



Town of Castle Rock

Agenda Memorandum

Agenda Date: 8/21/2018

Item #: 21. **File #:** TMP 2018-624

To: Honorable Mayor and Members of Town Council

From: Mark Marlowe, P. E., Director of Castle Rock Water

Resolution Approving an Escrow Agreement between the Town Of Castle Rock, Plum Creek Water Reclamation Authority, Castle Pines Metropolitan District and Castle Pines North Metropolitan District for Construction Work Package #1 for the Plum Creek Water Reclamation Treatment Plant 3.0 MGD Expansion [4255 North U.S. Highway 85, Castle Rock]

Executive Summary

Castle Rock Water is seeking Town Council approval of a Resolution (**Attachment A**) for the Construction Work Package #1 Escrow Agreement (**Exhibit 1**) with Plum Creek Water Reclamation Authority (PCWRA), Castle Pines North Metropolitan District (CPNMD), and Castle Pines Metropolitan District (CPMD) for the wastewater treatment plant 3.0 million gallons per day (MGD) expansion. The agreement authorizes transfer of Town funds in the amount of \$ \$11,834,638 for Construction Work Package #1 of the expansion. This will allow PCWRA to amend the existing Guaranteed Maximum Price Construction Contract (GMPCM) with Moltz Construction, Inc. (Moltz) with the scope of construction work in Work Package #1. The scope of work included in Work Package #1 includes primarily treatment process equipment procurement, earthwork, site utilities, demolition, and electrical work. Design specifications for treatment process equipment have been completed and lead time for procurement of this equipment is significant. Authorizing Construction Work Package #1 will allow process equipment procurement and early site work to begin while the design team is completing the remaining design and permitting for the project. It is anticipated that Work Package #2 will contain the remaining scope for the project and be contracted in early 2019, with substantial completion of the expansion targeted for August 2020.

Design of the plant expansion began in August 2017 and thirty percent design documents were completed in early 2018. Through a publicly advertised Request for Qualifications (RFQ) and Request for Proposal (RFP) process, Moltz was selected by PCWRA and Town staff to provide Construction Management/General Contractor (CM/GC) services for the proposed expansion through a Guaranteed Maximum Price (GMP) contract. PCWRA subsequently contracted with Moltz for preconstruction services in the amount of \$70,363 and an Initial Guaranteed Maximum Price (IGMP) of \$32,196,804 was established for the project. In a preconstruction role, Moltz has been providing construction cost estimating, constructability reviews, construction scheduling, work sequence planning, value analysis and review of alternate systems, permit assistance, and procurement planning for long-lead items. As Construction Manager/General Contractor (CM/GC), Moltz will

competitively bid the scope of construction work for each work package, which will determine the Final Guaranteed Maximum Price (FGMP) contract amounts for Work Package #1 and #2. The combined FGMP contracts for the project should be within the established overall IGMP.

The Town and PCWRA are drafting an agreement for expansion of the treatment facility. Design and construction costs related to expansion of the plant (including Moltz's preconstruction services) will be equitably shared by PCWRA members benefiting from the plant expansion. The expansion agreement will outline cost-share responsibilities of each member. Total project costs, including design, construction and permitting, are estimated at \$34,595,737. The Town's overall share of the total project costs is estimated at \$29,439,679 (85.1 percent).

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

On June 20, 2017, Town Council was briefed on the PCWRA 2017 Capacity Study Update and the need for expansion of the treatment plant.

On August 23, 2017, the Castle Rock Water Commission unanimously voted to recommend Town Council approval of a Resolution approving a Professional Services Agreement between PCWRA and Burns and McDonnell Engineering Co., Inc. (Burns and McDonnell), for the design of the PCWRA plant expansion.

On September 5, 2017, Town Council voted to approve and fund a Professional Services Agreement between PCWRA and Burns and McDonnell for the Design of the PCWRA Plant Expansion in amount of \$1,317,414.

On March 26, 2018, the PCWRA Board approved entering into contract negotiations with Moltz for preconstruction services for the three MGD Capacity Expansion, in the amount of \$70,363, contingent upon Town of Castle Rock funding approval.

On May 18, 2018 the Town Manager's Report provided a project update to council regarding selection of Moltz for CM/GC services for the three MGD Capacity Expansion.

On July 25, 2018 the Castle Rock Water Commission voted unanimously to recommend Town Council approval of a Resolution approving Construction Work Package #1 Escrow Agreement with PCWRA and CPNMD in the amount of \$13,907,353. Note that this amount represented the Town's share before the PCWRA entities approved in principle the cost sharing split.

Discussion

Castle Rock Water has been planning for a capacity expansion of the PCWRA wastewater treatment facility since 2015. A 2017 capacity update study revealed that an expansion of three million gallons per day (MGD) of average day capacity may be needed as early as 2020, with construction beginning in late 2018 to meet Colorado Department of Public Health and Environment (CDPHE) regulations. Original conceptual level estimates for the expansion were in excess of \$47 million.

Design of the plant expansion began in August 2017, with award of the design contract to Burns and

McDonnell in the amount of \$1,317,414. Burns and McDonnell staff completed thirty percent design documents in early 2018. The design includes improvements that will increase the rated hydraulic and treatment capacity of the plant from 6.44 MGD to 9.44 MGD. The design encompasses significant improvements to the plant headworks, tertiary filtration, ultra violet (UV) disinfection, and solids handling systems. Burns and McDonnell's thirty percent design preliminary conceptual cost opinion was approximately \$34 million.

In order to meet the accelerated schedule while delivering a quality-constructed project that maximizes value, staff recommended project delivery utilizing Guaranteed Maximum Price Construction Management (GMPCM). The GMPCM method involves hiring a construction manager/general contractor (CM/GC) to perform contract administration and guarantee a maximum price for the complete project. The owner and CM/GC agree on the price before the construction phase begins. Once construction starts, all work is awarded through a competitive subcontractor bidding process. The owner, CM/GC, and Engineer work collaboratively to design a project that fits a given budget and adjustments to the project design and/or budget are made during the design phase to ensure a successful project that meets the owner's expectations regarding cost, quality and schedule. The CM/GC's expertise in construction, contracting, and estimating can influence decisions made by the design consultant to keep project costs to a minimum in a manner consistent with the owner's objectives for quality and functionality. Through a publicly advertised Request for Qualifications (RFQ) and Request for Proposal (RFP) process, Moltz was selected by PCWRA and Town staff as the top-ranked contractor to provide Construction Management/General Contractor (CM/GC) services for the proposed expansion.

PCWRA and Town staff worked with Moltz to refine the budgetary construction estimate into an Initial Guaranteed Maximum Price (IGMP) for the project. The IGMP includes the cost of general conditions, overhead and profit, and the direct cost to do the work. PCWRA, Moltz, and the Town worked together to develop an agreed upon IGMP for the work based upon the thirty percent design documents. The agreed upon IGMP for the project was \$32,196,804. This amount was finalized prior to execution of the CM/GC services contract between PCWRA and Moltz. The scope of services authorized by the contract was preconstruction services only, with a not-to-exceed fee of \$70,363. The agreed upon IGMP serves as the budgetary target for the remainder of the design process.

Burns and McDonnell completed sixty percent design documents in May 2018. Moltz's updated sixty percent construction budgetary estimate was \$33,359,726. This represents a 3.6 percent increase over the original IGMP. The design team is working on ninety percent design documents, and is committed to keeping actual construction costs for the expansion within the original IGMP amount.

In order to keep the project on schedule, the design team has recommended separating the project construction into two work packages. Construction Work Package #1 will be to primarily process equipment procurement from vendors along with early site grading, utilities, demolition, and electrical work. The design documents for this scope of work are nearing completion and the equipment has relatively long procurement lead times. Contracting Construction Work Package #1 will allow equipment procurement and early site work to begin while the design team is still completing design and permitting for the balance of the project. The balance of the project scope is anticipated to be included in Work Package #2. This process will also allow the Town to allocate funds for Work Package #1 and Work Package #2 that are within the established budgets for 2018 and 2019.

Moltz's estimated construction cost for Work Package #1 is \$13,907,353 (**Attachment B**).

A Design Escrow Agreement executed between the Town and PCWRA in September 2017 previously transferred \$1,317,414 from the Town to a PCWRA-managed escrow account for Burns and McDonnell's design contract with PCWRA. A Preconstruction Escrow Agreement executed between the Town and PCWRA in April 2018 previously transferred \$70,363 to a PCWRA-managed escrow account for Moltz's preconstruction contract with PCWRA. The Town will recover some of these costs as part of the cost sharing agreement.

The Construction Work Package #1 Escrow Agreement (**Exhibit 1**) will allow transfer of funds in the amount of \$11,834,638 to a dedicated PCWRA-managed escrow account. As Burns and McDonnell completes design documents for the scope of work outlined in Construction Work Package #1, Moltz will solicit competitive bids for the work. The cost of the work, along with Moltz's previously established general conditions and fee percentage for the project, will determine the FGMP contract amount for Construction Work Package #1. PCWRA will subsequently retain Moltz (via contract amendment) for Construction Work Package #1. A similar process will be employed for Work Package #2.

Budget Impact

Funding for this project is included in the 2018 budget under PCWRA Capacity Expansion. Upon approval, \$11,834,638 will be transferred to the PCWRA Capacity Expansion Work Package #1 Construction Escrow.

Project	Account Number	Current Balance	Transfer Amount
PCWRA Capacity Expansion	213-4575-445.78-79	\$ 16,508,501	\$ 11,834,638

The Construction Work Package #1 Escrow Agreement obligates the Town to deposit funds authorized for the project into an escrow account maintained by PCWRA. Funds held in the escrow account will be released for payment of Moltz's construction invoices after review and approval in writing by the Town, CPNMD, CPMD, and PCWRA representatives. The established IGMP for construction of the plant expansion is \$32,196,804. It is currently anticipated that the construction contract will be amended with the remainder of project construction scope as Work Package #2 in early 2019. PCWRA, Burns and McDonnell, and Moltz are contractually obligated to work together to keep the project construction costs within the established IGMP. Other anticipated costs outside of Moltz's GMP contract will include construction phase engineering services, permitting fees, utility service upgrades, construction testing services, and other miscellaneous construction costs necessary for the expansion. These costs are currently estimated at approximately \$2 million.

The PCWRA Board is working with Castle Rock Water on an expansion cost-sharing agreement that will establish the escrow account for the construction funding. The agreement will outline the cost responsibilities of all PCWRA entities participating in the plant expansion, as well as any repayment terms and conditions necessary. Per the tentative cost sharing agreement, Castle Rock Water's share of the total project costs are estimated at 85.10 percent (\$29,439, 679), allocated between ten

percent to existing customers to cover the costs of improvements, and ninety percent to new customers (recovered through system development fees) to cover the costs of capacity expansion. Castle Rock Water's share of the 3.0 MGD capacity expansion is 86.3 percent, or 2.59 MGD. A summary of the cost split estimates has been provided (**Attachment C**).

Staff Recommendation

Staff requests Council approval of the Construction Work Package #1 Escrow Agreement with Plum Creek Water Reclamation Authority (PCWRA) and Castle Pines North Metro District (CPNMD), Castle Pines Metro District (CPMD), and others, in the amount of \$11,834,638.

Proposed Motion

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

Attachments

Attachment A:	Resolution
Exhibit 1:	Escrow Agreement
Attachment B:	Moltz Construction Cost Estimate
Attachment C:	Summary of Cost Split Estimates