

Invitation for Bid No. 24-06:

Lower Artichoke Reservoir Dam Spillway Protection Project

Addendum #2

Under the provisions of Part 1.08 of Section 00020, Instructions to Bidders, Bidders are informed that the Bidding Documents for the above-mentioned Project are modified, corrected, and/or supplemented as follows. Addendum No. 2 becomes part of the Bidding Documents and Contract Documents.

Acknowledge receipt of this addendum by inserting its number in Section 00030, Part B of the Form for General Bid. Failure to acknowledge receipt of the Addendum may subject the Bidder to disqualification.

Questions During the Pre-Bid Conference September 6, 2023:

The following are questions asked during the Pre-Bid Site Walk. PLEASE READ ALL ANSWERS AS SOME ANSWERS ELABORATE ON THE ANSWERS GIVEN AT THE PRE-BID. Therefore, these answers supersede any and all answers given during the Pre-Bid. These answers are hereby made part of the Contract Documents.

Q1: If the Project provides one year to perform the work, can we perform the work anytime during that timeframe?

A2: The duration of the Project has been reduced. The Contract will expire on June 1, 2024. The Contractor is expected to perform this work as soon as possible upon receipt of the Notice to Proceed. The City is planning to provide the NTP in November so if weather permits, substantial completion can occur before the end of this calendar year and the final cleanup and slope stabilization can be in the spring of 2024. See Items 2-1, 2-2, and 2-3 below.

In addition, the Contractor is hereby required to expedite the work by controlling the water level in the reservoir, if and as necessary, in order to substantially complete the work as soon as practicable. See Items 2-4, 2-5, and 2-6 below.

Q2: Do we clear all of the trees along the entire earthen berm on the West Newbury side (as shown on the NOI Drawings submitted to the WN ConCom)?

A2: No. Only remove trees within the confines of the stone ramp and stone side slopes (i.e. the limits of work). The 3-4 trees on the top of the earthen berm next to the spillway sidewall shall remain because their base is at elevation 12. The Contractor shall coordinate tree removal with the Engineer prior to performing the work.

Construction equipment access to the earthen berm on the West Newbury side shall be from the Newburyport side only. However, the Contractor can access that western berm area by foot from the WN Water Supply Wellfield driveway, provided a 24-hour advance notice is provided.

The Contractor is allowed to drag felled trees along the newly constructed portions of the stone foundation in order to remove them but cannot unload them from the WN side because of the wetlands. This access restriction shall include the earthworks

required to raise the earthen berm to elevation 12 on the West Newbury side – construction equipment access shall be over the newly constructed stone foundation.

The Contractor shall cut the trees at ground level and leave the stumps. Do not remove stumps as this will undermine the dam. The stone ramp can be installed on top of and/or around these stumps. The following trees were identified for removal and this work shall be included in the lump sum bid price:

<u>Size (DBH)</u>	<u>Qty.</u>
<2" shrub vegetation:	100 sf
4"-6" DBH:	17
8"-12" DBH:	5
20" DBH:	1

Contract Document Revisions

The following changes shall be made part of the Contract Documents:

Item 2-1 Section 00010 – Invitation to Bids

Delete "This contract will be effective on the date specified in a Notice to Proceed and will expire 1 year from the date of the Notice to Proceed" and **replace** it with "This contract will be effective on the date specified in a Notice to Proceed and will expire on June 1, 2024.

Item 2-2 Section 00020 – Instructions to Bidders, Part 1.20

Delete "This contract will be effective on the date specified in a Notice to Proceed and will expire one year thereafter" and **replace** it with "This contract will be effective on the date specified in a Notice to Proceed and will expire on June 1, 2024.

Item 2-3 Section 00030 – Form for General Bid, Part A

Delete "This contract will be effective on the date specified in a Notice to Proceed and will expire one year from that date" and **replace** it with "This contract will be effective on the date specified in a Notice to Proceed and will expire on June 1, 2024.

Item 2-4 Section 00030 – Form for General Bid, Part J

Delete Section 00030, Part J – Bid Schedule in its entirety and **replace** with attached.

Item 2-5 Section 01290 – Application for Payment

Delete Section 01290 in its entirety and **replace** with attached.

Item 2-6 Section 01571 – Control of Water

Add attached Section 01571, Control of Water, in its entirety.

Item 2-7 Attachment B – Conservation Commission Order of Conditions – Newburyport and West Newbury

Add attached letter from Town of West Newbury, Conservation Commission, to Jon-Eric White, City of Newburyport, dated September 27, 2023, Re: Insignificant Change Approval – Time of Year Restriction, in its entirety. All references to *Attachment B* throughout the Contract Documents shall hereby include this insignificant change approval to the West Newbury Order of Conditions and the Contractor shall comply with the conditions outlined therein.

For clarity purposes, Item 2, the Contractor is allowed to remove the trees beneath the stone ramp and stone side slopes in order to construct said ramp and side slopes. All other trees *beyond* the confines of the ramp and side slopes shall not be touched.

J) **BID SCHEDULE**

BID PRICE FORM

Item #	Item With Unit Price Written in Words	Est. Qty.	Unit Price (in Figures)	Subtotal Amount (in Figures)
1	Spillway Protection Project, per lump sum, for all work other than that covered under Item 1A and 1B At _____ dollars and _____ cents	1		
1A	1-1/2" Crushed Stone, per ton At _____ dollars and _____ cents	90		
1B	Water Control System, per lump sum At _____ dollars and _____ cents	1		

SECTION 01290

APPLICATION AND CERTIFICATE FOR PAYMENT

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Definition and description of measurement and payment to be used for the Work
 - 2. Payment procedures
- B. Related Requirements
 - 1. Section 01295 - Schedule of Values

1.2 GENERAL

- A. The following paragraphs describe payment procedures for the work to be done under the respective items in the Bid Form.
- B. Each lump sum and unit price will be deemed to include an amount considered by the Contractor to be adequate to cover the Contractor's overhead and profit for each separately identified item.
- C. Except as provided for in Section 01295, no separate measurement or payment will be made for Work called for in Division 0 or Division 1 of the Contract Specifications, unless specifically covered under the Bid items listed below. All costs associated with this Work will be considered incidental to the Contract Bid price.
- D. Division 2 Work will be measured and paid for at the Contractor's unit Bid price or lump sum Bid price as indicated on the Bid form. Those payable Work items, and related prices as Bid, will be the basis for all compensation to the Contractor for Work performed under this Contract. Work not specifically included as a Bid item, but which is required to properly and satisfactorily complete the Work is considered ancillary and incidental to the Bid item Work, and payment for such Work is considered to be included in the values as Bid for payable items. Compensation for all unit Bid price Work will be made based on the measured quantity of Work under the appropriate Bid items.

1.3 LUMP SUM ITEMS

- A. Each lump sum price stated in the Bid form shall constitute full compensation for all labor, equipment and materials necessary and required to complete the work specified under that particular item, and also all costs for doing related work as set forth in the Contract Documents or implied in carrying out their intent.
- B. Item 1 - Lower Artichoke Reservoir Dam Spillway Protection
 - 1. Measurement
 - a. There will be no measurement of quantities for lump sum items. Periodic partial payments for this Work, included under the Agreement, shall be based on the percent completion of each work item listed in the Schedule of Values provided under Section 01295 estimated by the Contractor and approved by the Engineer.

2. Payment

- a. The lump sum payment shall be full compensation for furnishing all labor, materials, tools, equipment, and services necessary for the construction of the Lower Artichoke Reservoir Dam Spillway Protection Project excluding Item 1A and Item 1B, in their entirety as detailed in the Contract Documents.

C. Item 1B – Water Control System

1. Measurement

- a. There will be no measurement of quantities for this lump sum item.

2. Payment

- a. Payment of the Bid price for the water control system will be full compensation for designing, furnishing, hauling, installing, maintaining, and removing, and include all labor, equipment, and materials required for or incidental to the Work.

1.4 UNIT PRICE ITEMS

- A. Each unit price stated in the Bid form shall constitute full compensation for all labor, equipment and materials necessary and required to complete the Work specified under that particular item, and also all costs for doing related work as set forth in the Contract Documents or implied in carrying out their intent.

- B. Payment of the unit price items will only be made for the actual quantity of Work performed in accordance with the Contract Documents.

C. Item 1A – 1-1/2” Crushed Stone

1. Measurement

- a. Measurement for 1-1/2” crushed stone will be on a per ton basis. Measurement shall be based on the truck weight slips.
- b. Crushed stone shall only be used if necessary as directed by the Owner.

2. Payment

- a. Payment of the Bid price for 1-1/2” crushed stone will be full compensation for furnishing, hauling, placing, spreading, and compacting, and include all labor, equipment, and materials required for or incidental to the Work.

1.5 PROCEDURES

- A. Informal submittal: Unless otherwise directed by the Engineer:

- 1. Make an informal submittal of request for payment by providing a draft of EJCDC C-620, Contractor’s Application for Payment, plus continuation sheet or sheets.
- 2. Make this preliminary submittal to the Engineer at the last regular job meeting of each month.
- 3. Revise the preliminary submittal as approved by the Engineer and incorporate the approved payments into the formal submittal.

B. Formal submittal: Unless otherwise directed by the Engineer:

1. Make formal submittal of request for payment by filling in the agreed data, by typewriter or electronically on EJCDC C-620, Contractor's Application for Payment, plus continuation sheet or sheets.
2. Sign and notarize the Application for Payment.
3. Submit the original of the Application for Payment, plus six identical copies of the continuation sheet or sheets, to the Engineer.
4. The Engineer will compare the formal submittal with the approved informal submittal and, if acceptable, will sign the Contractor's Application for Payment, and present the Application to the Owner.
5. Provide a signed and notarized Certificate for Stored Materials and proof of storage in a dry, watertight, heated and insured warehouse facility.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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SECTION 01571

CONTROL OF WATER

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes requirements for the control of surface water, including
 - 1. Water Level Control/Drawdown
- B. Related Requirements
 - 1. Section 01570 – Temporary Controls
 - 2. Section 02315 – Excavation, Backfill, Compaction and Dewatering

1.2 SUBMITTALS

- A. Informational Submittals
 - 1. The following may be separate documents or combined into one plan.
 - a. Water Control Plan, including description of approach, plans, location, materials, size, methods, phasing, calculations, and specifications for the control of water, dewatering of/removal of water from reservoir area.

1.3 PROJECT CONDITIONS

- A. Bathymetric Data
 - 1. A bathymetric survey was performed by Hancock Associates in February 2020 and is included in the drawings.
- B. Estimated Flow Rates
 - 1. The following flow information for the inflow to the Lower Artichoke Reservoir has been obtained from the United States Geological Survey StreamStats.

Percentage of Time Flow is Exceeded	Flow Rate (cfs)	Prediction Interval Lower (cfs)	Prediction Interval Upper (cfs)
50	6.05	3.14	11.6
60	4.32	2.25	8.26
70	2.60	1.29	5.17
75	2.01	0.995	4.01
80	1.53	0.74	3.12
85	1.11	0.506	2.39
90	0.793	0.342	1.80
95	0.452	0.175	1.13
98	0.291	0.0965	0.831

Percentage of Time Flow is Exceeded	Flow Rate (cfs)	Prediction Interval Lower (cfs)	Prediction Interval Upper (cfs)
99	0.213	0.0662	0.644

2. The following are flow rate estimates over the spillway based on depth of flow. Flows are estimated using the weir equation with a coefficient = 3.0 and a weir length of 80 feet.

Depth of Flow Over Spillway (in)	Estimated Flow Rate (cfs)
1	5.8
2	16.3
3	30.0
4	46.2
5	64.5
6	84.9

C. Estimated Flood Characteristics

1. The following flood flow information for the inflow to the Lower Artichoke Reservoir has been obtained from the United States Geological Survey StreamStats.

Storm Frequency	Flow (cfs)
2-year flood	94.3
5-year flood	154
10-year flood	200

D. Design Criteria

1. Provide a suitable water control system consisting of a siphon or multiple siphons sized adequately to perform a drawdown and control water for normal flows and small rainfall events that will occur routinely during construction.
 - a. Contractor shall be responsible for selection of the flow rate and number of siphons for design of the water control system; however, the water control system shall be designed to draw down the reservoir to at least 2 inches below the spillway crest, but not more than 12 inches, within 7 days of commencement of drawdown and then maintain that range of reservoir level throughout the duration of construction.
 - b. Contractor shall be responsible for controlling flows generated by up to a 1-year storm event.
 - c. The intake of the siphon(s) shall be fully submerged as to not create a vortex allowing air to enter the siphon and the invert shall be at least one

foot above the reservoir bottom to prevent mobilizing soils into the siphon, thereby, creating turbidity downstream. Contractor to field verify reservoir depth and locate intake accordingly.

- d. To dissipate the erosive forces of the discharge and to minimize the potential of air entering the siphon, the discharge of the siphon(s) shall include either:
 - 1) A vertical bend at the discharge, or
 - 2) The discharge shall be fully submerged by at least one foot and the invert shall be at least one foot above the bottom of the downstream water body. Contractor to verify downstream water depth and locate the discharge accordingly.

PART 2 PRODUCTS

2.1 TEMPORARY WATER CONTROL SYSTEM

- A. Provide an efficient temporary water control system to allow safe execution of the work under this contract.
- B. Water control system shall be comprised of a siphon system.
 - 1. The size and number of siphons shall be designed by the Contractor.
 - 2. Material used for the siphon shall be resistant to damage caused by vacuum pressures. Corrugated HDPE pipe is not permitted.

PART 3 EXECUTION

3.1 TEMPORARY WATER CONTROL SYSTEM

- A. Furnish, install, and remove a safe temporary water control system.
- B. Water control system shall be installed on the west dam embankment. Water control system shall be installed on the surface of the embankment. No excavation into the embankment shall be performed.
- C. The water control system shall be installed in a manner to prevent discharge of turbidity.

3.2 MAINTENANCE

- A. Continuously monitor the water control system, including weekends, for evidence of leakage, reduction in flow, or air intrusion throughout use. The water control system shall be maintained in good working order as necessary for the safety of workers and the protection of the permanent work.

3.3 FLOODING

- A. Monitor weather and weather related events to anticipate if flood control activities are anticipated. If flooding is anticipated, suspend construction operations, remove equipment which could be damaged, and take such actions and perform such additional work as approved by the Owner to protect the work and prepare the area for flooding.

END OF SECTION

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TOWN OF WEST NEWBURY

CONSERVATION COMMISSION

381 Main Street, West Newbury, Mass. 01985

TEL: 978-363-1100 x126 EMAIL: conservation@wnewbury.org

September 27, 2023

Jon-Eric White
City of Newburyport, Department of Public Services
16C Perry Way
Newburyport, MA 01950

Re: Insignificant Change Approval – Time of Year Restriction, Lower Artichoke Spillway – 0 Middle Street Parcel R27-31, West Newbury, MA, DEP File #078-0749

Dear Mr. White,

During a regularly scheduled and duly posted meeting of the West Newbury Conservation Commission held on Monday September 18, 2023 the Commission reviewed a request for insignificant change relative to Order of Conditions DEP File #078-0749 for construction of a stone foundation along the upstream side of the Lower Artichoke reservoir spillway and removal of trees along the dam embankment at the Lower Artichoke Spillway – 0 Middle Street Parcel R27-31, West Newbury, MA.

The insignificant change request sought to modify Standard Condition 19 of the Order of Conditions to waive the time of year restriction requiring work to stop between October 15, 2023 and April 15, 2024 to allow for the installation of the stone foundation between November 2023 and March 2024.

The Conservation Commission voted unanimously to approve this insignificant change request subject to the following conditions:

1. The WNCC authorizes the Conservation Agent with full powers to act on its behalf to administer and enforce Conditions of the Order of Conditions and this approval letter during the waived time of year restriction period between October 15, 2023 and April 15, 2024;
2. The stone foundation is the only work approved to be waived from the time of year restriction in Standard Condition 19 of the Order of Conditions. All other work, including tree removal on the earthen dam, are subject to the time of year restriction;
3. A preconstruction meeting attended by, at a minimum, the West Newbury Conservation Agent, the representatives of the project from the City of Newburyport, the contractor and any subcontractors hired to do the work shall be held prior to the start of any work;
4. Notice of at least 72-hours shall be given to the Agent before the start of any work;
5. The Agent shall have the full authority to review and monitor the site before and during work and the full authority to make a determination that the site conditions do not warrant the work to commence or to continue if the site conditions change and work is already underway;
6. If any dewatering is needed, it shall be done by a siphon system similar to the one shown in the attached detail dated 09/18/2023. Dewatering activities shall be discussed and agreed upon with the Conservation Agent prior to the commencement of any dewatering activities.

Please keep this letter as part of your file.

Sincerely,

Michelle Greene, Conservation Agent



Valve or Check Valve

Fill Port

Valve

Typical Siphon

Being proposed by Newburyport DPS to lower the water level at the Lower Artichoke Dam in order to construct the stone foundation spillway protection system.
SEPT. 18, 2023