

WORK CHANGE DIRECTIVE NO.: 2

Owner: Town of Erie

Engineer: HDR Engineer, Inc.

Contractor: Geo-Solutions, Inc.

Project: Erie Lake Dam Seepage Rehabilitation

Contract Name: N/A

Date Issued: May 8, 2026

Owner's Project No.: P22-91

Engineer's Project No.: 10405834

Contractor's Project No.: N/A

Effective Date of Work Change Directive: May 8, 2026

Contractor is directed to proceed promptly with the following change(s):

Description:

Contractor to provide cost and schedule impacts, to place Low Permeability Fill and crusher fines to raise the crest of Erie Dam to elevation 5236.9 feet. This will require work to be performed beyond the existing work area. Raising the crest will include continuing the existing slopes upward and will result in a narrower crest. When possible, the final crest width shall not be narrower than 13.4 feet in accordance with CO Dam Safety, Rules and Regulations for Dam Safety and Dam Construction Rule 7.4.2.1.1. Exploration by HDR indicates that the crest of the dam has approximately 1.6 inches of existing crusher fines. Two sections are expected to require construction to maintain Low Permeability Fill below the residual freeboard elevation of 5235.9 (1 foot below crest). See the attached drawings

1) Section 1 – Proposed Design for Existing Grade \geq 5236.1 feet

2) Section 2 – Proposed Design for Existing Grad $<$ 5236.1 feet.

It is estimated that Section 1 will be constructed over approximately 3,370 feet and Section 2 will be constructed over 800 feet.

Section 1 construction will consist of adding crusher fines from existing grade to the new nominal crest elevation of 5236.9 feet except for the downstream 4 feet as shown in Detail 01 on Sheet C-07 (replicated in attachment). Crusher fines placement will continue into the required 6 inches of crusher fines included as part of raise.

Section 2 construction will require removing the existing crusher fines on the dam crest prior to placing Low Permeability Fill from the borrow area and then the rest of Detail 01 on Sheet C-07.

The crest will not be raised at the location where the concrete boat ramp and concrete walkway located near Dam Stations 44+00/0+00 on the attached drawings (Note: this stationing is different than stationing on the sealed design drawings). Existing concrete and manholes in this vicinity will not be modified. The earthen areas adjacent to the concrete will be raised at a 2H:1V (horizontal to vertical) slope to the proposed crest elevation 5236.9 feet to minimize the width of the low spot.

The crest width varies around the perimeter of Erie Lake. In areas such as the spillway where the crest is relatively wide, the entire width of the crest does not need to be raised. The minimum crest width is required to be 13.4 feet of width and constructed to a minimum elevation of 5236.9 feet and graded to the surrounding area. The existing bench, signs, trash cans, and other features in this area are not to be disturbed. In areas where the crest is narrower than 13.4 feet the Engineer will work with the Contractor to field fit acceptable slopes to construct an acceptable crest width.

Existing manholes and piezometer vaults exist along the dam crest as shown on the attached drawings. Of these structures, piezometer HDR-24-9 will require modification to extend the

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piezometer to the new crest elevation. Other structures are at the required final grade or will require field fit grading of crusher fines to the structure.

Quantities:

This directive requires a contract amendment due to changing of quantities for Bid Items 5a, 7 and 11. New bid items are required for Bid Item 13 for removing existing crusher fines plus Bid Item 14 for the existing piezometer raise.

Contractor to provide an existing conditions survey and as-built survey to support measurement and payment.

As stated in Article 7.07 of M-Special Provisions in the RFP, "When a major item is increased to more than 125% or decreased below 75% of the original quantity stated on the Bid Schedule, the unit Bid price shall be modified by written change order. Payment for major items shall be calculated by multiplying the actual quantity placed by the modified Bid price."

Existing Bid Items (01 22 00 Measurement and Payment methods are unchanged):

Low Permeability Fill (Borrow, Bid Item 5a) will increase an estimated 885 cubic yards based on Engineer's estimate to source and install low permeability fill on the crest.

Bid Item 7 (Regrading Embankment Crest) will now be a quantity of 0 linear feet and replaced by work identified in this Work Change Directive.

Bid Item 11 (Crusher Fines for Unpaved Paths Restoration and Crest Regrading) will increase an estimated 1,520 cubic yards.

New Bid Items:

Bid Item 13 (Removal of Crusher Fines on Crest and dispose of within reservoir or place on embankment crest as directed by Owner) includes removal, hauling, and placement of existing crusher fines from the crest walking path for Section 2 only. Along Section 2 segments the existing crusher fines (average thickness of 1.6 inches) will be stripped and disposed of at a location directed by the Owner within the reservoir.

Measurement for Bid Item 13 to be on a square foot basis with an engineer's estimate of 7,250 square feet. Payment area to be measured by survey provided by Contractor and verified by Engineer.

Item includes, but is not necessarily limited to:

- Measurement of existing crusher fines area within Section 2 segments
- Equipment and labor to strip existing crusher fines
- Hauling and stockpiling of crusher fines
- Final placement location within reservoir determined by Owner

Bid Item 14 (Raise of Existing Piezometer) requires raising an existing piezometer to nominal elevation 5236.9 feet to avoid a relatively significant depression in the crest.

Measurement for Bid Item 14 to be on an each basis with an engineer's estimate of 1. Payment area to be measured by survey provided by Contractor and verified by Engineer. Existing metal surface mount piezometer vault to be preserved if possible but damage to inner PVC pipe is not acceptable. Piezometer surface vault or concrete may need to be extended to preserve PVC pipe from raised crest elevation.

Item includes labor, equipment, and materials for:

- Removal of piezometer vault
- Resetting piezometer vault at new elevation
- Concrete to stabilize vault at new elevation

Attachments:

Photos of piezometer installation

Annotated Drawings

Purpose for the Work Change Directive:

Crest raised to nominal elevation of 5236.9 feet to maintain residual freeboard of 1 foot.

Directive to proceed promptly with the Work described herein, prior to agreeing to change in Contract Price and Contract Time, is issued due to:

- Non-agreement on pricing of proposed change. Necessity to proceed for schedule or other reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract
Price:

Item No.	Description	Unit	Estimated Quantity (Change)	Unit Price (\$)	Total Amount (\$)
5a	Low Permeability Fill (Borrow)	CY	(885)	\$ 225.20	\$ 199,302
7	Regrading Embankment Crest	LF	(-1,900)	\$ 25.50	- \$ 48,450
11	Crusher Fines for Unpaved Paths Restoration and Crest Regrading	CY	(1,520)	\$ 97.20	\$ 147,744
13a	Removal of Crusher Fines on Crest and dispose within reservoir as directed by Owner	SF	7,250	\$ 5.10	\$ 36,975
14	Raise of Existing Piezometers	EA	1	\$ 2,800.00	\$ 2,800
Contract Modification Total					\$ 338,371

Contract Time: _____ days 17 **(increase)** [decrease] [not yet estimated].

Basis of estimated change in Contract Price:

- Lump Sum Unit Price Cost of the Work Other: See table above

Recommended by Engineer

Authorized by Owner

By: Caleb Stock

Title: Design Engineer

Date: May 9, 2026

DRAFT