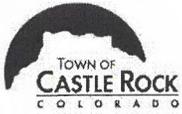


Town of Castle Rock



Agenda Memorandum

Agenda Date: 1/2/2018

Item #: 7. File #: RES 2018-004

To: Honorable Mayor and Members of Town Council

From: Mark Marlowe, Director of Castle Rock Water

Resolution Approving a Construction Contract with Hydro Resources - Rocky Mountain, Inc. for the Founders Arapahoe Well CR-227 [East of Matney Park, along Lantern Circle]

Executive Summary

Castle Rock Water is seeking Town Council approval of a Resolution approving a construction contract (**Attachment A**) with Hydro Resources - Rocky Mountain, Inc. for the Founder's Arapahoe Well CR-227 Drilling and Completion Project. The project cost is \$1,490,365. This bid includes the drilling and completion costs for the construction of the Arapahoe well. The equipping of the well remains under Layne Christensen Company's contract. Staff also requests approval of a ten percent Town-managed contingency of \$149,036.50, for a total project authorization of \$1,639,401.50. Assuming Town Council approves this drilling contract, the total project costs for this project are provided in the table below.

Contracts	Authorized	Contingency	Change Order	Total Authorization	Total Spent	Remaining
Dewberry	\$ 141,040	\$ 14,104.00	\$(30,000.00)	\$ 125,144.00	\$ 103,949.62	\$ 21,194.38
Layne	\$ 1,740,384	\$ 174,038.00	\$(294,701.90)	\$ 1,914,422.00	\$ 969,901.20	\$ 944,520.80
T Lowell	\$ 1,250,000	\$ 124,508.00		\$ 1,374,508.00	\$ -	\$1,374,508.00
Leonard Rice	\$ 78,200	\$ 7,820.00	\$ 35,790.00	\$ 121,810.00	\$ 60,632.85	\$ 61,177.15
Dewberry	\$ 48,790	\$ -		\$ 48,790.00	\$ 48,790.00	\$ 48,790.00
Misc.					\$ 19,526.94	
Hydro Resources	\$ 1,490,365	\$ 149,036.50		\$ 1,639,401.50	\$ -	\$ 1,639,401.50
Total				\$ 5,224,075.50	\$ 1,154,010.61	\$4,089,591.83

Due to lost circulation issues, Layne Christensen was unable to complete the Arapahoe Well in the original contract, which resulted in a net change order reduction of \$120,663.90. Staff decided to prepare a new set of well specifications and re-bid the Arapahoe Well drilling and completion. Six drilling companies were pre-qualified and invited to respond to the request for proposals and one

drilling contractor provided a bid.

Town Council approved the Water Service Intergovernmental Agreement (IGA) with Dominion Water and Sanitation District (Dominion) on September 20, 2016 for shared use of infrastructure. As part of the Water Service IGA, Dominion will be paying the Town for all costs associated with the design and construction of the Founders Well Facility infrastructure and conversion of two existing wells at the Ray Waterman Regional Water Treatment Center to ASR (aquifer storage and recovery), as part of the Infrastructure Fee. The initial payment Dominion made to the Town is \$3 million. At this time Dominion has not had the opportunity to meet to discuss the additional costs for the Arapahoe well with their board. Dominion indicated that they will likely proceed pending confirmation with their board. Staff recommends continuing the project so that we can remain on schedule with the hope that the new well will be on-line by July 2018. In the unlikely event that Dominion terminates the agreement and does not pay for the infrastructure, staff still recommends proceeding. Castle Rock Water needs additional groundwater infrastructure to keep pace with growth, and we have adequate capital reserves to pay for it even if Dominion decides to terminate.

History of Past Town Council, Boards & Commissions, or Other Discussions

On December 13, 2017, the Castle Rock Water Commission was advised of the bid results from the requests for proposals for the Founders Arapahoe Well CR-227 Drilling and Completion Project.

On November 7, 2017, Town Council was updated on the change order to the contract with Layne Christensen Company.

On October 25, 2017, the Castle Rock Water Commission recommended presenting this change order to Town Council.

On January 3, 2017, Town Council unanimously approved Resolution No. 2017-006, an agreement with Layne Christensen Company for the construction of the Founders Wells CR-226 and CR-227, for a total project cost of \$1,914,422.

On December 7, 2016, the Castle Rock Water Commission (aka Utilities Commission) unanimously voted to recommend Town Council approval of the construction services contract for Founders Wells CR-226 and CR-227.

Discussion

Based on the Water Resources Supply Demand Model, the current population growth trend in Castle Rock, the last two summer water demand seasons, and our recent Intergovernmental Agreement with Dominion, additional groundwater supply is needed to keep pace with increased water demands.

The new Founders Well Facility will be located east of Matney Park, along Lantern Circle on a parcel previously dedicated to the Town for the purpose of developing a well facility. A location map is included (**Attachment B**). Staff anticipates that this facility will produce 0.85 million gallons per day of raw water supply for the Town. During the construction of the Arapahoe Aquifer well with a target depth of 2,400 feet, Layne experienced five separate lost circulation events. The lost circulation

Item #: 7. File #: RES 2018-004

events were deemed to be caused by unforeseen conditions, which resulted in the hole being completed as the Denver Well at a depth of approximately 1,730 feet below ground. Because of the unforeseen conditions issue, Castle Rock Water revised the drilling specifications to include a more detailed loss of circulation clause, modifications to the design, and an incorporation of newer technologies in the design. Subsequently, Castle Rock Water re-bid the Arapahoe well with the revised specifications.

Leonard Rice Engineers, Inc. helped with the preparation of the revised well specifications and the pre-qualification of drilling contractors. The request for proposals were sent to six pre-qualified drilling companies. Bids were received from one drilling contractor, as summarized in the table below. The low bid was received from Hydro Resources and is considered a responsive bid.

Contractor	Base Bid Amount	Mandatory Alternative Items Bid Amount	Total Bid Amount	Staff Recommended Base Bid + Alternative Items Bid Amount
Hydro Resources	\$ 1,309,205	\$ 878,875	\$ 2,188,080	\$1,490,365
Boart Longyear	No Bid	No Bid	No Bid	No Bid
Layne Christensen	No Bid, (Schedule Conflicts)	No Bid	No Bid	No Bid
National Exploration	No Bid, (Bonding Conflicts)	No Bid	No Bid	No Bid
Stewart Brothers	No Bid	No Bid	No Bid	No Bid
Yellow Jacket Drilling	No Bid	No Bid	No Bid	No Bid

The bid package included the following alternative bid items: GESC permitting, drilling cuttings removal, drilling mud/fluids removal, road maintenance, three one-hour meetings, water supply, sound mitigation, glass bead filter pack, nuclear magnetic resonance logging, gyroscopic plumbness and alignment logging, zonal water sampling, and epoxy coating that totaled \$878,875 in Hydro Resources bid. These items were included because they may be necessary in keeping the site in good condition, additional information regarding the alignment of the hole, new technologies in filter pack and logging, and helping to mitigate a portion of the sound to the surrounding community. Staff determined that \$181,160 of the alternative bid items including GESC permitting, drilling cuttings removal, drilling mud/fluids removal, road maintenance, three one-hour meetings, water supply, and sound mitigation were a good value and recommends including those items in the contract.

Budget Impact

A budget amendment for 2018 will need to be completed for this project, as staff had not anticipated the unforeseen conditions that occurred during drilling in 2017. The Hydro Resources contract amount is \$1,490,365, plus a ten percent Town-managed contingency of \$149,036.50, for a total authorization of \$1,639,401.50. The project account number is 210-4275-442.75-39, New Water Supply Well.

Item #: 7. File #: RES 2018-004

<u>Project Amount</u>	<u>Amount</u>	<u>Contingency</u>	<u>Total</u>
210-4275-442-75-39	\$1,490,365	\$149,036.50	\$1,639,401.50

If Dominion proceeds with the IGA, all costs will be paid for by Dominion and reimbursed to Castle Rock's Water fund. In the unlikely event Dominion terminates, Castle Rock Water has adequate capital reserves to fund the project without Dominion.

Staff Recommendation

Staff recommends Town Council approval of the construction contract between the Town of Castle Rock and Hydro Resources - Rocky Mountain, Inc. for the drilling and completion of the Arapahoe Well CR-227 Project in the amount of \$1,490,365, plus a ten percent Town-managed contingency of \$149,036.50, for a total authorization of \$1,639,401.50.

Proposed Motion

"I move to approve the Resolution as introduced by title."

Attachments

Attachment A: Resolution
Exhibit 1: Contract
Attachment B: Map

RESOLUTION NO. 2018-004

RESOLUTION APPROVING A CONSTRUCTION CONTRACT WITH HYDRO
RESOURCES – ROCKY MOUNTAIN, INC. FOR THE
FOUNDERS ARAPAHOE WELL CR-227

WHEREAS, the Town of Castle Rock and Hydro Resources – Rocky Mountain, Inc. (“Hydro Resources”) have agreed to the terms and conditions by which Hydro Resources will undertake construction of the Founder’s Arapahoe Well CR-227 Drilling and Completion Project (“Project”).

NOW, THEREFORE BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF CASTLE ROCK AS FOLLOWS:

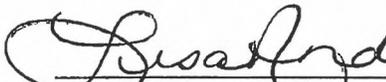
Section 1. Approval. The Construction Contract between the Town of Castle Rock and Hydro Resources in the form attached as *Exhibit 1* is hereby approved. The Mayor and other proper Town officials are hereby authorized to execute the Construction Contract by and on behalf of the Town of Castle Rock, Colorado.

Section 2. Encumbrance and Authorization for Payment. In order to meet the Town's financial obligation under the Construction Contract, the Town Council authorizes the expenditure and payment from expenditure account 210-4275-442.75-39, in an amount not to exceed \$1,490,365 to satisfy the contract requirements, plus a ten percent Town-managed contingency in the amount of \$149,036.50, for a total authorization in the amount not to exceed \$1,639,401.50, unless authorized in writing by the Town of Castle Rock.

PASSED, APPROVED AND ADOPTED this 2nd day of January, 2018, by the Town Council of the Town of Castle Rock, Colorado, on first and final reading by a vote of 7 for and 0 against.

ATTEST:

TOWN OF CASTLE ROCK

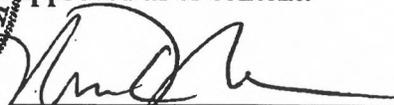

Lisa Anderson, Town Clerk

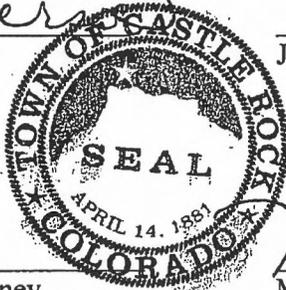

Jennifer Green, Mayor

Approved as to form:


Robert J. Slentz, Town Attorney

Approved as to content:


Mark Marlowe, Director of Castle Rock Water



**TOWN OF CASTLE ROCK
CONSTRUCTION CONTRACT**

THIS CONSTRUCTION CONTRACT (Contract) is made at the Town of Castle Rock, Colorado, between the Town of Castle Rock, Colorado (Town), a municipal corporation, 100 N. Wilcox Street, Castle Rock, Colorado 80104 and Hydro Resources – Rocky Mountain Inc., a Delaware corporation (Contractor) whose address is 13027 County Road 18, Unit C Fort Lupton, CO 80621.

In consideration of these mutual covenants and conditions, the Town and Contractor agree as follows:

SCOPE OF WORK The Contractor shall execute the entire Work described in the Contract.

CONTRACT The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, written or oral representations and agreements. The Contract incorporates the following Contract Documents. In resolving inconsistencies among two or more of the Contract Documents, precedence will be given in the same order as enumerated.

LIST OF CONTRACT DOCUMENTS

The Contract Documents, except for Modifications issued after execution of this Contract, are:

1. Change Orders;
2. Notice to Proceed;
3. Construction Contract;
4. The following Addenda, if any:

Number	1	Date	12/6/2017	Pages	7
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5. Special Conditions of the Contract:

Document	Title	Pages
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6. The following Specifications:

Town of Castle Rock Municipal Code
Well Drilling Specifications Founders Arapahoe
 7. The following Drawings:

Founders Arapahoe Well CR -227 Completion Design

 8. Notice of Award;
 9. Invitation to Bid;
 10. Information and Instructions to Bidders;
 11. Notice of Substantial Completion;
-

12. Notice of Construction Completion;
13. Proposal Forms, including Bid Schedules;
14. Performance, and Labor and Material Payment Bonds;
15. Performance Guarantee; and
16. Insurance Certificates.

CONTRACT PRICE. The Town shall pay the Contractor for performing the Work and the completion of the Project according to the Contract, subject to Change Orders as approved in writing by the Town, under the guidelines in the General Conditions. The Town will pay One Million, Four Hundred Ninety Thousand, Three Hundred Sixty-five and no/100 Dollars (\$ 1,490,365) (Contract Price), to the Contractor, subject to full and satisfactory performance of the terms and conditions of the Contract. The Contract Price is provisional based on the quantities contained in the (Bid) attached as Exhibit 1. The final Contract Price shall be adjusted to reflect actual quantities incorporated into the Work at the specified unit prices. The Town has appropriated money equal or in excess of the Contract Price for this work.

COMPLETION OF WORK. The Contractor must begin work covered by the Contract within 14 calendar days, and must complete work within 110-working days from and including the date of Notice to Proceed, according to the General Conditions. The Work should be completed by May 15, 2018.

LIQUIDATED DAMAGES. If the Contractor fails to substantially complete the Work by the date set for substantial completion in the Contract, or if the completion date is extended by a Change Order, by the date set in the Change Order, the Town may permit the Contractor to proceed, and in such case, may deduct the sum of \$500 for each day that the Work shall remain uncompleted from monies due or that may become due the Contractor. This sum is not a penalty but is a reasonable estimate of liquidated damages.

The parties agree that, under all of the circumstances, the daily basis and the amount set for liquidated damages is a reasonable and equitable estimate of all the Town's actual damages for delay.

The Town expends additional personnel effort in administering the Contract or portions of the Work that are not completed on time, and has the cost of field and office engineering, inspecting, and interest on financing and such efforts and the costs thereof are impossible to accurately compute. In addition, some, if not all, citizens of Castle Rock incur personal inconvenience and lose confidence in their government as a result of public projects or parts of them not being completed on time, and the impact and damages, certainly serious in monetary as well as other terms are impossible to measure.

SERVICE OF NOTICES. Notices to the Town are given if sent by registered or certified mail, postage prepaid, to the following address:

TOWN OF CASTLE ROCK
Town Attorney
100 N. Wilcox Street
Castle Rock, CO 80104

INSURANCE PROVISIONS. The Contractor must not begin any work until the Contractor obtains, at the Contractor's own expense, all required insurance as specified in the General

Conditions. Such insurance must have the approval of the Town of Castle Rock as to limits, form and amount.

RESPONSIBILITY FOR DAMAGE CLAIMS. The Contractor shall indemnify, save harmless, and defend the Town, its officers and employees, from and in all suits, actions or claims of any character brought because of: any injuries or damage received or sustained by any person, persons or property because of operations for the Town under the Contract; including but not limited to claims or amounts recovered from any infringements of patent, trademark, or copyright; or pollution or environmental liability. The Town may retain so much of the money due the Contractor under the Contract, as the Town considers necessary for such purpose. If no money is due, the Contractor's Surety may be held until such suits, actions, claims for injuries or damages have been settled. Money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that the Contractor and the Town are adequately protected by public liability and property damage insurance.

The Contractor also agrees to pay the Town all expenses, including attorney's fees, incurred to enforce this Responsibility for Damage Claim clause.

Nothing in the **INSURANCE PROVISIONS** of the **General Conditions** shall limit the Contractor's responsibility for payment of claims, liabilities, damages, fines, penalties, and costs resulting from its performance or nonperformance under the Contract.

STATUS OF CONTRACTOR. The Contractor is performing all work under the Contract as an independent Contractor and not as an agent or employee of the Town. No employee or official of the Town will supervise the Contractor. The Contractor will not supervise any employee or official of the Town. The Contractor shall not represent that it is an employee or agent of the Town in any capacity. **The Contractor and its employees are not entitled to Town Workers' Compensation benefits and are solely responsible for federal and state income tax on money earned.** This is not an exclusive contract.

THIRD PARTY BENEFICIARIES. None of the terms or conditions in the Contract shall give or allow any claim, benefit, or right of action by any third person not a party to the Contract. Any person, except the Town or the Contractor, receiving services or benefits under the Contract is an incidental beneficiary only.

INTEGRATION. This contract integrates the entire understanding of the parties with respect to the matters set forth. No representations, agreements, covenants, warranties, or certifications, express or implied, shall exist as between the parties, except as specifically set forth in this Contract.

DEFINITIONS. The Definitions in the General Conditions apply to the entire Contract unless modified within a Contract Document.

Executed this 2 day of January, 2018.

ATTEST:

TOWN OF CASTLE ROCK

Lisa Anderson
Lisa Anderson, Town Clerk

Jennifer Green
Jennifer Green, Mayor

APPROVED AS TO FORM:

APPROVED AS TO CONTENT

Robert J. Slentz
Robert J. Slentz, Town Attorney



Marlowe
Marlowe, Director of Castle Rock Water

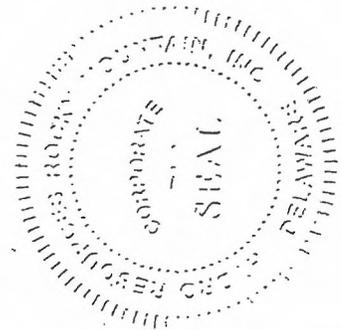
CONTRACTOR:

HYDRO RESOURCES - ROCKY MOUNTAIN, INC.,
a Delaware corporation.

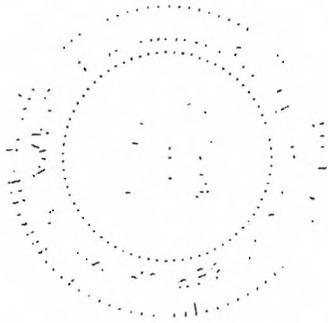
By: AM McWalter

Title: VP Operations

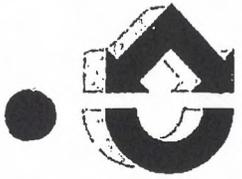
(Insert either the Corporate or Partnership Certificate, as appropriate)



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Hydro

resources - Rocky Mountain, Inc.

December 12th, 2017

To: Heather Justus, Town of Castle Rock

Re - Drilling Plan CR-227

Thank you for the consideration in this project, the following is the drilling plan for Castle Rock 227.

Drilling Plan

Drill conductor casing borehole with caission rig to 40'

Rig up Challenger 320 drilling rig equipped with 500BBL mud system and optional 200BB auxiliary tank

Drill 16" pilot hole using a mill tooth bit from GL to top of Arapahoe Formation, then switch to long tooth TCI (button bit) through the Arapahoe formation to maintain penetration rate

Geophysical Log borehole (NMR Option TBD)

Pick up 20" milltooth reamer and open hole from GL to top of Arapahoe Formation, then switch to long tooth TCI (button bit) through the Arapahoe formation to maintain penetration rate

Caliper log borehole

Install tremmi to TD of hole and circulate hole to maintain fluids and hole

Install casing, screen, gravel and cement

Note - LCM will be onsite for use IF needed upon approval of the owner and engineer

Thank you for the opportunity to provide pricing on this project

M. John Taylor
Regional Manager

Hydro Resources - Rocky Mountain, Inc.

**SECTION 00300
BID PROPOSAL**

PROJECT: Castle Rock Arapahoe Well CR-227

Place: Town of Castle Rock

Date: 12-12-2017

1. In compliance with your Invitation to Bid dated Nov. 30th, 2017, and subject to all conditions thereof, the undersigned Hydro Resources - Rocky Mountian, a Corporation incorporated in the State of Delaware, a _____, consisting of _____, an individual trading as _____ of the City of _____, State of _____, hereby proposes to furnish and do everything required by the Contract Documents to which this refers at the lump sum or unit prices shown for each Bid Schedule.
2. The undersigned bidder does hereby declare and stipulate that this proposal is made in good faith, without collusion or connection with any other person or persons bidding for the same Work, and that it is made in pursuance of and subject to all the terms and conditions of the Invitation to Bid and Instructions to Bidders, the Agreement, the Contract Drawings, and the Specifications pertaining to the Work to be done, all of which have been examined by the undersigned.
3. The undersigned has examined the location of the proposed Work, the Drawings, Specifications, and other Contract Documents and is familiar with the local conditions at the place where the Work is to be performed.
4. Accompanying this bid is a certified or cashier's check or standard bid bond in the sum of 5% Greatest amount bid (G.A.B.) (\$ 5% G.A.B.) in accordance with the Invitation to Bid and Instructions to Bidders.
5. The undersigned bidder agrees to execute the Agreement and a Performance Bond and a Payment Bond for the amount of the total of this Bid within ten (10) calendar days from the date when the written Notice of the Award of the Agreement is delivered to him at the address given on this Bid. The name and address of the corporate surety with which the Bidder proposes to furnish the specified Performance and Payment Bonds is as follows: Arch Insurance, Bowen, Miclette & Britt Agent - 1100 Poydras St.
New Orleans, LA 70163
6. All the various phases of Work enumerated in the Contract Documents with their individual jobs and overhead, whether specifically mentioned, included by implication or appurtenant thereto, are to be performed by the Contractor under one of the items listed in the Bid Schedule, irrespective of whether it is named in said list.
7. Payment for Work performed will be in accordance with the Bid Schedule subject to changes as provided in the Contract Documents.
8. The undersigned Bidder hereby acknowledges Addenda No. 1 through 1.
9. **BASE BID**

BID PROPOSAL

PROJECT: Founders Arapahoe Aquifer Well CR-227 Drilling and Completion Project

1. In compliance with your Invitation to Bid, and subject to all conditions thereof, the undersigned:

Hydro Resources Rocky Mountain, Inc.

a Corporation incorporated in the State of Delaware

-OR- _____, a partnership, / limited partnership, (*select one*), registered in the State of _____, whose general partner(s) is/are

-OR-

a sole proprietor, whose trade name is _____

in the Town of _____, State of _____, offers this Bid Proposal for the construction of all items listed at the prices shown on the following Bid Schedule. (*The attached Bid Schedule lists the various divisions of construction contemplated in the Plans and Specifications, together with an estimate of the units of each. With these units as the basis, extend each item, using the cost inserted in the unit column. Any total cost found inconsistent with the unit cost when the Bids are examined will be deemed in error and corrected to agree with the unit cost. Alternate Bids are optional.*)

2. The undersigned Bidder declares and stipulates that this Bid is made in good faith, without collusion or connection with any other person or persons bidding for the same Work, and that it is made subject to all the terms and conditions of the Invitation to Bids, Information and Instruction for Bidders, and Construction Contract General Conditions, the Agreement for a Construction Contract, the Technical Specifications, and the Plans pertaining to the Work to be done, all of which have examined by the undersigned.

3. Accompanying this Bid is a Bid Guarantee for 5% of the total Bid amount according to the Invitation to Bids and Information and Instructions to Bidders.

4. The undersigned Bidder agrees to execute the Agreement for a Construction Contract, a Performance Bond and a Labor and Material Payment Bond within ten days from the date when the written Notice of Award is delivered at the address given on this Bid Proposal. The Performance Bond and Labor and Material Payment Bond shall each be for the amount of the total of this Bid and shall be from the same surety. The name and address of the corporate surety through which the Bidder proposes to furnish the specified Bonds is as follows:

5. The submission of the Bid constitutes an agreement, and it shall not be withdrawn after the Bid Opening for a period of thirty days.

6. All the various phases of work enumerated in the Contract with individual jobs and overhead, whether specifically mentioned or not, are included by implication or appurtenance in the Contract. The Contractor shall perform all the various phases of work under one of the items listed in the Bid Schedule, irrespective of whether it is named in the Schedule.

7. Payment for the Work performed will be according to the Bid Schedule, subject to changes as provided in the Contract.

2017-08

8. The undersigned Bidder hereby acknowledges receipt of addenda numbers 1 through 1.

RETURN BID TO: TOWN OF CASTLE ROCK
UTILITES DEPARTMENT
175 Kellogg Court
Castle Rock, CO 80109

The undersigned, being familiar with the existing conditions on the project area affecting the cost of the Work and the Contract Documents, and having verified the quantities and the availability of materials and labor, hereby proposes to furnish all supervision, labor, materials, machinery, tools, appurtenances, equipment, supplies, and services, including utility and transportation service required to construct and complete the Project listed above, according to the Contract, within the time specified, and at the prices stated below. These prices are to cover all expenses incurred in performing the Work required under the Contract of which this Bid is a part.

(The approximate quantities of Work to be completed in-place under the Contract are identified in the Bid Schedule and are for the purpose of comparing Bids. These quantities have been estimated and the quantities used are for the general information of the Bidder, representing the major items of the Work to be done. Minor details are not listed but shall be part of the complete Contract.)

9. The undersigned agrees to hold firm the Bid for thirty days for the purpose of the Town reviewing the Bids and investigating the qualifications of the Bidders prior to award of Contract. Mutually agreed upon extensions of time may be made if necessary.

This proposal is submitted by:

CONTRACTOR: Hydro Resources Rocky Mountain, Inc.

BY: 

ADDRESS: 13027 County Road 18 Fort Lupton, CO 80621

TITLE: Region Manager

Attest:

SECRETARY: 
(if corporation)

DATE: December 12, 2017

BID SCHEDULE A
Arapahoe Well CR-227
Twelve-Inch Completion

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>EXTENSION</u>
1.	Wellhead Completion	L.S.	1	\$650.00	\$ 650.00
2.	Mobilization and Cleanup	L.S.	1	\$285,260	\$ 285,260.00
3.	Drilling 20.0-inch Diameter	L.F.	2,779	\$195.00	\$ 541,905.00
4.	Casing			\$N/A	\$ N/A
	a. 24-inch Diameter	L.F.	40	\$610.00	\$ 24,400.00
	b. 12-inch Diameter	L.F.	2,449	\$60.00	\$ 146,940.00
5.	Well Screen Assembly	L.F.	250	\$260.00	\$ 65,000.00
6.	Gravel Pack	L.F.	1,013	\$50.00	\$ 50,650.00
7.	Grout Seal	L.F.	1,766	\$35.00	\$ 61,810.00
8.	Well Development	HR.	52	\$720.00	\$ 37,440.00
9.	Geophysical Logging (resistivity, spontaneous potential, natural gamma, and caliper, at a minimum)	L.S.	1	\$9,730	\$ 9,730.00
10.	Well Pumping Test Tests Supply & Install Equipment	L.S.	1	\$52,540	\$ 52,540.00
	a. 8 - hour Step Test	L.S.	1	\$2,600	\$ 2,600.00
	b. 72- hour Pumping test	L.S.	1	\$23,400	\$ 23,400.00
11.	Disinfection	L.S.	1	\$2,420	\$ 2,420.00
12.	Video Survey	L.S.	1	\$2,230	\$ 2,230.00
13.	Video Survey - Additional Pass	L.S.	1	\$2,230	\$ 2,230.00

DRILLING TOTAL (IN WORDS) \$1,309,205.00 One million, three hundred, nine thousand, two hundred, five dollars and 00/100 cents *WTC*

MANDATORY ALTERNATE ITEMS (Must be bid)

REQUIRED ALTERNATE ITEMS

<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>EXTENSION</u>
GESC Permitting and Implementation	L.S.	1	<u>\$5,000</u>	<u>\$ 5,000.00</u>
Drilling Cuttings Removal	L.S.	1	<u>\$38,590</u>	<u>\$ 38,590.00</u>
Drilling Hourly Rate (Lost Circulation and Low Penetration Rate)	HR.	1	<u>\$650.00</u>	<u>\$ 650.00</u>
Drilling Mud/Fluids Removal	L.S.	1	<u>\$51,640</u>	<u>\$ 51,640.00</u>
Road Maintenance	L.S.	1	<u>\$5,000</u>	<u>\$ 5,000.00</u>
3 One hour Meetings with Facility Design Engineer	HR.	3	<u>\$250.00</u>	<u>\$ 750.00</u>
Water Supply provide backflow meter	Allowance	1	<u>\$ 10,000</u>	<u>\$ 10,000</u>
Sound Mitigation (325 linear feet of 16-foot high acoustical barrier)	L.S.	1	<u>\$69,530</u>	<u>\$ 69,530.00</u>

MANDATORY ALTERNATE ITEMS (Must be bid)

OPTIONAL ALTERNATE ITEMS (Will be decided before contract award)

<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>EXTENSION</u>
Filter Pack Alternative #1				
Sigmond Linder Glass Beads	M.T.	22	\$ <u>2,650</u>	\$ <u>58,300.00</u>
Gravel Pack	L.F.	703	\$ <u>55.00</u>	\$ <u>38,665.00</u>
Filter Pack Alternative #2				
Sigmond Linder Glass Beads	M.T.	68	\$ <u>2,650</u>	\$ <u>180,200.00</u>
Nuclear Magnetic Resonance Logging	L.S.	1	\$ <u>35,000</u>	\$ <u>35,000.00</u>
Gyroscopic Plumbness and Alignment Logging	L.S.	1	\$ <u>5,000</u>	\$ <u>5,000.00</u>
Zonal Water Sampling and Falling Head Tests	L.S.	7	\$ <u>20,600</u>	\$ <u>144,200.00</u>
Epoxy Coating (pump, discharge column pipes)	L.S.	1	\$ <u>236,350</u>	\$ <u>236,350.00</u>
MANDATORY ALTERNATE ITEMS TOTAL				\$<u>878,875.00</u>

MANDATORY ALTERNATE ITEMS SUBTOTAL (IN WORDS)

Eight hundred, seventy eight thousand, eight hundred, seventy five dollars and 00/100 cents ^{12/}

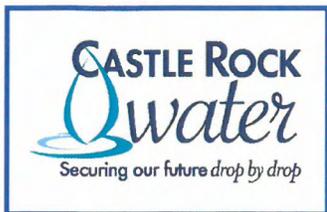
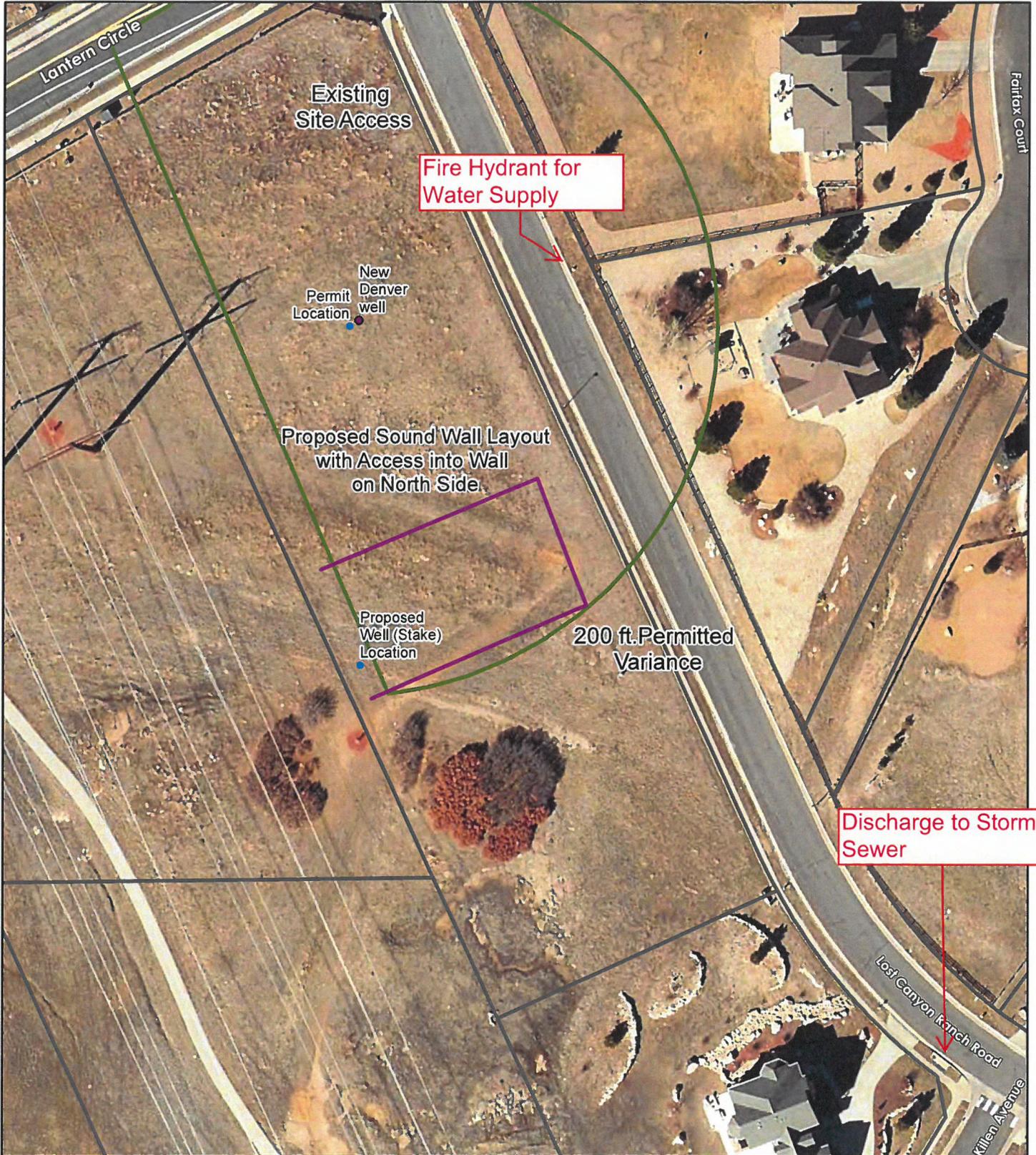
TOTAL PROJECT BID (IN WORDS)

Two Million, one hundred, eighty eight thousand, eighty dollars and 00/100 cents ^{00/}
(\$2,188,080.00)

Notes:

L.S. - Lump Sum
L.F. - Linear Feet
H.R. - Hours
M.T. - Metric Tons

Founders Wells



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