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October 4, 2022

Mr. Peter Alviti
Director
Rhode Island Department of Transportation
2 Capitol Hill
Providence, RI 02908

Dear Director Alviti,

The Office of Internal Audit has completed its audit of the oversight of utility relocations performed by the Rhode Island Department of Transportation (RIDOT). The audit was conducted in conformance with the Institute of Internal Auditors (IIA) International Standards for the Professional Practice of Internal Auditing and by the authority given to the unit as stated in accordance with the Rhode Island General Laws (RIGL) §35-7.1-1 – Establishment of office of internal audit. The recommendations included herein have been discussed with members of management, and we considered their comments in the preparation of this report.

RIGL §35-7.1-10 (d), entitled *Annual and interim reports*, states that, “Within twenty (20) calendar days following the date of issuance of the management response copy of the draft audit report, the head of the department, agency, public body, or private entity audited shall respond in writing to each recommendation made in the audit report...” Accordingly, management submitted its response to the audit findings and recommendations on September 7, 2022, and such response is included in this report. Pursuant to this statute, the Office may follow up regarding recommendations included in this report within one year following the date of issuance.

We would like to express our sincere appreciation to the staff of RIDOT for the cooperation and courtesy extended to the members of our team during this audit.

Respectfully yours,

Michael Sprague, CIA
Chief

cc: Internal Audit Advisory Group
Representative Marvin Abney, Chairman, House Committee on Finance
Senator Ryan Pearson, Chairman, Senate Committee on Finance
Steve Whitney – Senate Fiscal Advisor
Sharon Reynolds Ferland, House Fiscal Advisor

AUDIT Executive Summary

Why the OIA Did This Review

The purpose of this engagement was to review the level of oversight by RIDOT for utility relocations during construction projects and determine if:

- 1) RIDOT has developed and implemented policies, procedures, and processes which provide clear guidance on the preparation of utility agreements, communication of utility relocation requirements to contractors, and the capture of utility-related cost-and-time change orders
- 2) Oversight was sufficient to comply with applicable laws, rules, regulations, and aligned with best practices and
- 3) Source documents were available to validate costs incurred.

Background Information

Roadside utilities are not owned or directly controlled by the State. Title 23 of the United States Code of Federal Regulations (CFR) contains requirements that govern how public funds can be used to relocate utilities. Most of the utility relocations in Rhode Island involve the relocation of power, telephone, gas, water, and sewer utilities. Utility relocations were cited most recently in a 2018 report from the Federal Highway Administration (FHWA) as a “leading cause” of cost increases and schedule delays on transportation projects.

To Strengthen Controls, RIDOT Should:

- Ensure that the effective period of utility purchase orders is established to agree with the approved period in which the work is to be performed
- Create and approve purchase orders prior to the performance of work
- Ensure required supporting documentation is submitted to properly create purchase orders
- Ensure force account estimates include itemized material and labor costs
- Ensure force account comparisons agree to the estimates
- Adhere to established procedures for invoice approval and monitoring of work performed
- Revise conflicting procedures

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Objective and Scope

The purpose of this engagement was to review the level of oversight by RIDOT for utility relocations during construction projects and determine if:

- 1) RIDOT has developed and implemented policies, procedures, and processes which provide clear guidance on the preparation of utility agreements, communication of utility relocation requirements to contractors, and the capture of utility-related cost-and-time change orders
- 2) Oversight was sufficient to comply with applicable laws, rules, regulations, and aligned with best practices and
- 3) Source documents were available to validate costs incurred.

The scope of the audit is to examine the oversight processes performed by RIDOT for utility relocations on construction projects during the period of July 2018 through April 2022.

Methodology

As part of our audit work, we gained an understanding of the operations of the Financial Management and Utilities Divisions at RIDOT related to their responsibilities for utility relocations. To address our audit objective, we performed the following:

- Interviewed personnel, including financial and program staff
- Researched Federal laws and regulations, Rhode Island General Laws, departmental rules and regulations, and best practices
- Tested for compliance with applicable laws, rules, and regulations
- Sampled cost estimates, purchase orders, change orders and invoices

Background

Roadside utilities are not owned or directly controlled by the State. Title 23 of the United States Code of Federal Regulations (CFR) contains requirements that govern how public funds can be used to relocate utilities. Most of the utility relocations in Rhode Island involve the relocation of power, telephone, gas, water, and sewer utilities. Utility relocations were cited most recently in a 2018 report from the Federal Highway Administration (FHWA) as a “leading cause” of cost increases and schedule delays on transportation projects. Federal regulations require State departments of transportation (DOTs) to coordinate all utility relocations before construction to protect the investment by the government in the highway project.

Recommendations and Management's Responses

Purchase Orders

Purchase Orders not approved timely

Purchasing rules and regulations state that no work shall proceed until the issuance of a purchase order or change order is approved by the Division of Purchases or its delegated agent. The issuance of a purchase order establishes a binding contract and encumbers the agency funds, which is a budgetary control to ensure agencies stay within their appropriated budgets.

The “effective period” of a purchase order means the dates agreed upon by the parties for the period of performance under the contract. The start of the effective period should not precede the date on which the purchase order is approved. An approval of a purchase order indicates that all required parties have agreed to the terms and to obligate the required funding.

The OIA found that the start of the effective period on all 25 purchase orders tested was before the purchase order approval date. Upon inquiry of RIDOT personnel, it was determined that the effective period on purchase orders was set to start on the date the estimate from the utility company was received. While they stated that this date is not the beginning of the work and approval is granted prior to the performance of work, this methodology does not result in an accurate “effective period.”

The OIA also tested a sample of 25 invoices and found that utility work was performed prior to the purchase order approval date for four¹ of the invoices. This further emphasizes the need to accurately establish the effective period of purchase orders. As stated above, a contract between the State and the vendor does not exist until a purchase order is approved.

Recommendations:

- 1) Implement controls to ensure that the effective period of utility purchase orders is established to agree with the approved period in which the work is to be performed.
- 2) Implement controls to ensure that utility purchase orders are created and approved prior to the performance of work.

Management's Response:

- 1) RIDOT Financial Management will no longer put a beginning date on the PO lines. A note will be put on the PO saying that the Period of Performance will be the PO issued date and then we will put the construction completion date as the end date.
- 2) By RIDOT Financial Management implementing the proposed change, there will be no purchase order created prior to performing work.

¹ Any invoices billed for emergency utility services were not included as an exception, as an approved purchase order is not required prior to the performance of the emergency services.

Responsible Party: Brian Smith, RIDOT Financial Management
Anticipated Completion Date: Implemented

Purchase Orders missing required backup documentation

23 CFR § 645.113(c) states:

The agreement shall be supported by plans, specifications when required, and itemized cost estimates of the work agreed upon, including appropriate credits to the project, and shall be sufficiently informative and complete to provide the TD² and the FHWA with a clear description of the work required.

Additionally, the standard utility agreement states that the utility company must submit a reasonable cost estimate (Section III.1) and adequate proof of insurance (Section VI.1(b)) to be accepted by RIDOT prior to the beginning of work.

The OIA found that eight out of the 25 tested purchase orders did not have the required itemized cost estimates. Additionally, the OIA found that four of the tested purchase orders did not have the required insurance certificates attached.

RIDOT does not ensure all supporting documentation is received from the utility companies since, as stated in the above finding, work has often started prior to the approval of the purchase order. There is an increased risk that the State is not receiving services and materials at a fair price and that the utility company does not have insurance coverage for unexpected liabilities that may result during the project. If the state becomes liable for unbudgeted costs, those funds cannot be obligated to future projects.

Recommendation:

- 3) Ensure required supporting documentation, including required detailed estimates and insurance certificates, is provided and complete prior to the effective contract period and performance of work.

Management's Response:

The Utility Section will ensure all supporting documentation is provided and complete before the effective contract period and performance of work. The explanation for why the utility company's certificate of insurance was not included in the tested purchase orders referenced is because the insurance was previously kept on file. RIDOT Legal instructed the Utility Section to include the certificate of insurance with every agreement processed, so now it is always included. Moving forward, the Utility Section will pay attention to the costs that were not itemized previously, see next recommendation/response for further resolution.

Responsible Party: Vincent Palumbo, RIDOT Utility Section

² Transportation Department

Anticipated Completion Date: Implemented

Force Account Estimates

Force account estimates are a required component of the relocation agreements made between the utility company and RIDOT to show estimated costs of the time, materials, or overhead for the utility relocation project. The estimates for these items should include sufficient detail to provide RIDOT with a reasonable basis for cost analysis and budgeting, as well as verifying the reasonableness of invoices. Force account estimates are vital to the agreement process because they facilitate transparency and provide assurance that all costs are accounted for. RIDOT must approve of the estimated costs submitted under the utility relocation agreement before the agreement is signed and work is performed.

Materials and labor not presented as itemized cost estimates

Utility relocation agreements should include force account estimates that itemize material and labor unit costs as required per 23 CFR § 645.113(c).

The force account estimates provided did not itemize all material and labor costs in eight out of the 25 purchase orders selected for testing.³ In two purchase orders, the force account estimates did not list any material or labor costs by unit price, but rather presented material and labor estimates as lump sum costs. In six purchase orders, the force account estimates listed unit cost for materials; however, presented labor estimates as lump sum costs. RIDOT did not ensure that the utility company provided itemized costs for materials and labor prior to approval of the agreement. If costs are not itemized in the force account estimates it may not provide RIDOT with adequate information to make informed decisions on the reasonableness of cost estimates which could result in the State overpaying for services or materials.

Recommendation:

- 4) Review utility relocation agreements to ensure force account estimates include itemized material and labor costs.

Management's Response:

The Utility Section will require an itemized and more detailed cost estimate for all PE and Force Account Estimates.

Responsible Party: Vincent Palumbo, RIDOT Utility Section

³ This finding refers to the same samples lacking required itemized cost estimates noted in the above finding under "Purchase Orders." See subsection "Purchase Orders missing required backup documentation" on pg. 6.

Anticipated Completion Date: Implemented

Cost estimate backup for material and labor do not agree to the total force account estimates

The totals on the force account estimates for materials and labor were not supported by adequate itemized backup in 11 out of 25 of the samples selected for testing.

- In nine cases the materials and labor backup for the cost estimates were less than what was presented in the total force account estimate. \$562,514 was included in the total material and labor costs estimate that did not have supporting documentation or was not included in the backup.
- In two cases the materials and labor backup for the cost estimates provided added up to more than what was presented on the force account estimate. A total of \$44,723 was included in the backup that was not included in the total estimate.

Materials and labor backup that total to less than the presented total estimated costs could be either leaving out relevant costs or overcharging for materials or labor. Materials and labor backup that total to more than the presented estimated costs are either including materials or labor that aren't being charged for or are presenting inaccurate costs. This could impact the budgeting process by resulting in the over or under obligation of funding dedicated for the contract. RIDOT's review process for force account estimates lacks proper oversight resulting in cost estimates not reconciling to the supporting materials and labor backup.

Recommendation:

- 5) Review utility relocation agreements to ensure that all estimated materials and labor costs are supported by adequate itemized backup.

Management's Response:

All estimates are reviewed by the Utility office. An additional emphasis will be on the utility companies to detail their estimates and break-down of labor costs and materials clearly. Also, there will be a discussion between RIDOT and utility companies regarding the estimates they generate and the discrepancy between the totals for overall costs and their itemized costs.

Responsible Party: Vincent Palumbo, RIDOT Utility Section

Anticipated Completion Date: Implemented

Force Account Comparisons

RIDOT's Utility Section procedures dictate that once the force account estimates have been received, they are then to be entered into a spreadsheet which catalogues the historical pricing of materials and labor charged by the utility company and calculates an average historical unit cost. This spreadsheet is called the "Weighted Average Unit Price", and one is created for each utility company. A force account comparison sheet is then created comparing the Weighted Average Unit Price with the current submitted estimated costs. The force account comparisons are used to determine if cost estimates are reasonable and comparable to historical averages.

Force account comparisons do not capture all presented costs

Force account comparisons completed by the Utility Section did not total to the force account estimates presented in 11 out of 20 agreements tested⁴.

- In seven of these cases the force account comparison total was less than the force account estimate. A total of \$444,625 was not included in the force account comparisons for these seven comparisons.
- In two of these cases the force account comparison total was more than the force account estimate. A total of \$44,723 over the estimate was included in the force account comparisons in these two comparisons.
- In two of these cases the force account comparisons were not completed due to the utility company not itemizing their costs. A total of \$117,889 in material and labor costs were not included in any comparative analysis.

Force account comparisons that do not add up to the total estimate presented could be due to costs being left out, inclusion of extra costs, or oversight errors by RIDOT which reduces the effectiveness of analysis and could result in RIDOT accepting overpriced materials or services.

Recommendation:

- 6) Ensure force account comparisons match the force account estimates. Perform additional analysis to ensure all costs presented are fair and within industry averages if estimates are not compared to average costs.

⁴ 25 agreements were selected for testing; however, testing could not be completed for 5 agreements because they did not have comparisons performed by RIDOT. RIDOT does not complete force account comparisons for cities and towns, preliminary engineering estimates, nor agreements made before 2017; this applied to 5 of the agreements.

Management's Response:

Further oversight and review will be done regarding force account comparisons matching the force account estimates. The force account comparisons may fluctuate from the force account estimate, as costs fluctuate due to the economy. Aggregating this data together and establishing a historical estimate on record was a recommendation from FHWA. It is an average unit price compiled from previous estimates. A comparison estimate is utilized to justify that the proposed Force Account estimate is reasonable and within an acceptable range. We never expect our comparable to match to the penny and it should not, because our data is generated by compiling the averages of previous estimates on file.

Responsible Party: Vincent Palumbo, RIDOT Utility Section

Anticipated Completion Date: Implemented

Invoices

Invoice Approvals not in accordance with Utility Section policy and procedures

The procedures for the RIDOT Utility Section state that the section is responsible for maintaining, reviewing, and approving records for each project's utility force account estimates, utility agreements, and invoices including the supporting documentation. All questioned costs are documented and communicated to the utility company to provide an explanation regarding the disputed charges or to correct the invoice. Once any issues are resolved or if there are no issues, the invoice is approved by the State Utilities Engineering Coordinator and returned to RIDOT Financial Management for payment processing.

Established policies and procedures for approving utility invoices were not followed for three out of 25 invoices tested. One invoice was approved by a Construction Supervisor from the RIDOT Construction Unit, and two invoices were approved by a Project Manager II from the Project Management Unit. This was due to the absence of the State Utilities Engineering Coordinator who is normally responsible for approvals, and lack of a delegated approver. To ensure proper oversight of utility costs and to reduce the risk of improper payments, invoices should only be approved by the positions assigned this responsibility.

Recommendation:

- 7) Adhere to the RIDOT Utility Section established policies and procedures for approving utility invoices.

Management's Response:

Before establishing the utility invoice approval process, a few project managers signed invoices without the Utilities Section review. Subsequent to recently passed legislation for utility reimbursement, we are implementing a new process where both the Utilities Section and the Project Manager approve the invoices.

Responsible Party: Vincent Palumbo, RIDOT Utility Section

Anticipated Completion Date: Implemented

Conflicting utility invoice review procedures

RIDOT's policies and procedures do not provide clear guidance over the process of reviewing utility invoices. The relevant procedures listed in the Procedures for Uniform Record Keeping (PURK) policy manual appear to conflict with the established policies and procedures applicable to the Utility Section.

The RIDOT PURK policy states that the duties of the Resident Engineer include signing the applicable daily force account forms (Subject 11, Part II) and the review of the utility or railroad company's invoice (Subject 11, Part I).

The Utility Section current policy and written procedures indicate that upon receipt, a utility invoice is reviewed by staff within the Utility Section to determine if the invoice is accurate, the costs are reasonable when compared to the estimate, and that the documentation submitted with the invoice is sufficient to support the charges billed.

It is imperative that each employee be knowledgeable and clear on their responsibility involved in the invoicing process to ensure proper oversight of utility costs billed to the State. When determining placement of responsibilities, the concept of segregation of duties should be considered. Segregation of duties is a basic building block of internal controls and sustainable risk management. The principle is based upon sharing key process responsibilities and critical functions among more than one person or department. Without this separation, the risk of fraud or error is heightened. Ideally, the responsibilities of confirming the receipt of services (in this case the resident engineer) should be separate from the responsibility of verifying the accuracy of the charges billed and approving the invoice.

Recommendation:

- 8) Revise the written procedures in the Procedures for Uniform Record Keeping (PURK) policy Subject 11 to eliminate the resident engineer's procedure to review the utility invoice.

Management's Response:

The (PURK) policy manual is in process of being revised. The Utility Section will provide comments to RIDOT Construction to update the Procedures for Uniform Record Keeping (PURK) policy Subject 11. The PURK manual is subject to FHWA approval.

Responsible Party: Lori Fiset, Division of Project Management

Anticipated Completion Date: April 2023

Work not properly monitored

The RIDOT Procedures for Uniform Record Keeping (PURK) policy states that the RIDOT Resident Engineer is responsible for reviewing the utility agreement and recording daily work completed and signing the applicable daily force account forms.

One out of 25 invoices tested had billed 31 construction labor hours; however, only one force account sheet for five hours was included in the invoice backup. Documentation from the associated invoice memo completed by the Utility Section indicated that force account sheets for the remaining 26 hours worked were not available because the work was performed prior to the assignment of a RIDOT resident engineer to the project. If the work performed by a utility company is not properly monitored, the risk of the State overpaying for services is increased.

Recommendation:

- 9) Adhere to the Procedures for Uniform Record Keeping for monitoring utility work by assigning a resident engineer to a utility project prior to the start of the performance of the work.

Management's Response:

Recommendation #9 is in reference to an invoice for Bridge Group 59C – Reservoir Ave RR which was a Type I emergency project. Purchasing Regulations state that an approved purchase order is not required prior to the performance of the emergency services.

Emergency work falls outside of our usual operating procedures and is done immediately for public safety measures. The department is of the opinion that emergency projects should not be subject to audit or if they are part of the audit, they are looked at in accordance with the emergency project guidelines.

The Utilities Section properly documented and investigated this issue at the time the invoice was submitted. Due to there not being a RIDOT resident engineer assigned to this emergency project, backup consisting of timecards were submitted by the utility company. The issue was considered resolved.

Responsible Party: Lori Fissette, Division of Project Management

Anticipated Completion Date: Implemented

Change Orders

Change orders lacking adequate force account backup

Change orders should include force account estimates that itemize material and labor unit costs as required per 23 CFR § 645.113(c).

Of the selected sample of 25 purchase orders, there were eight associated change orders. All eight change orders were selected for testing. A force account estimate is required to be included with all change orders that request funding for additional work. Adequate force account estimate backup was not provided in four out of the eight change orders selected for testing.⁵ RIDOT did not provide sufficient oversight to ensure that the utility company provided itemized costs for materials and labor prior to approval of the change order. If costs are not itemized in the force account estimates, it may not provide RIDOT with adequate information to make informed decisions on the acceptability of cost estimates which could result in the State overpaying for services.

Recommendation:

- 10) Review all change orders to ensure that adequate force account backup that supports the force account estimate is provided.

⁵ Similar findings involving force account estimates lacking itemized costs for materials and labor were also noted above. See the Force Account Estimates section.

Management's Response:

Moving forward, RIDOT Utility Section will ensure acceptable details and backup are included in each change order and will not be accepted if not complete.

Responsible Party: Vincent Palumbo, RIDOT Utility Section

Anticipated Completion Date: Implemented

Work performed before change order approval

A written agreement between the State and the utility company should be made prior to any changes to the scope of work, extra work or major changes in the planned work covered by the approved agreement, plans, and estimates per 23 CFR § 645.113(e).

Four out of the eight change orders selected for testing included work that was already performed prior to the approval date of the change order. RIDOT did not adequately monitor the project to ensure all work was within the scope and budget of the original agreement. If work is performed prior to the approval of the change order, the State may end up paying for unnecessary or overpriced materials and/or services.

Recommendation:

- 11) Monitor utility relocation projects to ensure that change orders are created and approved prior to the performance of work.

Management's Response:

The Department will institute further oversight to approve ROCs⁶ prior to work completion and to not approve invoices that list charges prior to the ROC Purchase Order being issued.

There is no risk as mentioned regarding that the State may end up paying for unnecessary or overpriced materials and/or services since the Department reimburses for actual costs with back up. Change orders have been addressed once work is complete, so as not to affect the project schedule.

Responsible Party: Lori Fiset, Division of Project Management

Anticipated Completion Date: Implemented

⁶ Report of Change