



Meeting Date: March 2, 2021

## **AGENDA MEMORANDUM**

**To:** Honorable Mayor and Members of Town Council

**From:** Mark Marlowe, P.E., Director of Castle Rock Water  
Matt Benak, P.E., Water Resources Manager  
Lauren Moore, Water Resources Program Analyst

**Title:** **Resolution Approving a Construction Contract with Applied Ingenuity, LLC. for the 2021 Denver Basin Wells Rehabilitation, Pumping Equipment Replacement, and Well Abandonment Project**

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### **Executive Summary**

The purpose of the resolution (see Attachment A) is to request Town Council approval of a Construction Contract (see Exhibit 1) with Applied Ingenuity for the 2021 Denver Basin Wells Rehabilitation, Pumping Equipment Replacement, and Well Abandonment Project. In 2016, Castle Rock Water started a planned well rehabilitation program. This program is designed to help maintain water production yields from our current deep well assets and to reduce the likelihood of emergency well failures. The program targets wells that are showing declines in well yield and/or have been identified as equipped with older pumping equipment. This program has proven successful over the past few years due to limited well failures during peak demand season, increased well efficiencies, decreased power consumption, as well as increases in well yield. The 2019-2020 rehab project included 5 wells and contributed to an increased well yield of approximately 36 million gallons over the past year.

In anticipation of drought conditions continuing throughout the summer months coupled with the relatively short window for rehabilitation this winter/spring, we have decided to split this project between two contractors in order to ensure the most efficient route to project completion prior to demand season. For Applied Ingenuity, we are targeting three Denver Basin wells for planned rehabilitation and equipment replacement. Castle Rock Water recommends approval of a construction contract with Applied Ingenuity, LLC. in the amount of \$480,421.00 plus a five percent Town-managed contingency in the amount of \$24,021.05 for a total project cost with Applied Ingenuity of \$504,442.05. Schedule is critical for this project given the need for these wells during irrigation season. Pump and motor equipment has been preordered under a purchase order approved by the Town Manager to expedite the construction schedule. Work will begin immediately upon contract approval and is scheduled for substantial completion by June 1, 2021.

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

Castle Rock Water Commission was informed of the project at their February 24, 2021 meeting and \_\_\_\_\_.

Notification and outreach efforts will include postcard mailers to nearby homes describing the project details such as location, dates, and work hours. Additionally, the project will be listed on the Castle Rock Water website.

## **Discussion**

It is important to keep our existing infrastructure operating in an efficient manner to ensure that peak water demands during the summer months can be met, without resorting to curtailment measures due to well failures. In order to do this, the Water Resources Division has established a yearly rehabilitation and equipment replacement program for priority deep Denver Basin wells. A formalized program will help mitigate emergency well services due to pumping equipment failure. This will be accomplished by identifying the wells that are showing declines in production due to biofouling and wells with older pumping equipment. Replacing older pumping equipment often provides the opportunity to resize equipment so that better well efficiency is achieved, potentially reducing the long-term costs to operate the wells. The following wells are identified for the 2021 Denver Basin Rehabilitation and Pumping Equipment Project: Arapahoe Aquifer Wells CR-39, CR-86, CR-73R, and CR-117. Denver Aquifer Wells CR-72R, CR-217, and CR-41. The combined daily production from the wells is 2.5 million gallons per day.

Castle Rock Water sent out an Invitation to Bid to four qualified contractors and four responded. The following table is a summary of the bids:

<b>Layne Christensen Co.</b>	<b>Applied Ingenuity, LLC</b>	<b>Colorado Pump Service &amp; Supply Co.</b>	<b>Hydro Resources</b>
\$916,848.00	\$1,060,811.38	\$1,005,027.41	\$1,208,059.50

The price sheet did include optional bid items most of which will not be included in the scope of work.

As mentioned in the executive summary, this project will be split among two contractors in order to have the rehabs completed prior to demand season this summer. Upon conversations with the bidders related to schedule and pricing, CRW Staff decided to move forward with Colorado Pump and Applied Ingenuity. While Layne Christensen was the initial low bidder, there were concerns about them meeting the short rehab window as well as pricing changes related to the request for an accelerated schedule. Colorado Pump is recommended for award of Wells 72R, 73R, 117, 81, and Well 31 abandonment. Applied Ingenuity is recommended for award of Wells 39, 41, and 217. Both contractors have worked with the Town for previous rehabs and are familiar with the Town's Well Rehabilitation Program. In addition, prior to this resolution and contract approval, advanced purchase orders were initiated. This was done in order to provide the contractors with monies to order the pump and motor equipment that has a lead time of up to 4 weeks. The equipment purchase order for Applied Ingenuity was in the amount of \$152,714.00 and approved under Town Manager authority. The equipment purchase order is included in the contract price for both Colorado Pump and Applied Ingenuity.

## **Budget Impact**

Funding for the project is available in the approved 2020 and 2021 Budgets. 2020 budget funds will be brought into 2021 as a carryforward for this purpose as the project was originally intended to be started in late 2020. Funding for the project will come from Accounts Repair and Maintenance - Wells 210-4250-442.40-37 (\$800,000 budgeted in 2021). The following table shows the breakdown of funding. Town staff will use the funds to complete rehabilitation and equipment replacement for this project. Applied Ingenuity's proposed fee is \$480,421.00. Staff requests an additional \$24,021.05 contingency be authorized for a total authorization of \$504,442.05.

<b>Project Account</b>	<b>Contract Amount</b>	<b>Contingency</b>	<b>Total Authorization</b>
210-4275-442.40-37 Repair & Maintenance – Wells – 2021 (Colorado Pump)	\$557,850.08	\$27,892.50	\$585,742.58
210-4275-442.40-37 Repair & Maintenance – Wells – 2021 (Applied Ingenuity)	\$190,236.37	\$24,021.05	\$214,257.42
210-4275-442.40-37 Repair & Maintenance – Wells – 2020 (Applied Ingenuity)	\$290,184.63	--	\$290,184.63
<b>TOTAL</b>	<b>\$1,038,271.08</b>	<b>\$51,913.55</b>	<b>\$1,090,184.63</b>

## **Recommendations**

Staff recommends Town Council approval of the construction contract with Applied Ingenuity, LLC. for the 2021 Denver Basin Wells Rehabilitation, Pumping Equipment Replacement, and Well Abandonment Project.

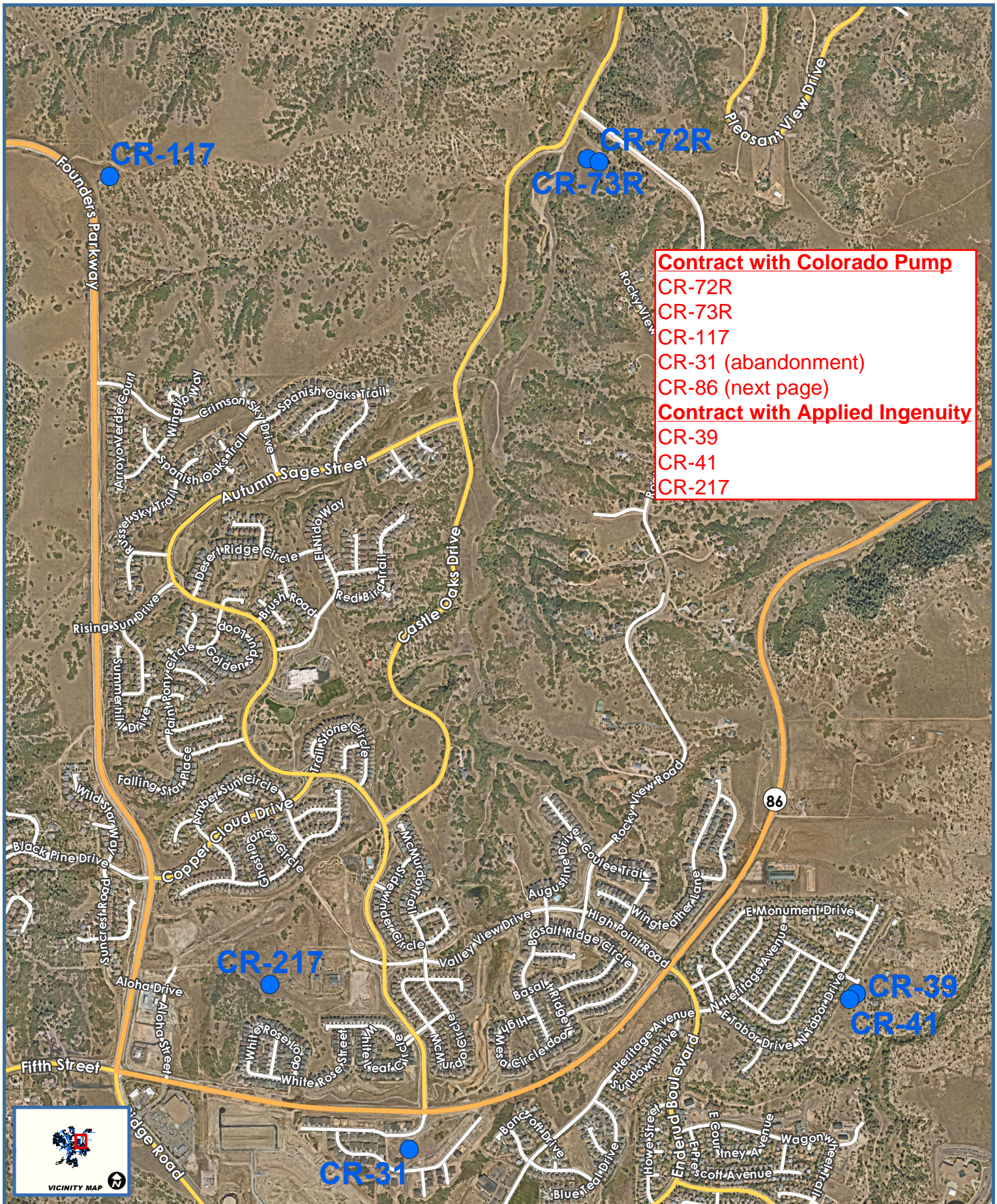
## **Proposed Motion**

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

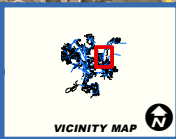
## **Attachments**

Attachment A: Resolution (Not Attached)  
Exhibit 1: Construction Contract (Not Attached)  
Attachment B: Location Maps





**Contract with Colorado Pump**  
 CR-72R  
 CR-73R  
 CR-117  
 CR-31 (abandonment)  
 CR-86 (next page)  
**Contract with Applied Ingenuity**  
 CR-39  
 CR-41  
 CR-217



0 700 1,400 2,800 Feet  
 Date: 2/10/2021 1 inch = 1,401 feet



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**CASTLE ROCK  
 UTILITIES MAP  
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