 12-inches below the existing surface. The top 12-inches shall be filled to match the existing surface material. Separate Bid Items are not included for capping pipe ends and replacing the surface material, these material costs are included with Bid Item 18. Limits of abandonment are shown on the demolition and utility drawings.

Bid Item 20 – RELOCATE WATER METER BEHIND CURB

Installation of curb stop valves, risers and locking lids shall be all inclusive to this item.

Refer to City Details W-7 and W-9 - Outside Setting for Meter and Service Line, Stop Box and Outside Meter Installation.

Bid Items 21 – RESET WATER VALVE TO PROPOSE GRADE

Refer to City Details S-33 – Water Valve Detail for Raising to Finished Grade.

Bid Item 22 – RELOCATE FIRE HYDRANT BEHIND CURB

Installation of thrust block, tracer wire, and bedding materials shall be all inclusive to this item.

Refer to City Detail W-1 – Fire Hydrant Assembly with Tracer Wire Installation.

Bid Items 23 – RESET JUNCTION BOX TO PROPOSE GRADE

Contractor to coordinate with City Traffic Engineer for adjustment to existing traffic related junction boxes at the intersection of US34 and 65th Avenue.

Bid Item 24 AND 25 – RELOCATE SIGN

Contractor shall remove existing street signs and store in the contractor's yard until time of reinstallation. Any damage to the signs caused by the contractor during removal or during the course of the project shall be repaired or replaced at no cost to the project. Permanent signs shall be installed on new posts and sign anchor. Payment for sign posts / sign anchor are included under a separate payment item.

Refer to City Details S-43, S-44 and S-46 – Typical Sign Installation

Bid Item 26 – RESET SURVEY MONUMENT TO PROPOSED GRADE

Refer to Streets, Section 01010 1.3 I.

Refer to City Detail S-32 – Survey Monument in Pavement

Bid Item 27 AND 28 – RELOCATE MAILBOX STRUCTURE

Contractor to notify the local Postmaster prior to relocation of mailbox locations; Kanda Baum at (970) 392-0298 or current Postmaster. Existing mailboxes are typically traditional mailbox on a wood post; however, some lot(s) have a custom mailbox. The cost of wood post is inclusive to this item. Contractor to coordinate with lot owners that have custom mailboxes for construction material of new mailbox; material costs are inclusive to these Bid Items. The cost of temporary relocating mailboxes during construction (if required), shall be included in this bid item cost.

Bid Item 29 – TRANSPLANT TREES

The contractor shall transplant five trees as shown on lot 2727 65th Avenue within the lot. The trees shall be transplanted one time to their final location. Contractor to coordinate with Shiloh Hatcher at (970) 371-3766 or current City Forestry Manager and the lot owner for new location of transplanted trees.

Bid Item 30 – SUBGRADE PREPARATION

Exposed ground surface should be scarified to a depth of 8” or 10” as shown in the plans, moisture conditioned, and re-compacted to at least 95 percent of the maximum dry unit weight at determined by AASHTO T99 before any new fill, curb and gutter, sidewalk, or pavement section is placed. Preparation of finished subgrade for base and pavement after earthwork operation is completed is incidental to the cost of the work. Water necessary for the operation is incidental to the cost of the work. See Geotechnical report.

Refer to Streets, Section 02225 – Grading, Compaction Subgrade, and Unimproved Area Preparation.

Bid Item 31 – AGGREGATE BASE COURSE

CDOT Section 403 – Hot Mix Asphalt

REVISION OF SECTION 106
CONFORMITY TO THE CONTRACT OF HOT MIX ASPHALT

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

Subsection 106.05 shall include the following:

For this project, Contractor process control testing of hot mix asphalt is mandatory.

CDOT PROJECT SPECIAL 304
AGGREGATE BASE COURSE

Materials for the subbase shall be Aggregate Base Course (Class 6) as shown in Table 703-2.

The aggregate base course (Class 6) must meet the gradation requirements and have a resistance value of at least 78 when tested by the Hveem Stabilometer method.

**Table 703-2
CLASSIFICATION FOR AGGREGATE BASE COURSE**

Sieve Size	Mass Percent Passing Square Mesh Sieves						
	LL not greater than 35			LL not greater than 30			
	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7
150mm (6")			100				
100mm (4")		100					
75mm (3")		95-100					
60mm (2 ½")	100						
50mm (2")	95-100			100			
37.5mm (1.5")				90-100	100		
25mm (1")					95-100	100	100
19mm (¾")				50-90		95-100	
4.75mm (#4)	30-65			30-50	30-70	30-65	
2.36mm (#8)						25-55	20-85
75 μ m (#200)	3-15	3-15	20 max	3-12	3-15	3-12	5-15
NOTE: Class 3 material shall consist of bank or pit run material.							

Bid Item 32 – ASPHALT PATCH

Refer to Streets, Section 02576.

Bid Items 33 AND 34 – HOT MIX ASPHALT PAVEMENT (HMAP)

CDOT Section 403 – Hot Mix Asphalt

CDOT PROJECT SPECIAL
REVISION OF SECTION 403
HOT MIX ASPHALT

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

Subsection 403.02 shall include the following:

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

Table 403-1							
Property	Test Method	Value For Grading					
				SX(100)			Patching
Air Voids, percent at: N (design)	CPL 5115			3.5 – 4.5			3.5 – 4.5
Lab Compaction (Revolutions): N (design)	CPL 5115			100			100
Stability, minimum	CPL 5106			30			30
Aggregate Retained on the 4.75 mm (No. 4) Sieve for S, SX and SG, and on the 2.36mm (No. 8) Sieve for ST and SF with at least 2 Mechanically Induced fractured faces, % minimum*	CP 45			60			60
Accelerated Moisture Susceptibility Tensile Strength Ratio (Lottman), minimum	CPL 5109 Method B			80			80
Minimum Dry Split Tensile Strength, kPa (psi)	CPL 5109 Method B			205 (30)			205 (30)
Grade of Asphalt Cement, Top Layer				PG 76 - 28			PG 76 -28
Grade of Asphalt Cement, Layers below Top				PG 64 - 22			PG 64 -22
Voids in the Mineral Aggregate (VMA) % minimum	CP 48			See Table 403-2			See Table 403-2
Voids Filled with Asphalt (VFA), %	AI MS-2			65-75			65-80
Dust to Asphalt Ratio Fine Gradation Coarse Gradation	CP 50			0.6 – 1.2 0.8 – 1.6			0.6 - 1.2 0.8 – 1.6
<p>Note: AI MS-2 = Asphalt Institute Manual Series 2</p> <p>Note: Mixes with gradations having less than 40% passing the 4.75 mm (No. 4) sieve shall be approached with caution because of constructability problems.</p> <p>Note: Gradations for mixes with a nominal maximum aggregate size of one-inch or larger are considered a coarse gradation if they pass below the maximum density line at the #4 screen. Gradations for mixes with a nominal maximum aggregate size of 3/4" to 3/8" are considered a coarse gradation if they pass below the maximum density line at the #8 screen. Gradations for mixes with a nominal maximum aggregate size of #4 or smaller are considered a coarse gradation if they pass below the maximum density line at the #16 screen.</p> <p>*Fractured face requirements for SF may be waived by RME depending on project conditions.</p>							

All mix designs shall be run with a gyratory compaction angle of 1.25 degrees and properties must

satisfy Table 403-1. Form 43 will establish construction targets for Asphalt Cement and all mix properties at Air Voids up to 1.0 percent below the mix design optimum. CDOT will establish the production asphalt cement and volumetric targets based on the Contractor's mix design and the relationships shown between the hot mix asphalt mixture volumetric properties and asphalt cement contents on the Form 429. CDOT may select a different AC content other than the one shown at optimum on the Contractor's mix design in order to establish the production targets as contained on the Form 43. Historically, Air Voids adjustments typically result in asphalt cement increases from 0.1 to 0.5 percent. Contractors bidding the project should anticipate this change and factor it into their unit price bid.

Table 403-2

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

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

CDOT approved Warm Mix Asphalt (WMA) may be allowed on this project in accordance with CP 59. Unique requirements for WMA design, production and acceptance testing as documented during CDOT WMA approval shall be submitted and approved prior to creation of the Form 43 and before any WMA production on the project. Delays to the project due to WMA submittal and review will be considered within the Contractor's control and will be non-excusable.

Hot mix asphalt for patching shall conform to the gradation requirements for Hot Mix Asphalt (Grading SX).

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

Acceptance samples shall be taken per CP 41 Method B.

Subsection 403.03 shall include the following:

The Contractor shall construct the work such that all roadway pavement placed prior to the time paving operations end for the year, shall be completed to the full thickness required by the plans. The Contractor's Progress Schedule shall show the methods to be used to comply with this requirement.

Aggregate, asphalt recycling agent, asphalt cement, additives, hydrated lime, and all other work and materials necessary to complete each hot mix asphalt item will not be paid for separately, but shall be included in the unit price bid. When the pay item includes the PG binder grade, any change to the submitted mix design optimum asphalt cement content to establish production targets on the Form 43 will not be measured and paid for separately, but shall be included in the work. No additional compensation will be considered or paid for any additional asphalt cement, plant modifications and additional personnel required to produce the HMA as a result in a change to the mix design asphalt cement content.

Historically, typical asphalt cement increases reflected on the Form 43 are from 0.1 to 0.5 percent. However, the Contractor should anticipate the AC increases typical of his mixes. Contractors bidding the project should anticipate this change and factor it into their unit price bid.

When the pay item does not include the PG binder grade, asphalt cement will be measured and paid for in accordance with Section 411. Asphalt cement used in Hot Mix Asphalt (Patching) will not be measured and paid for separately, but shall be included in the work.

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

Bid Item 35 – CONCRETE PAVEMENT

All labor, equipment and material to install the concrete pavement shall be included in this item. All tie bars and dowels shall be included in the cost of this pay item.

Refer to Streets, Section 02585 - Portland Cement Concrete Pavement.

Bid Item 36 – CONCRETE SLEEPER SLAB TRANSITION

All labor, equipment and material to install this concrete slab transition between concrete and asphalt pavement shall be included in this item. All tie bars and dowels shall be included in the cost of this pay item.

Refer to Drawing C-424 for detail.

Bid Items 37 – CONCRETE CURB RAMPS

Includes all labor, equipment, and materials necessary to construct the pedestrian ramps and median ramps (refuge areas) as shown on the plans and per the details and standard. Truncated domes are paid separately (Item 38).

Refer to City Detail S-14 – Curb Ramp Detail for Detached Walk
Refer to City Detail S-17 – ADA Detectable Warning Detail

Bid Items 39 AND 40 – CONCRETE CURB AND GUTTER

Curb Cut is included in this item and will not be paid separately.

Refer to City Detail S-16 – Vertical Face Curb & Gutter
Refer to City Detail S-16 – Median Curbs

Bid Items 41 – CONCRETE CROSSPAN

Refer to City Detail S-28 – Concrete Cross Pan Detail

Bid Items 42 – CONCRETE SHARED USE PATH

Refer to City Detail S-29 – Bikeway Detail

Bid Items 43 – MEDIAN COVER MATERIAL - CONCRETE

Refer to City Detail S-48 – Right In/Right Out Layout Detail

Contractor to use Terra Cota or similar color in concrete medians. Contractor to verify color with City Engineer.

Bid Items 44 AND 45 – CONNECT TO EXISTING STORM PIPE/STRUCTURE WITH CONCRTEETE COLLAR

Refer to Stormwater, Section 6.2.3 – Connections to Existing Storm Drains

Bid Items 46 TO 53 – STORM PIPES AND FES

All RCP storm drain pipe shall be class III reinforced concrete pipe. Saddles and pipe joint grouting designated on the contract construction plans shall be considered incidental expenses to the installation of the storm drain line. No additional payment will be made for trenching, drainage rock, bedding or MIRAFI fabric which shall be considered an incidental expense to the installation of the storm pipes.

Flared end sections are required for all new culverts.

Refer to Stormwater, Section 6.2 – Construction Materials/Installation of Storm Drains

Refer to Streets, Section 02595 – Street Cut and Excavation Repair

Refer to City Details 6-6 and 6-7 – Standard Storm Water Bedding Detail

Bid Items 54 TO 56 – STORM INLETS

Inlet structures shall not be constructed until the curb and gutter has been installed. The City may allow the inlet structures to be constructed if the curb and gutter has been staked and the stakes can be used to set the inlet structures for line and grade 100 feet in each direction.

Refer to City Detail 7-1 – Curb Inlet Type R

Refer to CDOT Detail M-604-10 for Type C

Bid Items 57 – OUTLET STRUCTURE

Refer to City Detail 11-3 – Type II Outlet Details and Construction Plans DT-1106 for site specific details.

Refer to Stormwater, Section 9.3.7– Trash racks material requirements.

Bid Items 58 – MANHOLES

Refer to Stormwater, Section 6.7.2 and 6.7.3 – Manhole Materials and Construction

Refer to City Details 6-8 and 6-9 – Standard Stormwater Manhole Ring, Cover and Manhole

Bid Items 59 – 18” Steel Auger Bored Storm Line (Portion of Line D)

The work covered by this Bid Item includes furnishing all labor, materials and equipment required to bore and install the portion of Storm Line D to properly complete pipeline construction as shown on the Drawings and described herein.

It is up to the Contractor to finalize construction methods for this Bid Item; below are guidelines for the trenchless method of installation that shall be followed.

Included in this Bid Item is an open pit on the north near the proposed Type-C Inlet and to the south near the proposed manhole outside of the existing roadway. North location general pit size can be up to 50-feet in the north-south direction with sufficient width. The north location allows for a portion (approximately 30-feet) of pipe to be placed in open trench technique. South location general pit size can be up to 40-feet in the north-south direction with sufficient width as needed; this side will require shoring/stabilization of the northern pit wall because the proposed manhole is located approximately 8-feet from the existing curb and gutter of the US34 right-turn slip lane.

Minimum performance requirement is to provide an accuracy of 1-inch or better line and grade precision of the pipe line in existing soil conditions. Slope of the storm line from north to south must be constructed to ensure that pipe invert elevations decrease without any sump locations along the line.

The Contractor shall submit a detailed construction process, equipment, lubrication fluids, layout, and machinery set-up and shall be approved by the engineer prior to construction. Other submittals (e.g., as-built construction records) will be submitted throughout the construction process.

The minimum qualifications for the Contractor or Contractor Sub shall include a minimum number of pipe ramming projects successfully completed by the contractor (five pipe ramming projects, or over 2,000 feet of steel pipe installed in the last four years, with at least one project in the past year and at least one project in similar ground conditions). Contractors that do not satisfy minimum qualifications may qualify if they provide assistance on site by a competent individual from the manufacturer, or local representative, or dealer of the manufacturer.

The Contractor shall confirm locations of all known existing utilities prior to starting pit excavation, auger boring and pipe installation.

If of concern, the nearby utilities and structures should be monitored for displacement or damage, and the contract documents should clearly state the monitoring requirements. If the contractor disturbs the surrounding environment, existing utilities, or structures, the contractor shall be required to restore them to their original condition.

If an adjacent underground utility is damaged, the contractor must immediately notify that utility owner of the location and nature of damage. Also, the contractor must allow the utility owner a reasonable time to accomplish necessary repairs before continuing the ramming. In general, when a correctly marked and specified utility line is struck and damaged, the damage caused by the contractor will be repaired at his/her own expense.

During the ramming operation, if an obstruction is encountered such that the pipe gets stuck, an excavation may need to be made at the location of the obstruction to allow the installation to continue. In such cases, the contractor should inform the owner or the engineer and ask for direction. Payment for these problems will be negotiated on a case-by-case basis.

The submittals should clarify how the quality control requirements will be satisfied. To assure quality control for materials and equipment, a representative of pipe supplier or ramming system manufacturer may be present on the site to observe site conditions, installation, quality of workmanship, start-up of equipment, operator training, test, adjust, and balance of equipment as applicable, and to initiate operation.

Quality control for construction should include the following:

- Preparatory inspection – Prior to the pipe installation the following should be done:
 - Pipes should be checked for conformance to approved certified tests. The pipes should have no mid seam welds, or if they exist, they should be certified.
 - Pipes should be checked for proper storage and handling. The pipes should be unloaded from trucks with a crane or a backhoe and not dropped off or pushed off.
 - Pipe installation procedure should be discussed and reviewed with construction manager.
- Initial inspection – After completion of pipe installation, the following should be done:
 - Pipe depth and grade should be checked.
 - Pipe joints should be checked.
 - Pipe alignment should be checked. A straight run of pipe can be checked for gross deficiencies by holding a light at one end of the pipe; it should show an approximately full circle of light through the pipe when viewed from the opposite end of pipe.
 - If television inspection of the installed line is specified, the contractor is to provide continuous videotape over the entire length of the pipe.

Bid Item 60 AND 61 – RIPRAP

All material, labor, and equipment required to install the riprap per Urban Storm Drainage Criteria Manual shall be included in the unit price. This includes excavation, filter fabric, bedding material, and riprap.

Contractor shall remove and dispose of Riprap at existing drainage outfalls and gravel at driveways. The contractor can reuse the material on site if it fits the specifications for Storm Line H.

Refer to UDFCD Technical Specification Section 31 37 00 Riprap, Boulders, and Bedding
<https://udfcd.org/specifications>

Bid Item 62 shall include all material, labor, and equipment required to excavate and stockpile existing riprap at Propose Storm Line H and to re- install the riprap at the downstream end of the proposed line. This item includes excavation, stockpiling, hauling, filter fabric, and bedding material.

Bid Items 63 TO 76 – WATERLINE ITEMS

The individual pay items shall be complete compensation for all means, method, labor and materials for supplying and installation of individual items, including but not limited to excavation, bedding, and backfill.

Refer to Water, Section 3.07 – Depth of Bury
Refer to Water, Section 3.08 – Connections to the Existing Potable Water System
Refer to Water, Section 3.11 – Pipe Material
Refer to Water, Section 3.12 – Valves
Refer to Water, Section 3.14 – Thrust Blocking and Pipe Restraint
Refer to Water, Section 3.17 – Potable Water Services and Fire Sprinkler Lines
Refer to Water, Section 01713 – Water Distribution System Testing
Refer to Water, Section 01785 – Project Record Documents
Refer to Water, Section 02315 – Excavation and Fill
Refer to Water, Section 02510 – Water Utility Distribution Piping
Refer to Water, Section 02511 – Disinfecting of Water Utility Distribution
Refer to Water, Section 02512 – Ductile-Iron Pipe
Refer to Water, Section 02515 – Water Utility Distribution Valves
Refer to Water, Section 02516 – Water Utility Distribution Fire Hydrants
Refer to City Detail WS-2 – Trench Cross Section
Refer to City Detail W-1 – Fire Hydrant Assembly with Tracer Wire Installation
Refer to City Detail W-2 to W-4 – Thrust Blocks
Refer to City Detail W-5 – Water Line Lowering
Refer to City Detail W-6 – Water Service Connection
Refer to City Detail W-7 – Outside Setting for ¾" & 1" Meter
Refer to City Detail W-9 – Potable Water Service Line, Stop Box and Outside Meter Installation
Refer to City Detail W-12 – Ductile Iron Pipe Bonding

All new underground waterlines must be electronically locatable.

Bid Item 77 – EROSION CONTROL MAINTENANCE

This item shall consist of the on-going maintenance of field erosion control measures in accordance with provisions outlined in the Storm Water Pollution Protection Plan (SWMPPP) included within these special provisions in addition to State and Federal temporary storm water discharge permits. No separate measurement shall be made for this bid item which shall be paid on a lump sum basis in accordance with the contract bid form.

Contractor shall provide periodic maintenance of the site, particularly during and after storms, to maintain barricades, provide necessary dust control and ensure general maintenance. Disregard of this provision shall cause for suspension of the project. It will be the Contractor responsibility to ensure that existing streets adjacent to the area under construction be kept free of all concrete or other foreign material. All labor, materials, equipment, and other items of expense needed to maintain the erosion control measures required for this project shall be included within this payment item.

EROSION AND SEDIMENT CONTROL:

Contractor is responsible for control and routing of storm water runoff draining onto and from the construction area to prevent erosion or other damage. Comply with City of Greeley Environmental Municipal Construction Best Management Practices (BMP). City will obtain Colorado Discharge Permit. The Contractor is responsible for all implementation, removals, maintenance, etc. to keep the project in strict compliance with this permit. The City is responsible for inspections and documentation (SWPPP Notebook). Brian Hathaway with the City will be the City's Erosion Control Supervisor for this project. The Contractor will be required to appoint their own Erosion Control Supervisor and needs to display due diligence towards the maintenance of the sediment and erosion control bid items.

The Contractor shall submit a Stormwater Management Plan (SWMP) with schedule identifying erosion control methods and timing as well as any construction means and methods items at Preconstruction Meeting. The 2018 Colorado Discharge Permit System (CDPS) General Permit for Stormwater Discharges Associated with Construction Activities (COR-400000) is required before construction activities commence and the owner and operator are co-permittees (must sign permit) and are subject to the compliance with all terms and conditions.

Not all BMP's shown on Plans are intended for initial installation. BMP's shall be requested/approved by City prior to implementation. Additional BMPs may be required and shall be implemented at the request of the City. Additional BMPs, approved by the City, will be paid per the unit bid price.

EQUIPMENT STAGING/PARKING

The Contractor is responsible for obtaining permission from adjoining property owners for any equipment staging areas. All staging area shall be re-seeded per plan details.

DUST CONTROL

The Contractor shall control dust in and around the construction site. If dusty conditions prevail, the site shall be watered at least twice daily. No separate payment will be made for dust control by watering. Merge costs of dust control by watering into bid price of related items.

Bid Items 83 – CONCRETE WASHOUT STRUCTURE

No earthen pit wash out areas will be allowed. Washout pans should be placed to coincide with construction phasing. Washout pans must be clearly signed per City detail for washout areas. Recycled concrete is specifically prohibited for use as vehicle tracking pad aggregate.

Bid Items 86 – SEEDING (NATIVE)

From the time of installation, during construction, and throughout the Landscape Establishment period the Contractor shall maintain all plant material and seeded areas in a healthy and vigorous growing condition and ensure the successful establishment of vegetation. This includes performing establishment, replacement work, and landscape maintenance work as needed.

Refer to Stormwater, Section 14 – Vegetation & Irrigation for native seeding.

Bid Items 87 – SIGN ANCHOR

Sign shall be installed per details S-43 through S-45 and sign shall be set in concrete including a 4" PVC pipe. No separate measurement or payment will be made for concrete or PVC pipe.

Bid Items 89 – STEEL SIGN POST

Includes mounting new signs and all labor and materials necessary for a sign anchor as shown on details S-43 through S-45 and described in Street Section 1.21 B.

Bid Items 93 TO 94 - PAVEMENT MARKINGS

Pavement Marking Standards per Streets Section 02618.

Bid Items 95 TO 104– TRAFFIC CONTROL ITEMS

The Contractor shall comply with the requirements of Street Section 01010, Paragraph 1.3 G. 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. The TRAFFIC CONTROL PLAN will include the City's Traffic Control Plan Review Form.

The Contractor will appoint a Traffic Control Supervisor (TCS) to this project. The TCS does not need to be on site but 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 will be notified in writing when the traffic control for any site work is not acceptable. The Contractor will not be allowed to continue work at the location until the problems are corrected. Failure to correct the traffic control deficiencies prior to continuance of the work will result in non-payment for the work performed at the locations in question.

All costs incidental to construction traffic control shall be included in the cost of the traffic control bid items (#96-107).

This project may be constructed in two phases: 65th Avenue with Intersection work and US34 roadway improvements. Refer to general phasing notes included on the Construction Drawings TC-1001. Refer to the Traffic Control plans for additional, details. For paving and striping operations, contractor shall coordinate with City to determine the appropriate method of handling traffic.

Bid Items 98– CONSTRUCTION TRAFFIC SIGN

Payment shall be per the individual bid items for traffic control signs and devices shown on DWG TC-1001 to TC-1107. Payment for traffic control devices will be paid once for the duration of the project. Maintenance, replacement, and resetting of devices is included in these bid items.

Bid Item 100– PORTABLE MESSAGE SIGN PANEL

Item shall meet the requirements as outlined in Streets Section 1.20 K and be on the project site at least 7 days prior to the start of active roadway construction. Maintenance, storage, operation, relocation to different sites during the project, and all repairs of the portable message sign panels shall be the responsibility of the Contractor.

Bid Item 105 - CONSTRUCTION SURVEY

Construction staking shall be provided by the Contractor and shall be performed under the direct supervision of a Professional Land Surveyor licensed in the State of Colorado. Refer to "Streets Volume I" Section 01010.H.

Bid Item 107-119 – SIGNAL QUANTITIES

Per Streets Section 1.26 B; contact the City Traffic Division; Scott Logan or current Traffic Engineer assigned to this project before material have been ordered. The Traffic Division maintains current standard drawings and construction specifications for traffic signals which can be furnished to the Contractor.

Storm Water Management Plan (SWMP)
for
65th Avenue Road Widening
at 65th Avenue and US 34 Bypass
Construction Plans
City of Greeley, Colorado

1. This plan identifies potential sources of pollutants of storm water, presents pollution control measures, and assists in ensuring the implementation and maintenance of the Control Measures; also referred to as, Best Management Practices (BMPs) indicated herein. The intent of this Storm Water Management Plan (SWMP) is to describe a Storm Water Pollution Prevention Plan (SWPPP) to reduce pollution associated with this project to the maximum extent practicable.
2. In the event of a release of a reportable quantity of a pollutant, the Contractor shall advise the Owner to notify the response center and City of Greeley. If necessary, this pollution prevention plan may be revised to reflect the change in conditions of the construction activity. A reportable quantity is established by 40 Code of Federal Regulations (CFR) 117.3 or 40 CFR 302.4.
3. The 2018 Colorado Discharge Permit System (CDPS) General Permit for Stormwater Discharges Associated with Construction Activities (COR-400000) is required before construction activities commence and the owner and operator are co-permittees (must sign permit) and are subject to the compliance with all terms and conditions.
4. All contractors and their personnel whose work can contribute to or cause pollution of storm water should be made familiar with this pollution prevention plan. Adequate training for implementation of the measures presented herein shall be provided to the contractors and their personnel.
5. Changes in construction or in conditions which are not covered by this plan should be brought to the attention of the Owner. This pollution prevention plan should be revised to reflect the change in construction or in conditions.
6. All prevention and clean up measures should be conducted in accordance with City of Greeley ordinances, as well as state and federal regulations. Waste materials should be disposed of in a legal manner. All dischargers of storm water must comply with the lawful requirements of City of Greeley, Weld County and other local agencies regarding the discharges of storm water to storm drains and drainage channels.
7. This plan does not cover the removal of hazardous or toxic waste. In the event of a discharge or release of a reportable quantity of toxic waste, work should be stopped until the spill can be assessed and a mitigation report prepared by a qualified environmental consultant, and if necessary, reviewed by Weld County, City of Greeley and any other agency having jurisdiction.
8. Permits: The City of Greeley will obtain a storm water discharge permit from State of Colorado, Department of public Health & Environment, Water Quality Control Division for temporary storm water runoff from the approximate 14.70 acres construction site.

9. Contact Information:

Owner: City of Greeley
Project Manager, Tom Helen
1001 9th Avenue, Greeley, CO 80631
970-350-9793

Contractor / Discharger: Company Name:
Contact Name:
Company Address:
Contact Phone:

SWMP Administrator: Name:
Contact Name:
Contact Address:
Contact Phone:

Civil Engineer: J-U-B Engineers, Inc.
Amber Morse, P.E.
4745 Boardwalk Drive, Building D, Suite 200, Fort Collins, CO 80525
970-377-3602

Regional Environmental Protection Agency
Region VIII EPA, Denver, Colorado
800-759-4372

Federal Environmental Protection Agency
U.S. EPA, Washington, D.C. 20460
202-475-9518

10. Site Description:

- A. The proposed improvements located north of US 34 Bypass will widen 65th Avenue near the intersection with US 34 Bypass to include two thru-lanes in each direction, bike lanes, two left-turn lanes, and protected right-turn lanes at both corners. Improvements extend 1,100-feet north along 65th Avenue from US34 as improvements transition to match existing. Proposed improvements along US34 include the addition of a westbound acceleration lane with shoulder connecting to the existing protected right-turn lane at 71st Avenue and pedestrian islands at both north corners of the intersection with 65th Avenue. Proposed improvements along frontage road W. 28th Street are re-alignment of the roadway to accommodate the addition of a multi-use trail between 71st Street and 61st Avenue. Improvements also include removing a portion of W. 28th Street between 65th Avenue and the first driveway to the east; eliminating through vehicle traffic east of 65th Avenue at this intersection.
- B. The proposed construction activity involves roadway reconstruction and widening along with some underground utility work. A detention pond with outlet structure is designed at the north-east corner of the intersection of 65th Avenue and W. 28th Street. The construction limits of the site encompass approximately 7.9-acres in Greeley, Colorado. The project will include excavation, embankment, hot mix asphalt pavement, new concrete curb, gutter, concrete shared use path, storm drainage improvements, waterline improvements and miscellaneous site improvements associated with the new improvements.

- C. The site is generally fairly flat with roadway grades averaging approximately 0.5% - 2.5%. The proposed finish grade of the sidewalk will generally match the roadway grades. Some embankment fill will occur at both sides of 65th Avenue and along the edge of proposed trail. Fill depths are approximately 1 to 3-feet higher than the existing roadway.
- D. Potential pollutants during construction are: generation of dust during mass grading, mud and debris being tracked into the streets and fuels and fluids needed to operate and maintain construction equipment.

Best Management Practices (BMP's) to Reduce Pollution

- A. Prohibition on most non-storm water discharges: Clean, non-chlorinated water from the flushing of fire hydrants, water mains, and storm drains may be discharged to the storm drain if it is not allowed to collect dirt, debris and trash while flowing to a storm drain inlet.
- B. Sources of storm water pollutants: storm water pollutants include soil sediment and nutrients, solvents, and typical vehicle gases, oils and fuels. Sources of storm water pollutants include but are not limited to soil erosion by water and/or wind; clearing of vegetation; grading; paints, solvents and adhesives; and landscaping work.
- C. Erosion and sediment controls:
 - 1. Areas will only be disturbed when needed.
 - 2. Long term stockpile areas (areas where stockpiles will lay dormant for four weeks or more) will be protected using perimeter containment berms or silt fencing.
 - 3. Re-vegetate areas where landscaping has died or not taken hold.
 - 4. Stabilize all construction site entrances to the site with a temporary or permanent material. This is intended to reduce significant amounts of mud-tracking onto the existing streets.
 - 5. Storm water inlets: Provide protection for all storm water inlets as identified on Sediment and Erosion Control Plans of the construction drawings to be clean and free of dirt and debris. Refer to detail sheets for additional inlet protection details and requirements.
 - 6. Provide a sign to identify the concrete washout area to truck drivers. The sign shall read "CONCRETE WASHOUT AREA."
- D. Other controls
 - 1. Waste disposal:
 - a. Keep waste disposal containers covered.
 - b. Provide for the disposal of waste containers every other week (or more frequent, if necessary).
 - c. Provide containers at convenient locations around the site.

2. Sweeping of site:
 - a. Provide sweeping by hand or mechanical means every other week to keep the paved areas of the site free of dust, dirt, and debris. Sweeping of streets during stormy periods may be required more frequently.
 - b. Dispose of accumulated dirt in waste containers or haul it off the site to a landfill.
3. Sanitary sewer:
 - a. Provide and maintain restroom facilities.
4. Spills:
 - a. Store adequate absorbent materials, rags, brooms, shovels, and waste containers on the site to clean-up spills of materials such as fuel, paint, solvents, or cleaners. Clean up minor spills immediately.
 - b. For reportable quantity of hazardous or toxic substance, secure the services of qualified personnel for clean-up and disposal.
5. Landscaping operations
 - a. Use only the minimum amount of landscaping fertilizes, nutrients, and other chemicals that are needed.
 - b. Do not over-water fertilized or treated landscape areas. Minimize runoff of irrigation water from landscaping.

E. Final stabilization and post-construction controls

1. After construction has been completed, the site shall be swept clean, storm water inlets (grates and basins) shall be cleaned, and all waste and leftover materials shall be removed from the site.
2. All landscaping and planting areas should be well maintained to prevent erosion. Avoid over watering of landscaping.
3. All paved and sidewalk areas should be swept either by hand or by mechanical means to keep the site clear of dirt, dust, and debris.
4. Waste materials should be removed from the site and properly disposed of.
5. Storm drain lines should be checked and cleaned annually to keep them clean and clear of debris.
6. All on-site storm water inlets should be clearly marked "storm water only".
7. Temporary BMPs should be removed once the site is stabilized.
8. Permanent BMPs include detention basins, surface drainage across grass areas and re-vegetation.

BMP Inspection (Provided by the City of Greeley)

1. Discharger Responsibility: All dischargers are required to: conduct inspections of the construction site prior to anticipated storm events and after actual storm events, to identify areas contributing to a storm water discharge, to evaluate whether measures to reduce pollutant loadings identified in this SWMP are adequate, to properly implement in accordance with the terms of the general permit, and to determine whether additional control practices are needed.
2. Frequency: Regular interval inspection to occur at a minimum of every 14 days and also before anticipated storm events and within 24 hours after storm events of ½ inch of moisture or more. The first inspection must be within 7 days of construction commencement. Inspections shall continue until the site is stabilized.
3. Documentation: Contractor must keep an inspection log on site at all times until construction is complete. If modifications to this plan are required, the modifications must be made within 7 calendar days of inspected deficiency. Inspection report must be signed and dated by the inspector.
4. Deficiencies: All deficiencies identified in the scheduled report must be corrected by the discharger within 7 calendar days of the notice of deficiency.
5. Retention of Records: The discharger is required to retain records of all monitoring information, copies of all reports required by this general permit, and records of all data used to complete the notice of intent for construction activity for a period of at least three years. This period may be extended by request of the State. With the exception of noncompliance reporting, dischargers are not required to submit the records except upon specific request by the State of Colorado Division of Water Quality.

Maintenance of Controls (Contractor)

1. Maintenance and Repair: All controls and measures indicated on this plan should be maintained in good and effective condition. If any controls or measures are damaged or removed, they should be promptly repaired or restored.
2. Plan Revisions: If construction activity or conditions change from those shown in this plan, then this plan shall be revised to reflect the current conditions. An updated copy of this site plan shall be kept on site at all times during construction. All revisions shall be noted with a signed acknowledgment of the change at the end of this document.
3. Accumulated Sediment: Sediment that has accumulated inside control structures, pipes, or conveyances must be removed when the capacity of the structure, pipe, or conveyance has been reduced by 50% of the available full capacity.

Completion of Construction Activities and Notice of Termination:

1. Transfer to City: At the completion of construction activities the Contractor shall transfer maintenance responsibilities of ongoing BMP's to the City. This transfer shall include transfer of all operation and maintenance manuals and maintenance instructions.
2. Removal of Temporary BMP's: After the area has been stabilized and a notice of termination has been received, all temporary erosion control measures shall be removed in a manner that minimizes disturbance to the site.

**CITY OF GREELEY STANDARD SPECIFICATIONS
FOR TRAFFIC SIGNAL PROJECT**

TRAFFIC SIGNAL MATERIALS AND INSTALLATION

TABLE OF CONTENTS

TS-1 GENERAL

TS-2 DEFINITIONS

TS-3 SCOPE OF WORK

- A. General
- B. Materials to be furnished by the City
- C. Materials to be furnished by the Contractor

TS-4 CONTROL OF WORK

- A. General
- B. Traffic Control
- C. Equipment List and Drawings
- D. Cooperation between Contractors
- E. Coordination with Xcel Energy Company

TS-5 EXCAVATING AND BACKFILLING

- A. Excavating
- B. Backfilling
- C. Removing and Replacing Improvements

TS-6 CONDUIT

- A. General
- B. PVC conduit
- C. Galvanized Rigid conduit
- D. Conduit Installation
- E. PVC conduit Installation
- F. Termination of conduit

TS-7 CONCRETE FOUNDATIONS

- A. General
- B. Poles, Standards, and Pedestal Foundations
- C. Controller Foundations

TS-8 LOOP DETECTOR INSTALLATION

TS-9 CABLE AND CONDUCTORS

- A. General
- B. Wiring Installation

TS-10 SERVICE SYSTEMS

- A. General
- B. Service Pole

TS-11 METHOD OF MEASUREMENT AND BASIS OF PAYMENT

- A. General

- B. Trenching, Backfilling, and Restore
- C. Bored or Pushed Conduit
- D. Conduit
- E. Potholing
- F. Pull Box
- G. Cabinet Foundation
- H. Cabinet Step Pad
- I. Cabinet
- J. Mast Arm Pole or Combination Pole
- K. Pedestal Pole
- L. Traffic Signal Head
- M. Traffic Signal Head
- N. Pedestrian Push-button Assembly
- O. Pedestrian Instructional Sign
- P. Pedestrian Push-button Lead-In Wire
- Q. Multi conductor
- R. Grounding and Bonding Wire
- S. Service Entrance Wire
- T. Fire Preemption Unit and Timer
- U. Fire Preemption Unit Lead-In Wire
- V. LED Signal Indication
- W. Intersection Detection System
- X. Radar Detection Cabling
- Y. Communication Radio

TS-1 GENERAL

These specifications for the provision of traffic signal and lighting installations are intended to provide a set of minimum standards that shall be followed when work is done for the City of Greeley. These standards, plans, and any special provisions shall apply to all materials supplied, methods and procedures of work to be followed, and other general minimum requirements that shall be complied with before work is accepted by the City of Greeley.

The City of Greeley has adopted the following as part of these standard specifications:

Standard Specifications for Road and Bridge Construction (current edition), Colorado Department of Transportation, and all amendments and revisions pertaining thereto.

Manual on Uniform Traffic Control Devices (current edition), Federal Highway Administration, and the Colorado Supplement thereto.

Design Criteria and Standard Specifications (current edition), City of Greeley.

The standard specifications outlined in this document are revisions and amendments to the Colorado Department of Transportation Standard Specifications for Road and Bridge Construction. In situations where there is a conflict or question of interpretation, these specifications and any special provisions will prevail.

These specifications, the plans, any special provisions, and all supplemental documents are essential parts of a contract and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for the complete work. In case of a discrepancy, figured dimensions shall govern over scaled dimensions; plans shall govern over standard specifications; and special provisions shall govern over plans and standard specifications.

TS-2 DEFINITIONS

CITY

The City of Greeley, Colorado.

CONTRACTOR

The person, partnership or corporation that has signed a contract to perform work for the City.

CABINET

A complete electrical or solid-state mechanism for controlling the operation of traffic control signals, including the timer controller, and all auxiliary apparatus mounted in the cabinet.

DETECTOR, LOOP

A loop of wire imbedded in the roadway capable of actuating a detection unit when a vehicle passes within its magnetic field.

DETECTOR, MICROLOOP

A sealed probe buried beneath the roadway surface capable of actuating a detection unit when a vehicle passes within its magnetic field.

CITY ENGINEER

The City Engineer or his duly authorized representative.

GRC

Galvanized rigid conduit.

INSTALLATION, THE

The work completed, in place, and in operation.

LENS

A part of the optical unit that redirects the light coming from the reflector. It may be referred to as the redirecting cover glass or roundel.

PVC - (POLYVINYL CHLORIDE)

A strong, tough plastic based on resins made by the polymerization of Vinyl Chloride or co polymerization of Vinyl Chloride with minor amounts (not over 50 percent) of other unsaturated compounds, which is then fashioned into sheets, tubing pipe, conduit, containers, insulation, etc.

PEDESTRIAN PUSH-BUTTON ASSEMBLY

An assembly consisting of actuation ADA button, switch, housing or frame, and directional sign.

PHASE

A part of the total time cycle allocated to any traffic movements receiving the right-of-way simultaneously during one or more intervals.

SIGNAL HEAD

An assembly containing one or more signal faces, which may be, designated accordingly as one-way, two-way, three-way, four-way, etc. (a) Signal Section - An assembly containing a reflector, receptacle, lens, and door with the necessary enclosure and supporting parts; to be used with a light source for

providing a single signal indication, which may be RED, YELLOW, GREEN OR ARROW, as necessary.
(b) Signal Face - an assembly containing from one to five complete signal sections (normally red-yellow-green or arrows).

SIGNAL INDICATION

The illumination of a traffic signal lens or equivalent device or of a combination of several lenses or equivalent devices at the same time.

SUPERINTENDENT

The City Traffic Operations Manager or his duly authorized representative.

TRAFFIC SIGNAL

A power-operated traffic control device, not a sign, by which traffic is warned or is directed to take some specific action.

TS-3 SCOPE OF WORK

A. General

The work shall consist of the installation of materials and equipment to form complete and operational traffic signal and lighting installations at various locations in the City.

The installations shall be complete with all necessary accessories for proper operation. The disconnect devices; protective devices, and all other equipment shall be thoroughly coordinated to secure accordance with these specifications.

The contractor shall be responsible for all requests for locates from the start of the project and shall continue until the project is accepted as complete by the City of Greeley.

Traffic signal and lighting plans indicate the extent and general arrangement of the installation. If the Contractor deems any departures from the plans necessary, details of such departures and the reasons therefore shall be submitted immediately to the Superintendent for approval. No such departures shall be made prior to the written approval of the Superintendent.

Location of materials and equipment shall be as shown on the plans or as directed by the Superintendent.

A certified IMSA Level II Signal Field Technician shall do all work within controller cabinets. The successful bidder shall provide a list of qualified employees to the Superintendent.

Loop detector repair and maintenance shall begin a maximum of 48 hours after the City gives a verbal Notice to Proceed.

B. Materials to be furnished by the City

The City will furnish traffic signal items as noted on the traffic signal plans. The contractor shall furnish and install all other traffic signal items on the plans.

C. Materials to be furnished by the Contractor

The Contractor shall supply all materials as noted on the traffic signal design plans.

Unless otherwise indicated on the plans, specified in the special provisions, or directed by the Superintendent, all materials shall be new. Where existing installations are to be modified, existing material shall be incorporated into the revised system, salvaged, or abandoned, as indicated on the plans, specified in the special provisions, or as directed by the Superintendent.

TS-4 CONTROL OF WORK

A. General

Work shall not be performed in the roadway before 8:00 a.m. or after 4:00 p.m., unless the Superintendent grants permission.

The Contractor shall notify property owners, and give them sufficient time to move their vehicles, before a driveway is blocked.

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.

B. 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. The City of Greeley has an agreement with Northern Colorado Traffic Control, 1712 First Avenue, Greeley, Colorado, 970-356-6881, to provide traffic control services. If you are interested in using them, they will perform the service at the rates covered by the agreement. 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.

Traffic control plans shall be submitted to the Superintendent for approval before work in the public right of way may begin.

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

C. Equipment List and Drawings

If the Contractor is supplying equipment to the project, he shall submit to the Superintendent for approval, within five days following notification of work to perform, a list of equipment and material, which he proposes to install. The list shall include all materials that are identified on the plans or in the specifications by the performance characteristics, or by other means when it is necessary or customary in the trade. The list shall be complete as to name of manufacturer, size, and catalog number of unit, and shall be supplemented by such other data as may be required, including detailed scale drawings and wiring diagrams of any non-standard or special equipment and of any proposed deviation from the plans. If requested to do so, the Contractor shall submit for approval sample articles of the materials proposed for use.

The above data shall be submitted to the Superintendent (in as many copies or complete sets as required by the Superintendent) for checking, correction, and approval. Upon completion of checking, correction, or approval, the Superintendent will submit a letter of transmittal to the Contractor indicating acceptance or rejection of, or changes required for acceptance of, the above data.

The contractor shall supply "as-built drawings" to the Traffic Operation Superintendent upon completion of the work and prior to final payment.

D. Cooperation between Contractors

Street construction within the limits of the work may be under way by other Contractors during the period of the contract. The Contractor shall cooperate with any other Contractor under contract to the City or working under a utility agreement with the City. Coordination of work zone traffic control will be done by the City.

E. Coordination with Xcel Energy Company

Xcel Energy Company of Colorado crews will be installing street light fixtures in conjunction with the Contractor's work. Xcel Energy Company may be installing street lighting conduits in the same trenches as the traffic signal conduits. 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.

The contractor shall furnish and install a 12/2 UF with ground from Xcel Energy source to the end of the luminaire arm.

TS-5 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 compacted 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.

If old caissons are abandoned, caisson shall be broken out a minimum of 12".

TS-6 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 meet the ANSI/SCTE 77 2013-Tier 22 specification (or an approved equal) with the sizes as specified on the plans. 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 ¾" rock.

TS-7 CONCRETE FOUNDATIONS

A. General

Foundations shall be as specified on the plans with 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.

All pole bases shall be grouted using a non-shrink grout. Pole bases shall be sealed so when grouting, should not enter the base of the pole.

Poles that are to be painted, shall be washed with approved solvent, a two-part primer coat applied with an approved primer (Macro Epoxy 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 as specified on the plans and when located in sidewalks, shall rise above the sidewalk surface as shown on the plans. If plans call for a concrete foundation, this concrete shall conform to City of Greeley Class "B" mix requirements. Foundations for traffic signal controller cabinets

may also be constructed of strong polymer concrete and reinforced with a heavy-weave fiberglass.

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

TS-8 VEHICLE DETECTOR INSTALLATION

The vehicle detection system shall be specified by the City of Greeley, and shall be installed per manufacturer standards.

TS-9 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.

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

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.

The Contractor shall install two single conductor #8 AWG wire from the cabinet to the service connection pull box or service pole, leaving three extra feet of wire in the pull box.

B. Wiring Installation

**City Of Greeley
21 Conductor Cable Wiring**

MAIN 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 CONDUCTOR 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		

TS-10 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.

TS-11 METHOD OF MEASUREMENT AND BASIS OF PAYMENT

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. Sky-brackets (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 retro-reflective 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.

TRAFFIC SIGNAL CONTROLLER CABINET

This item will use the CDOT Standard Specifications for Road and Bridge Construction Section 614 and is hereby revised for this project as follows:

Section 614 of the Standard Specifications is hereby revised for projects as follows:

Subsection 614.08 shall include the following:

Traffic Signal Materials

(b) Traffic Signal Controllers – General. The traffic signal controller shall be specified by the City of Greeley.

(c) Controller Cabinets. The traffic signal controller cabinet shall be tested by the City of Greeley traffic signal staff for a minimum of 7 days, and 2 weeks prior to installation. The controller cabinet assembly shall consist of a 332D cabinet, controller, Clary UPS, backup generator connection, and all necessary auxiliary equipment to provide the operation shown on the plans. The cabinet shall be natural aluminum with anchor bolts in accordance with the FHWA-IP-78-16 specification. The input files shall meet the

requirements of the split input file below. Unless otherwise specified in the Contract, the cabinet shall include the following:

<i>Quantity</i>	<i>Item</i>
1 ea.	Traffic Controller (Specified by City of Greeley)
2 ea.	Internal (front/back) fluorescent lamps
4 ea.	Corbin Locks
4 ea.	Fan Assemblies
1 ea.	PDA #2 2/206-L Power Supply
2 ea.	Standard Split Input File
4 ea.	Model 430 Transfer Relays
2 ea.	Model 204 2-Circuit Flasher (cube type, 25 AMP output)
12 ea.	Model 200 Load Switch (cube type, 25 AMP output)
3 ea.	Model 242 DC Isolators
1 ea.	Model 2010ECL Monitor with absence of red monitoring.
1 ea.	New York 330 Pull-out Drawer Assembly
1 ea.	Auxiliary Detector Termination Panel Assembly
1 ea.	Transient Voltage Surge Suppression System
1 ea.	Output file with Terminal Strip
4 ea.	Anchor Bolts
1 ea.	Traffic UPS (see Specifications below)

Additional provisions for the 332D cabinet shall include:

- 2 each Split Input File
- 1 each Additional New York Pull-out drawer Assembly
- 1 each Traffic UPS (see Specifications below)
- Cabinet dimensions: 67" H X 49" W X 30" D
- Cabinet shall have four (4) doors (2 full size front and 2 full size back) and Corbin #2 Locks.
- Door Stops: 90 degree (+/- 10 degree) each door top and 90 degree and 180 degree (+/- 10 degree) each door bottom
- The left side of the 332D cabinet assembly shall have shelves assembled to the EIA rack assembly to house additional equipment such as, but not limited to, Video Detection,
- Standby Uninterrupted Power supply and communication equipment.

The cabinet shall have a natural aluminum finish.

The output file shall have a terminal strip capable of a minimum of eight phases.

Surge suppression for the field wiring shall be installed on the back of the output file. This shall include devices for a 9-position 5-mm panel and plug. Through panel part #071024 and 9-position plug parts # 1778056. Each plug shall have six 50 joule, 150 V movistors, or as a covered sealed unit.

The power distribution assembly shall be the PDA No. 2. The PDA No. 2 shall have field circuit breakers 1–6 to provide 15 amperes of operating AC current to the field load switches. If one of the field breakers is set off, the indicating switch shall place power on the MC coil and FTR coils causing a flashing operation. All cabinets shall have a shield over the circuit breakers to protect from accidentally being

turned off. The shield will be such that the technician will still be able to view and reset the switch without removing the shield.

Red Monitoring. A 20-conductor cable assembly for monitoring the red outputs of all signal load switches shall be provided and mounted to the back-panel assembly. The cable shall be routed to the front of the assembly and be plugged into the connector on the front of the conflict monitor.

A means of selecting the active red monitor channel shall be provided on the rear of the monitor panel. Selections shall be accomplished by means of a two position jumper (shunt) with the center position wired to a red monitor input and select of 115 VAC to the right and red load switch output to the left. Moving the jumper to the right will provide continuous red input and override, while moving the jumper to the left will attach the monitor channel to the corresponding load switch output.

The jumper assembly shall be accessible while the intersection is in operation. Means shall be provided to prevent shock to personnel operating jumper selection devices.

A minimum of 12 selections is required, eight phase selections and four overlap selections shall be provided with jumper selections.

Red monitoring disable control shall be provided within the red monitor cable assembly. Pin six on TB02 shall connect to a 24 VDC relay coil. This relay is designated RM control relay. The normally closed contacts shall provide 115 VAC to the red monitor select line and pin 17 on the monitor cable. When a logic ground signal is applied to TB02-6 the RM relay shall energize and open the cable. The relay power will be derived from the cabinet 24 VDC cabinet power supply.

Transient protection. Electrical characteristics of the device that will be used for series transient protection on the 332, 332D and 336S cabinet systems shall include tests run using a Velonex 587 surge generator and Tektronix oscilloscope type 2430 or equivalent hardware. Using ANSI/IEEE.062.41-1980 waveforms for normal mode and common mode ring wave and impulse tests, each unit shall comply with the following minimum characteristics:

- (1) Clamping level 400V peak normal mode and 500V peak common mode. Trace photos and other test related information will be available upon request.
- (2) EMI/EFI noise rejection derived via standardized 50 ohm insertion loss tests shall have amplitude of at least -20dB over a minimum spectrum from 50 kHz with a -40dB being the most desirable.
- (3) Diagnostics indicators shall clearly display the status of the suppression circuit. The indication shall warn of the loss of protection.
- (4) Transient energy suppression shall be in excess of 250 joules.
- (5) Rated voltage is 120 VAC with rated output current minimum 10 amperes single-phase operation.

Split Input File. The split input file shall be an SF 170 that will operate in the 332, 332D or the 336S cabinet.

The split input file shall use the same form factors as the present (older) input file and shall be completely interchangeable with these older input files except as follows.

The input file shall use a split 22-pin connector (2 rows of 22 pins), which provide for 44 unique contacts, rather than the 22 double contacts as provided by the former input file. This design shall interface electrically with the older 2 and 4 channel devices available under the 170 and NEMA TS1 specifications as well as the newer 2 and 4 channel devices as specified in the TS2 NEMA specifications.

The input file shall be divided into two partitions. The first partition shall include the first eight slots from the left; the second partition shall include the next six slots. All 14 slots shall be able to be tied to one common communications drop if desired.

The serial/TTL Transmit and receive pairs shall be wired across the back panel. TX0, DX0, and Ground0 serve the first eight slots; TX1, DX1 and Ground1 serve the next six slots. Back panel addressing is automatically assigned in the rear of the input file, such that:

Slot 1 = Address 0
Slot 2 = Address 1. . . Slot 8 = Address 7 (all three lines low)

Addressing from the front of any input device shall override the back plane addressing.

Serial connections shall use a standard quick lock connection.

Beau 5.08-mm pluggable PCB terminal Block & Header (Eurostyle) shall be used for all field termination points on the back of the input file. There shall be 3 headers soldered and fastened to the input file PCB for each slot assignment. Three (3) terminal blocks shall plug into the headers of each slot assignment. Two of the blocks shall have 5 termination points and the third shall have 4 termination points. The 4-position plug shall terminate inputs from the 57-pin Amp connector. The 5 position plugs shall terminate all field terminal connections from field wiring. Channel 1 shall be on one 5-position plug and channel 2 on the other 5-position plug. Each five-position plug shall daisy chain the loop input to allow for more than one twisted pair connection point. The plugs shall be configured and attached to the header in the following manner:

<i>SP</i>	<i>Spare</i>
<i>SP</i>	<i>Spare</i>
<i>F</i>	<i>Channel 1 output</i>
<i>W</i>	<i>Channel 2 output</i>

<i>D</i>	<i>Channel 1 Loop</i>
<i>E</i>	
<i>D</i>	<i>Channel 1 Loop</i>
<i>E</i>	
<i>L</i>	<i>Equipment Gnd.</i>

<i>J</i>	<i>Channel 2 Loop</i>
<i>K</i>	
<i>J</i>	<i>Channel 2 Loop</i>
<i>K</i>	
<i>L</i>	<i>Equipment Gnd.</i>

A strain release bar shall be added and fastened with thumbscrews for tie wrapping input circuits from the field loops. The strain release bar shall be in a horizontal plain located at the bottom of the input file and mounted in such a way as to not interfere with the Amp connector mounting or field input wiring.

Surge suppression for the field wiring shall be installed on the back of the input file. Each plug shall have a 50 joule, 150 V MOVs, or as a covered sealed unit.

Uninterrupted Power Supply (UPS) - The 332D shall have a Clary UPS as specified below rack mounted in the left cabinet.

1.0 Operation

A. The Traffic UPS shall be capable of producing – simultaneously -- fully regenerated, conditioned and true sine wave, standby and continuous AC outputs.

B. Suggested operating mode for respective outputs during power failure: Continuous output provided for signal controllers and modems; Standby output provided for signals in flash mode operation (optional delay timer available for short-term battery run under full cycling operation).

C. Up to the maximum rating, the Traffic UPS shall be capable of running any combination of signal heads, whether Incandescent, LED or Neon, by any manufacturer, regardless of power factor, without overdriving the poorer power factor LED heads which may cause early degradation, low luminosity or early signal failure.

D. Upon loss of utility power the Traffic UPS shall insert battery power into the system via a supplied Power Interface Module (PIM). In case of UPS failure and/or battery depletion, the PIM will ensure that the UPS will drop out and, upon return of utility power, the traffic control system will default to normal operating mode.

E. The Power Interface Module shall enable removal and replacement of the Traffic UPS without shutting down the traffic control system (i.e. “hot swap” capability). Connectors shall be equipped with a “safety interlock” feature.

F. For 170 or “California” style cabinets, upon loss of power the Traffic UPS shall actuate the existing Flash Transfer Relays (FTRs) and Mercury Contactor (MC) to force the traffic control system into Flash Mode operation.

G. Existing Flasher Modules and Flash Transfer Relays shall be utilized.

H. To facilitate emergency crews and police activities, the Traffic UPS shall be compatible with police panel functions (i.e. “Signals OFF” switch must kill power to the field wiring even when on UPS/Battery power).

I. The Traffic UPS shall not duplicate or take over flash operation or flash transfer relay functions.

J. The Traffic UPS shall be capable of providing continuous, fully conditioned, regulated, sinusoidal (AC) power to selected devices such as signal controllers, modems, communications hubs, NTCIP adapters and video equipment.

2.0 Description

The Traffic UPS shall consist of three major components, the Electronics Module, the Power Interface Module, and the Battery System.

The Electronics Module shall consist of the following:

- A. True sine wave, high frequency inverter utilizing IGBT technology,
- B. 3-stage, temperature compensated, battery charger,
- C. For connection from the Electronics Module to the Power Interface Module and Battery System, dedicated harnesses shall be provided with quick-release, keyed, circular connectors and braided nylon sleeving over all conductors,
- D. local and remote control of UPS functions,
- E. local and remote communications capabilities,
- F. and be capable of accepting an NTCIP-ready adapter or a Wireless broadband Radio modem.
- G. Separate Power Interface Module (PIM) for inserting power safely and reliably.

2.1 Mounting/Configuration

- 2.1.1 NEMA Style: mounting method shall be shelf-mount or wall-mount.
- 2.1.2 170 Style: mounting method shall be 19" rack-mount. Shelf angles or rails, typically supplied by others, are available as optional accessories.
- 2.1.3 External: A separate, stand-alone, pad-mounted, outdoor (NEMA 3R) enclosure shall be available should there be inadequate room in the signal cabinet or should the consulting/traffic engineer prefer independent, external mounting.

2.2 Battery System

- 2.2.1 The battery shall be comprised of extreme temperature, deep cycle, AGM/VRLA (Absorbed Glass Mat/Valve Regulated Lead Acid) batteries that have been field proven and tested by the U.S. military.
- 2.2.2 The battery system shall consist of one or more strings (typically 4 or 6 batteries per string) of extreme temperature, deep cycle, AGM/VRLA (Absorbed Glass Mat/ Valve Regulated Lead Acid) batteries such as Clary Outpost™ batteries or equivalent.
- 2.2.3 Batteries shall be certified to operate at extreme temperatures from -40°C to $+74^{\circ}\text{C}$.
- 2.2.4 The batteries shall be provided with appropriate interconnect wiring and a corrosion-resistant mounting trays and/or brackets appropriate for the cabinet into which they will be installed.
- 2.2.5 The interconnect cable shall be protected with abrasion-resistant nylon sheathing.
- 2.2.6 The interconnect cable shall connect to the base module via a quick-release circular connector.
- 2.2.7 For purposes of safety and proper operation, the circular battery connector shall have interlocking pins to prevent turn-on if batteries are not connected, and to shut off the UPS should the batteries be disconnected.
- 2.2.8 Battery construction shall include heavy-duty, inter-cell connections for low-impedance between cells, and heavy-duty plates to withstand shock and vibration.

- 2.2.9 The top cover shall use tongue and groove construction and shall be epoxied to the battery case for maximum strength and durability.
- 2.2.10 An optional lifting handle shall be available on most battery models.

3.0 Electrical Specifications

3.1 Input Specification

Nominal Input Voltage	120 VAC, Single Phase
Input Voltage Range	85 VAC to 140 VAC
Input Frequency	50 or 60 Hz (+/- 5%)
Input Configuration	3 Wire (Hot, Neutral & Ground)
Input Current (Max. draw) Corrected	7.2 amps, Power-Factor
Input Protection	Input Fuse (12 amps)

3.2 Output Specification

Nominal Output Voltage	120 VAC, Single Phase
Power Rating	1 kVA (1000VA/700W)
Output Voltage Regulation +/- 2% for 100% step load change and from High battery to Low battery condition	
Output Frequency	50 or 60 Hz (+/- 5%)
Output Configuration	Keyed, circular connectors and duplex receptacle
Output Wave Form	True Sinewave
Overload capability	110% for 10 minutes 200% for ½ second
Fault clearing	Current limit and automatic shutdown
Short circuit protection	Current limit and automatic shutdown
Efficiency	85% at full load
Load Power Factor	.7 lagging through unity to .7 leading

4.0 Physical Specifications, UPS Electronics Module

4.1 Dimensions:

- Rack-mount: Width = 19", Depth = 12", Height = 3.5" (2U)
- Shelf-mount: Width = 19", Depth = 12", Height = 3.5"
- Wall-mount/Unistrut Rail mount: Width = 6.9", Depth = 9.5", Height = 16"
- Separate Power-Interface Module = Width = 6", Depth = 2.8", Height = 9"

4.2 Weight: UPS: 20 lbs., Shipping weight: 25 lbs.

5.0 Environmental Specifications

- 5.1 The UPS shall meet or exceed NEMA temperature standards from -40°C to +74°C.
- 5.2 The UPS shall be certified and field proven to meet or exceed NEMA temperature standards. A certificate of compliance shall be made available upon request.

6.0 Battery Specifications

6.1 The battery system shall be certified and field proven to meet or exceed NEMA temperature standards from -40°C to $+74^{\circ}\text{C}$.

6.2 Ampere-Hour ratings (see table 1)

6.3 Hydrogen gas emissions: must meet Mil-Spec #MIL-B-8565J

6.4 Dimensions: (see table 1)

6.5 Weights: (see table 1)

Table 1.

		Estimated Runtime (assumes $77^{\circ}\text{F}/25^{\circ}\text{C}$, to 1.75 volts per cell)			Unit Weight	Overall Dimensions Per Battery Inches (cm.)		
		200 Watts	400 Watts	800 Watts		Length L	Width W	Height H
	Volts/ A-hrs.				Lbs. (Kg.)			
	12 VDC/ 16 A-h	3.5 Hrs.	1.73 Hrs.	52 Min.	14.7 (6.7)	7.27 (18.46)	3.11 (7.89)	6.67 (16.93)
	12 VDC/ 31 A-h	8.8 Hrs.	3.8 Hrs.	1.8 Hrs.	23 (10.5)	7.68 (19.51)	5.15 (13.08)	7.22 (18.34)
	12 VDC/ 39 A-h	11.3 Hrs.	5.5 Hrs.	2.3 Hrs.	29 (13.2)	7.68 (19.51)	5.15 (13.08)	8.50 (21.59)
	12 VDC/ 48 A-h	13.7 Hrs.	6.7 Hrs.	2.9 Hrs.	32 (14.5)	9.41 (23.90)	5.22 (13.26)	9.35 (23.75)

*OP72X battery sets include **six (6)** batteries per set. Wired in series, each set provides 72 VDC.

7.0 Communications, Controls & Diagnostics

7.1 Alarm Function Monitoring: The traffic UPS shall come standard with a DB-9F connector with open collectors (40 V @ 20 mA) indicating:

7.1.1 Loss of Utility Power,

7.1.2 Inverter Failure, and

7.1.3 Low Battery.

7.2 An RS232 Interface shall be provided via a DB-9F connector allowing full, interactive, remote computer monitoring and control of the UPS functions.

7.3 Front Panel controls: Power ON, Cold (DC) Start, Alarm Silence, Battery Test, Bypass Breaker, and DC/Battery Breaker.

8.0 Reliability

- 8.1 Calculated MTBF is 100,000 hours based on component ratings.
- 8.2 When Bypass and Power Interface Module are included, system MTBF increases to 150,000 hours.

9.0 Options

- 9.1 Battery Tray to hold six (6) OP72A batteries, up to four (4) OP72B or OP72C batteries, and up to three (3) OP72D batteries. Tray is 19" wide for use in 170 type cabinets and mounts on standard RETMA rails.
- 9.2 Swing-out Battery Box, mounts on right rail inside back door of 170 type cabinets. Box is designed to hold six (6) OP72A batteries, up to four (4) OP72B or OP72C batteries, and up to three (3) OP72D batteries.
- 9.3 Adjustable Delay-timer to provide up to 10 hours of full cycling while on battery before switching to flash mode (only available where 100% low-power/LED signals and ped heads are used). Batteries must be sized properly to fully utilize this feature.
- 9.4 Service pedestal-mounting option.
- 9.5 One-shot ground pulse to trigger External Start upon return of AC power.
- 9.6 Dial-out modem for wireless or land line communication
- 9.7 Enhanced battery charger provides accelerated charging capacity (contact factory for details and proper application).

10.0 Serviceability & Maintainability

- 10.1 MTTR (Mean-Time-To-Replace or Repair)
 - 10.1.1 Electronics: 15 minutes or less
 - 10.1.2 Battery System: 15 minutes or less

11.0 Warranty

Standard warranty terms cover entire Traffic UPS including battery. Terms are one-year parts and labor with labor F.O.B. factory.

All of the above components provided on the project, excluding the signal monitor unit, shall be on the Colorado Qualified Products listing.

METHOD OF MEASUREMENT

All labor, materials, and equipment necessary for the Traffic Signal Controller Cabinet will be measured by the number of cabinets installed.

BASIS OF PAYMENT

Payment will be under:

Pay Item	Pay Unit
Traffic Signal Controller Cabinet	Each

Payment will be full compensation for all labor, materials & equipment required to complete the work.