



Wastewater Pump Station Flood Remediation Project

Audit 2022-U2

June 2023



WASTEWATER PUMP STATION FLOOD REMEDIATION PROJECT AUDIT (2022-U2)

BACKGROUND

The City of Fort Smith has a population of approximately 89,000. The Utility Department’s mission is “We are a unified team committed to delivering reliable, high-quality drinking water and water reclamation services for the City of Fort Smith and the River Valley.” The City has approximately 627 miles of sanitary sewer lines, 23 pump stations, and two wastewater treatment plants.

The Utility department utilizes e-Builder, a project management software program, to manage its water and sewer projects. The Utility Department also developed a Project Management Manual to document processes used to administer infrastructure projects. The primary focus of the Project Management Manual is to guide the Utilities Department, their Project Engineers, Engineering Consultants, and Contractors through the necessary processes to accomplish the goals of each project. Finally, the Utility Department developed Standard Operating Procedures (SOP) for the Engineering Department Workflow Process. The use of e-Builder, the project management manual, and the SOP should ensure the Utility Department properly and adequately ensures all processes and documents for each project are reviewed, complete and accurate and uploaded into e-Builder.

The City experienced a major flood in 2019 and several of the wastewater pump stations were damaged. The City entered into an agreement with Hawkins-Weir Engineers, Inc. to perform an assessment of the flood damage to the pump stations. Hawkins-Weir Engineers, Inc. was selected as the engineer to perform the design for the pump station repairs and remediation. Van Horn Construction, Inc. was selected as the Construction Manager to oversee the Wastewater Pump Station Flood Damage Remediation Project and Hawkins-Weir Engineers, Inc. was selected to perform engineering services (construction observation) for the project. The project consists of five (5) phases, of which, four (4) phases have been completed and the fifth phase is ongoing.

Each phase consists of a separate amendment to the agreement which includes a separate project manual and set of plans for the work to be performed under each amendment.

19-29-C1	Amendment 1	Resolution No. R-9-20, approved by Board of Directors, 01/21/2020
19-29-C2	Amendment 2	Resolution No. R-36-20, approved by Board of Directors, 03/03/2020
19-29-C3	Amendment 3	Resolution No. R-38-20, approved by Board of Directors, 03/17/2020
19-29-C5	Amendment 4	Resolution No. R-129-20, approved by Board of Directors, 10/06/2020
19-29-C4	Amendment 6	Resolution No. R-141-21, approved by Board of Directors, 09/07/2021

Note: Amendment 5 was an amendment to amendment 4 reducing the amount of the amendment by \$101,239 for the removal of the repair of pumps from the project.

Total estimated cost of Wastewater Pump Station Flood Damage Remediation project is approximately \$15.8 million. 19-29-C4, Amendment 6, Resolution No. R-141-21, agreement with contractor is for \$6.2 million for the construction of two new pump stations. Seventy-five percent of the total cost of the Wastewater Pump Station Flood Damage Remediation project is being considered for reimbursement from FEMA.

AUDIT SCOPE AND OBJECTIVES

The scope of the audit covers activities and transactions for the Wastewater Pump Station Flood Remediation Project that occurred during the calendar year 2022. This project was identified during the risk assessment and was included in the 2022 Audit Plan.

Our audit objectives, as refined during research and the risk assessment process occurring throughout the course of our work, were as follows:

1. Comprehensive policies and procedures for Construction Management have been established and are followed by staff.
2. The City is in compliance with all applicable laws and regulations.
3. The City has an effective system of controls in place that assist in appropriately managing construction-related costs.
4. Changes from the initial contract award amount and the final contract price were appropriately negotiated and documented.
5. City facilities and construction projects are adequately protected from liability by insurance and bonding.
6. Information systems are reliable and timely, and accurate information is available to management and the Board
7. Contractors complied with the provisions stated in the contract.

CONCLUSIONS AND SIGNIFICANT ISSUES

We believe that we have obtained sufficient and appropriate evidence to adequately support the conclusions provided below as required by professional standards. Each conclusion is aligned with the related Audit Objective for consistency and reference. For detailed findings, recommendations, management responses, comments and assessment of responses see the “Detailed Findings, Recommendations, Management Responses, and Assessment of Responses” section of this report.

AUDIT OBJECTIVE 1 - Comprehensive policies and procedures for Construction Management have been established and are followed by staff.

CONCLUSION - The Utility staff does not consistently follow the policies and procedures for construction management that are in place. *(See Findings 1 – 5)*

AUDIT OBJECTIVE 2 - The City is following all applicable laws and regulations.

CONCLUSION - No findings noted.

AUDIT OBJECTIVE 3 - The City has an effective system of controls in place that assists in appropriately managing construction-related costs.

CONCLUSION - No findings noted.

AUDIT OBJECTIVE 4 – Changes from the initial contract award amount and the final contract price were appropriately negotiated and documented.

CONCLUSION - No findings noted.

AUDIT OBJECTIVE 5 - City facilities and construction projects are adequately protected from liability by insurance and bonding.

CONCLUSION - See Finding 6.

AUDIT OBJECTIVE 6 - Information systems are reliable and timely, and accurate information is available to management and the Board.

CONCLUSION - Information systems are not consistently reliable and timely, and therefore, accurate information is not consistently available to management and the Board. *(See Finding 4)*

AUDIT OBJECTIVE 7 - Contractors complied with the provisions stated in the contract.

CONCLUSION - The contractor is not in compliance with the provisions stated in the contract. *(See Finding 4)*

DETAILED FINDINGS, RECOMMENDATIONS, MANAGEMENT RESPONSES, AND ASSESSMENT OF RESPONSES

Activities and transactions for Project 19-29-C4 that occurred during the year 2022 were reviewed by Internal Audit and the following findings were identified.

FINDING # 1 - SUPPORTING DOCUMENTATION INCOMPLETE AND PAYMENT APPLICATION NOT VERIFIED

BACKGROUND:

Periodic Payment Applications typically include supporting documentation for amounts claimed such as a schedule of values and/or invoices. Invoices may be for work performed or materials purchased. Without supporting documentation, the City may inappropriately pay for work not performed and/or materials not purchased. The Engineer Consultant reviews and certifies information as work progressed as indicated, quality of work is in accordance with the contract documents, and the contractor is entitled to payment of the amount certified. Additionally, the invoice goes through multiple levels of City approval in e-Builder and in the Tyler-Munis ERP System. It is the City's responsibility to ensure all invoices and supporting documentation is received and correct before approving the invoice for payment.

FINDING:

The schedule of values for payment application number one does not have any amounts reported for the period.

Payment application number one was certified by the project engineer, reviewed by city engineer and the administrative assistant, and approved by management without complete supporting documentation for the amount claimed (\$77, 805).

RECOMMENDATION:

The Utility Department should ensure each payment application is complete and all supporting documentation is attached and verified before approving for payment.

UTILITY DEPARTMENT'S MANAGEMENT RESPONSE:

Water Utilities agree with the finding. This payment; for contractual performance bond, insurance, and contractor's fee; was processed in 2021 prior to the aforementioned referenced SOP which was adopted August 18, 2022. All staff have been trained on the SOP.

RESPONSIBLE PARTY:

Director of Water Utilities

ESTIMATED DATE OF COMPLETION:

AUGUST 18, 2022: COMPLETED

ASSESSMENT OF RESPONSE:

Management's response, as presented, sufficiently addresses the issues identified.

FINDING # 2 - SUPPORTING DOCUMENTATION MISSING. REPEAT FINDING.

BACKGROUND:

Contractor may request payment for materials purchased and not yet incorporated into the project. This is typically done by including invoices for those materials along with the payment application and schedule of values. Ownership of materials purchased transfers to the City upon payment for those materials included in the payment application amount. This comment is the same as a previous finding from 2022 U-1 Sub Basin P002 & P003 Capacity Improvement Project.

FINDING:

Invoices for materials purchased and stored were not included with the payment application. Application and Certification for Payment #11 had a net increase of \$55,082 in Materials Stored but no invoices were included with the Payment Application in e-Builder.

Total Materials Stored	
Payment Application # 11	\$401,827.52
Payment Application #10	\$346,745.04
Net Change	\$55,082.48

Item 30 increased by	\$17,140.51
Item 640 increased by	\$118,176.00
<u>Item 335 decreased by</u>	<u>\$80,234.03</u>
Net Change	\$55,082.48

The calculation of the amount due for the current period includes work completed to date and materials stored to date. The total amount of the payment application # 11 was \$749,068.10. Additionally, there were no attachments with the Payment Application in Munis.

Due to documents not in e-Builder and/or Munis, Internal Audit (IA) had to request invoice(s) for the materials purchased; the Utility Department was able to obtain and provide the invoice to IA.

RECOMMENDATIONS:

Utility Department should verify that all appropriate supporting documentation is included with each payment application.

UTILITY DEPARTMENT'S MANAGEMENT RESPONSE:

Water Utilities acknowledges the omitted documentation in e-Builder. A checklist and SOP of what is required to be uploaded in e-Builder is underdevelopment. Until it is completed and adopted, hard copy files are being kept. Invoices and attachments have historically not been uploaded to Munis at the direction of the former Finance Director.

RESPONSIBLE PARTY:

Director of Water Utilities

ESTIMATED DATE OF COMPLETION:

On or before October 1, 2023

ASSESSMENT OF RESPONSE:

Management's response, as presented, sufficiently addresses the issues identified.

FINDING # 3 - INVOICES ARE NOT CONSISTENTLY UPLOADED IN E-BUILDER.

BACKGROUND:

The Project Management Manual, Volume II – Procedures, defines the process for reviewing and approving vendor invoices under Procedure CN-1, General Invoice Approval. A General Invoice is defined as a vendor invoice without commitments. Engineering Design, Construction, and Construction observation invoices/payment applications would be invoices with commitments. Invoices for legal services, property acquisition, appraisals, material and equipment purchased by the City would be considered as invoices without commitments.

FINDING:

Program/Dept. 5626 (Easement, Building, and Station Maintenance) processed three (3) invoices totaling \$17,016.88 in the Tyler-Munis ERP system that were charged to the project. However, those invoices were not entered into e-Builder. The Utility Financial Specialist provided the charge code for program 5626 to process the purchases.

The project cost in e-Builder and the project cost in Tyler-Munis do not agree. The Utility Financial Specialist performs a quarterly project reconciliation for all water and sewer projects. This discrepancy due to the three (3) invoices was not noted on the latest project reconciliation provided to IA.

The Utility Department stated that Tyler-Munis is the system to obtain financial information.

RECOMMENDATIONS:

Utility Department should ensure that all invoices charged to a project are uploaded or entered into e-Builder. Additionally, the Utility Department should add a procedure for invoices processed by departments other than 5523 to the Engineering Workflow Process SOP. Utility Department should also add the project reconciliation to the Engineering Workflow Process SOP.

UTILITY DEPARTMENT'S MANAGEMENT RESPONSE:

The referenced Project Management Manual, Volume II – Procedures, was written by CDM-Smith without the full input of the Water Utilities Staff. This manual was never adopted by the Water Utilities and thus never implemented as it is not an approved policy.

The quarterly project reconciliation was performed between DataPerfect and Munis. The variance was provided to Internal Audit at their request before March 30, 2023.

As pointed out by Internal Audit's Finding #3, Tyler-Munis is the system to obtain financial information on all projects. The need for reconciliation between e-Builder and/or DataPerfect verses Munis is not clear as neither e-Builder and/or DataPerfect are the authoritative, auditable source for financial information.

A checklist and SOP of what is required to be uploaded in e-Builder is underdevelopment.

RESPONSIBLE PARTY:

Director of Water Utilities

ESTIMATED DATE OF COMPLETION:

On or before October 1, 2023

ASSESSMENT OF RESPONSE:

Management's response, as presented, does not sufficiently address the finding that invoices are not consistently uploaded in e-Builder.

The 2018 Construction Contract Audit noted under finding #2 "The Utility Department does not have a comprehensive manual of policies and procedures to manage construction lifecycle processes of capital improvement projects within the Department." Management's response was "The Project Management Manual (PMM) is currently under development by the Utility department and CDM Smith staffs. The timeline calls for review and comments to be submitted to CDM Smith by mid-January 2019. This manual will provide a common process to manage projects from cradle to grave.

Internal Audit referenced the Project Management Manual in the 2022 P003 & P003 Sub-Basin Capacity Improvements Audit and management noted "The project management manual is out of date and was originally prepared by CDM-Smith. This manual needs to be updated with current practices."

The Utility Department now has a significant deficiency in policies and procedures, in that they do not have in place and follow a comprehensive manual of policies and procedures.

During the process walkthrough the financial specialist demonstrated that she compares the balances in e-Builder, DataPerfect, and Munis. Additionally, the reconciliations provided for project 19-29 includes a note that indicates an amount was "processed in e-Builder but was not in Munis yet".

The invoices were not uploaded in e-Builder and therefore the project management software system does not include all documents pertinent to the project. Eighteen (18) other general invoices were entered in e-Builder for this project.

FINDING # 4 - RECORDING, REPORTING, AND APPROVAL OF WEATHER DAYS IS NOT CONSISTENTLY FOLLOWED AS DEFINED IN THE AGREEMENT. REPEAT FINDING.

BACKGROUND:

Weather Days Notification Form paragraph 108.08, (c), states that the contractor is to provide written notification to the Engineer of the occurrence of adverse weather days within 15 days of each occurrence. Paragraph 108.08, (b) The weather experienced at the project site during the contract period must be found to be unusually severe, that is more severe than the adverse weather normally anticipated for the project location during the contract time. Additionally, the daily inspector's logs note if weather adversely affected work for the date reported.

Approved weather days may be added to the contract/agreement time when those days adversely affect the contract/agreement time. However, if weather days are not properly recorded and approved the contractor may be allowed extra time for days improperly approved. Additionally, this could affect the contract/agreement time and the calculation of liquidated damages due to the City.

FINDING:

- The weather days notification form included with payment application #7 was for a two (2) month period, which does not comply with the 15 day reporting rule.
- On the weather days notification form included with payment application #7 the contractor requested 20 days and the engineer approved 18 days. However, the engineer did not identify the days that were not approved.
- The supporting list of weather days submitted with payment applications #7 and #8 both included 04/25/2022.
- No weather days notification form was submitted with payment application #14. However, the weather days notification submitted with payment application #15 was for two months including the period for payment application #14.
- Weather days were requested for dates that the daily inspector's logs indicate that weather did not affect work for that date and work was performed on that date.

RECOMMENDATIONS:

Utility Department should consider the effects of weather days to the contract time and ensure all weather days approved are valid.

Utility Department should ensure contracts/agreements adequately address how weather days are defined, notification requirements, and approval requirements.

Utility Department should not approve any weather days when the contractor does not follow proper requirements as indicated in the contract.

UTILITY DEPARTMENT'S MANAGEMENT RESPONSE:

Water Utilities agrees with the finding.

Weather day definitions in the contract will be reviewed and changed if possible. As weather is not predictable, defining what is a weather day is impossible. This is where engineering judgement is vital.

Water Utilities staff have been given verbal instructions to only award weather or any other extension of time days as it pertains to the contract.

Written notification of the proper policy based on the contract language will be provided to staff and all engineering observation firms.

RESPONSIBLE PARTY:

Director of Water Utilities

ESTIMATED DATE OF COMPLETION:

May 15, 2023 for notification to follow proper policy; Contract Manual October 1, 2023

ASSESSMENT OF RESPONSE:

Management's response, as presented, sufficiently addresses the issues identified.

FINDING # 5 - INSPECTION LOGS ARE NOT CONSISTENTLY ENTERED IN E-BUILDER.

BACKGROUND:

Inspection logs are used during the construction phase to document the location of work performed, weather conditions, work performed, labor force counts, photos, etc. The inspection logs are completed and entered in e-Builder by the engineer consultant on a regular basis as specified by the project engineer and/or contract.

Contract time is specified and should be adhered to as much as possible. When there are delays, those delays should be adequately documented. Delays may result in change orders for extensions of time and/ improper calculation of liquidated damages.

FINDING:

Daily inspection logs are missing from twelve (12) regular business days.

RECOMMENDATIONS:

Utility Department should ensure all inspection logs are entered in e-Builder in a timely manner. Utility Department and engineer consultant should document instances when work is suspended giving reason(s) why work was suspended or no work was performed.

Utility Department should consider not granting additional time for days that are not properly documented when work was not performed on site.

UTILITY DEPARTMENT'S MANAGEMENT RESPONSE:

Water Utilities agrees with the finding. Proper documentation is important and all inspection logs are now being uploaded to e-Builder.

New agreements will be developed for construction observation to include providing an inspection log documenting no work performed on days when the contractor is absent from the work site.

Water Utilities staff have been given verbal instructions to only award weather or any other extension of time days as it pertains to the contract.

Written notification of the proper policy based on the contract language will be provided to staff and all engineering observation firms

RESPONSIBLE PARTY:

Director of Water Utilities

ESTIMATED TIME OF COMPLETION:

May 15, 2023 for notification to follow proper policy; New Agreements October 1, 2023

ASSESSMENT OF RESPONSE:

Management's response, as presented, sufficiently addresses the issues identified.

FINDING # 6 – PERFORMANCE AND PAYMENT BONDS AND LIABILITY INSURANCE NOT VERIFIED. REPEAT FINDING.

BACKGROUND:

Article 11, Section 11.2 Insurance, “Before starting the Work and as a condition precedent to payment, Construction Manager shall procure and maintain in force Workers’ Compensation Insurance, Employers’ Liability Insurance, Business Automobile Liability Insurance, and Commercial General Liability Insurance (“CGL”).” Typically, these documents are included with the executed agreement.

FINDING:

The performance and payment bonds and the certificate of liability insurance for project 19-29-C4 were not found in e-Builder. IA requested the documents from the Utility Department. The Utility Department provided the certificates of insurance for the years 2021 – 2024 (April 01 through April 1). However, the agreement was executed on 09/09/2020 and no certificate of liability insurance was provided for 2020 through 04/01/2021 and no performance and payment bonds were provided. The certificates of insurance were uploaded in e-Builder after they were provided to IA. This is a repeat finding from the 2019 Construction Contract Audit.

RECOMMENDATIONS:

The Utility Department should ensure all documents required by the contract are provided and verified and uploaded to e-Builder.

UTILITY DEPARTMENT’S MANAGEMENT RESPONSE:

Water Utilities agrees with the finding.

As per the cited language, “Before starting the Work and as a condition precedent to payment, Construction Manager shall procure and maintain in force Workers’ Compensation Insurance, Employers’ Liability Insurance, Business Automobile Liability Insurance, and Commercial General Liability Insurance (“CGL”).” The current language does not require the documentation of renewal notice. The Contractor did provide the renewals upon request.

A new contract manual is under development and will include the need to submit to the City any and all insurance/bond certificates including renewals.

A checklist is also employed to prevent future occurrences.

RESPONSIBLE PARTY:

Director of Water Utilities

ESTIMATED TIME OF COMPLETION:

The performance Bond was filed for 19-29-C4 on April 17, 2023.

Contract Manual October 1, 2023

ASSESSMENT OF RESPONSE:

Management's response, as presented, sufficiently addresses the issues identified. However, it should be noted that the contract states "Before commencing the Work and upon renewal or replacement of the insurance policies, Construction Manager shall furnish Owner with certificates of insurance until one year after Substantial Completion or longer if required by the Contract Documents."

OBSERVATIONS:

Documentation is not consistently found in e-Builder.

The Utility Department utilizes e-Builder, a project management software program, to manage its water and sewer projects. E-Builder contains project information specific to the Utility Department's water and sewer projects, including contracts/agreements, amendments to contracts/agreements, resolutions, and ordinances relative to the project, payment applications, daily inspection logs, communications (email, letters, memos, and meeting documents), etc.

During IA's discussion with Managements, Management indicated that they thought that e-Builder was working exceptionally well.

However, the data in e-Builder varies from project to project and engineer to engineer. Documents and information uploaded into e-Builder is not consistent throughout the Engineering and Engineering Technology department and at times documents are not uploaded in e-Builder. While some differences may be expected because of the nature of the different projects, the different types of contracts/agreements, and different users uploading and entering data into e-Builder; there should be some consistency in regards to standard documents required for project contracts and agreements. The Project Management Manual and Engineering Workflow Process SOP should identify standard documents required.

Additionally, the Project Management Manual identifies a pre-construction meeting; however, the preconstruction meeting agenda and summary are not consistently uploaded to e-Builder.

Furthermore, there is not usually documentation located in e-Builder for the regular construction progress meetings.

Payment applications are not consistently reviewed.

IA reviewed the agreements and amendments and other documents for the Wastewater Pump Station Flood Damage Remediation project to fully understand the scope of the project.

Payment application #1 for project 19-29-C1 for \$9,978.99 and payment application #1 for project 19-29-C3 for \$37,484.06 were not certified by the engineer.

The Utility Department approved payments for those invoices without the certification from the engineer that the amount requested was appropriate for the work performed during the period.

Project 19-29-C5, status of serviced pump is pending response from management.

Inspection log IL-00326, 19-29-C5 indicates that Van Horn Construction (VHC) received the serviced pump from Pentair for Riverfront Pump Station (PS 6). Management is looking into the status of the serviced pump. There is no documentation in e-Builder for the receipt of the serviced pump. Additionally, there is no documentation in e-Builder for the return of the two pump motors that were to be returned to the City as part of the project plans.

Response: *Pump was returned on February 22, 2021. It is currently located at the "P" Street Water Reclamation Facility.*

Water Utilities staff duly note the observations and thank Internal Audit Staff for bringing these to our attention.