



## Legislation Text

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**TO:** Mayor and Members of City Council

**THRU:** Adam Lindsay, Assistant City Manager

**FROM:** Sheila Thomas-Ambat, PE - Public Services Director  
Byron Reeves, PE - Assistant Public Services Director  
Kelly Olivera, Budget and Evaluation Director

**DATE:** August 8, 2022

**RE:**  
Adoption of Capital Project Ordinance Amendment 2023-11 to Provide Additional Construction Funding for the Devonwood Lower Dam Hurricane Matthew Recovery Project.

**COUNCIL DISTRICT(S):**  
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**Relationship To Strategic Plan:**

Goal 1: Safe and Secure Community  
Goal 3: High Quality Built Environment  
Goal 4: Desirable Place to Live, Work and Recreate

**Executive Summary:**

Capital Project Ordinance Amendment 2023-11 will appropriate anticipated funding from the Federal Emergency Management Agency (FEMA) and the North Carolina Department of Public Safety (NC DPS) to provide \$356,432 of additional project funding for the construction of a utility duct bank on the Devonwood Lower Dam.

Per Dam Safety requirements, the duct bank will be above the 100-year water surface elevation and placed on the downstream shoulder of the embankment, parallel to the road and outside the extent of the dam. The duct bank will house utility lines inside the conduits as Dam Safety does not allow utilities to be constructed within the footprint of the dam. As construction has neared completion, the contractor has submitted a change order to order the required materials for the construction of Duct Bank.

**Background:**

Devonwood Lower Dam is a City owned, small, high hazard dam located along McFayden Drive that was damaged during Hurricane Matthew, beginning on October 2, 2016. The damage sustained included significant erosion and sloughing of the downstream embankment.

On April 18, 2018 FEMA officially obligated \$1,429,420 under Project Worksheet (PW) 01887 to construct Devonwood Lower Dam per Dam Safety requirements.

Following Dam Safety requirements to place utilities outside the footprint of the Dam, the Engineer of Record proposed the following:

- Install the Charter, CenturyLink, and Duke electric lines in 3, 6-inch conduits on the west side of the dam as shown in the attached plan sheet. Encase the conduits with concrete. The approximate dimensions of the concrete encasement are 36" wide by 18" high. The length of the proposed concrete encasement is approximately 500 linear feet. The encasement will be located along the shoulder of the road with minimal cover to allow the encasement to be located as high as possible. The top elevation of the encasement will range from elevation 196 to 196.5 with an invert elevation ranging from 194.5 to 195.
- Installing the concrete encasement will balance the need to provide utility service without excessive relocation costs while maintaining the safety of the dam. The rectangular shape of the encasement will allow for proper compaction of the dam embankment fill material per the approved specification.
- The 100-year peak water surface elevation is 193.62 which is below the invert of the concrete encasement. The 1/3 PMP peak elevation is 196.98. The length of time for which the water surface would be higher than the concrete encasement during the 1/3 PMP storm is approximately 180 minutes since the size of the emergency spillway will quickly pass the peak flows during the 1/3 PMP event.

Dam Safety sent final approval of the above proposal dated June 2, 2021.

As a "large" public assistance project under FEMA guidelines, total actual costs will be eligible for reimbursement, even if they exceed the PW estimate, provided that all of the work completed is within the scope of (or incidental to) the work described in the PW. Based upon staff conversations with FEMA & NCDPS staff, there is no reason to believe that the total costs for this project will not be reimbursable under the 75%/25% federal/state funding model.

The contractor, Fred Smith Company, is finishing the construction of the dam and upon the approval of the funds outlined below, the Public Services Department will route the Change Order to construct the duct bank. The requested cost is outlined as follows:

Detail	Cost
Fred Smith Company Cost of Duct Bank Construction	\$285,145.04
Contingency of 25% due Inflation and shortage of materials	\$ 71,286.26
<b>Total</b>	<b>\$356,431.30</b>

#### **Issues/Analysis:**

FEMA requires adherence to strict procurement and documentation guidelines to qualify for federal reimbursement of expenditures for response and recovery from natural disasters. City staff is making every effort to comply with those requirements to maximize reimbursement from FEMA as

appropriate.

**Budget Impact:**

There is no anticipated impact to the General Fund as it is expected that the project will be fully reimbursed by FEMA and NCDPS.

**Options:**

1. Adopt Capital Project Ordinance Amendment 2023-11 to allow the transfer of funds.
2. Do not adopt Capital Project Ordinance Amendment 2023-11 and provide further direction to staff.

**Recommended Action:**

Staff recommends that Council move to adopt Capital Project Ordinance Amendment 2023-11.

**Attachments:**

1. Duct Bank Change Order Summary
2. Duct Bank Design approved by Dam Safety
3. Duct Bank Bulletin Drawing by Engineer of Record
4. FEMA Project Worksheet PW 1887
5. Capital Project Ordinance Amendment 2023-11