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October 4, 2017

Mr. Peter Alviti
Director
Department of Transportation
Two Capitol Hill
Providence, RI, 02903

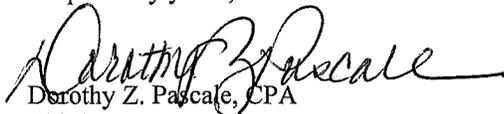
Dear Director Alviti:

The Office of Internal Audit has completed its audit of the Rhode Island Department of Transportation's Quarterly Reporting Practices. The audit was conducted in accordance with Rhode Island General Laws (RIGL) §35-7-3. The recommendations included herein have been discussed with members of management, and we considered their comments in the preparation of this report.

RIGL §35-7-3(b), entitled *Audits performed by bureau of audits*, states that, "Within twenty (20) days following the date of issuance of the final audit report, the head of the department, agency or private entity audited shall respond in writing to each recommendation made in the final audit report.." Accordingly, management submitted its response to the audit findings and recommendations on September 27, 2017, and such response is included in this report. Pursuant to this statute, the OIA 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 RIDOT staff for the cooperation and courtesy extended to the members of our team during the course of this audit.

Respectfully yours,


Dorothy Z. Pascale, CPA
Chief

c—Jonathan Womer, Director, Office of Management and Budget, Department of Administration
Peter Keenan, State Controller, Office of Accounts and Control, Department of Administration
Loren Doyle, Associate Director, Department of Transportation
Honorable William J. Conley, Jr., Chairperson, Senate Committee on Finance
Honorable Marvin Abney, Chairperson, House Finance Committee

Executive Summary

Why the OIA Did This Review

The purpose of this engagement was to determine if the program is operating efficiently and effectively in accordance with applicable statutes and state procedures and with adequate controls.

Background Information

The Rhode Island Department of Transportation (RIDOT) designs, constructs, and maintains the State's surface transportation system. With a staff of more than 700 transportation professionals, RIDOT serves as the steward of a statewide multimodal transportation network, consisting of 3,300 lane miles of roadway, 1,162 bridges, five rail stations, and more than 60 miles of bike and pedestrian paths.

With the implementation of the Rhode Works bill, the department is required to provide transparency quarterly reports on Rhode Works projects and the report also includes updates on key accomplishments during the past quarter.

In 2015 The EPA filed a complaint alleging that RIDOT has violated the Clean Water Act by failing to comply with conditions in the Storm Water General Permit. RIDOT reports on compliance in the transparency report.

To Improve Controls the Office of Internal Audit recommends the following:

- Provide training for the VUEWorks Asset Management and Mobile System to RIDOT Storm Water Office and Maintenance staff to appropriately utilize functionality of the system
- Monitor VUEWorks data and resolve discrepancies or issues in a timely manner.
- Allow Project Management access to VUEWorks

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Introduction

Rhode Island Department of Transportation (RIDOT) has put forth a ten-year transportation plan to repair roads and bring the State's bridges into a state of good repair. To ensure that a steady funding source would be available to rebuild Rhode Island's transportation infrastructure, RhodeWorks legislation designated \$4.7 billion over a ten-year period to finance road improvements, bridge replacement, transit developments, bike paths and maintenance for the state's infrastructure.

The RhodeWorks plan to repair roads and bridges was approved by the Rhode Island General Assembly and signed into law by Governor Gina M. Raimondo on February 11, 2016. The legislation sets forth certain reporting requirements:

RIGL 42-13.1-16. Reporting. – The department shall submit to the office of management and budget, the house fiscal advisor, and the senate fiscal advisor, a report on the progress of implementation of this chapter within thirty (30) days of the close of each of the fiscal quarters of each year. The reports shall also be posted on the department's website. The reports shall include, at a minimum:

(1) Construction and design contracts of five hundred thousand dollars (\$500,000) or greater planned to be advertised in the upcoming federal fiscal year, their value and expected award date;

(2) Construction and design contracts of five hundred thousand dollars (\$500,000) or greater awarded in the prior federal fiscal year, date of award, value, and expected substantial completion date;

(3) Expected final cost of:

(i) Any construction contracts of five hundred thousand dollars (\$500,000) or greater that reached substantial completion in the prior federal fiscal year; and

(ii) Any design contracts of five hundred thousand dollars (\$500,000) or greater completed in the prior federal fiscal year; and

(4) Total number of workers employed through the contract and the number of the workers in that total with a Rhode Island address.

RIDOT Consent Agreement

In addition to RhodeWorks reporting requirements, RIDOT also must report on Storm water/Drainage status in accordance with a Consent Decree with the United States Environmental Protection Agency (EPA) for violations of the Clean Water Act. The Consent Decree was finalized on December 22, 2015. The Decree requires RIDOT to implement remediation actions necessary in order to address discharges to impaired waters, illicit discharge detection and elimination, street sweeping pollution prevention and catch basin and other drainage system component inspection and maintenance. In addition to the remediation measures that must be implemented by RIDOT, RIDOT has paid a civil penalties and completed two supplemental environmental projects that require the transfer of certain parcels of land for conservation purposes. The Consent Decree also incorporates stipulated penalties for RIDOT's failure to meet specific compliance deadlines.

Recommendations for Improved Controls

Allow Project Managers Access to VUEWorks

Quarterly transparency reporting is required by RhodeWorks legislation. These reports provide updates on key RIDOT accomplishments during the quarter and also includes posting project budgets and schedule status through road side signs throughout the state at project sites.

When a road sign needs to be changed, Project Managers (PMs) prepare a form and submit it to their supervisors for approval. It is then submitted to the Chief Implementation Aide who is not part of Project Management will access VUEWorks and set up the work order. The PM sign detail will be copied into the work order along with a map and GPS. RIDOT crews use work orders to make or update the signs.

The Project Managers do not have access to the VUEWorks system. In an effort to be more efficient, allowing PM's direct access to the VUEWorks system would eliminate the need for the Implementation Aide to enter the information. Due to the manual nature of the process, the VUEWorks system is not being fully utilized.

Recommendation:

1. Allow Project Mangers to enter sign data requests into VUEWorks, using the approval process, and allow Project Management access to VUEWorks monitor and report to upper management.

Management's Response: The PM staff have been meeting throughout the summer to develop the workflow's and set up the templates to automate this process. Additionally, the PM's have all been trained on the functionality of VUEWORKS and have begun using the program. Due to a delay in the approval of the RIDOT sign policy we have a shift in the completion date of the implementation of an electronic process. We anticipate that the sign process will be fully automated including approvals by the end of 2017.

Responsible Party: Lori Fiset, Acting Manager of Project Management

Anticipated Completion Date: December 31, 2017

Storm Water Catch Basin Reporting

The Rhode Island Department of Transportation (RIDOT) submits the Annual Compliance Report as required by the United States of America vs. Rhode Island Department of Transportation Civil Action (No. CV-15-433) Consent Decree. The Consent Decree establishes the prescribed reporting requirements expected of RIDOT.

The Consent Decree states that:

RIDOT shall inspect all catch basins, manholes, and outfalls along RIDOT maintained roadways, RIDOT parking lots, and other RIDOT facilities within the RIDOT permit area by December 31, 2017. RIDOT shall inspect at least 50% of these catch basins, manholes, and outfalls by December 31, 2016. As part of the inspection, RIDOT shall identify which catch basins, manholes, and outfalls need to be cleaned and, to the extent possible from the inspection, which catch basins, manholes, and outfalls need to be repaired. RIDOT shall track the results of its inspections in its maintenance management system, including information on whether the catch basin, manhole, or outfall needs to be cleaned or repaired. RIDOT shall also note any information available from the inspections as to whether pipes or any other closed drainage system components associated with the catch basins, manholes, or outfalls require cleaning or repair and include such information in its maintenance management system.

RIDOT uses an asset management system called VueWorks that is web based and intergraded with GPS and the work order asset protection system. Consultants with the mobile application are entering data in real time in the field. RIDOT work crews are not using the mobile application and are working from paper documents which are manually entered at RIDOT Storm Water Administration. In addition, the Storm Water Administration is not using the asset management system to issue work orders for the inspections and repairs performed by RIDOT crews.

The RIDOT Division of Highway and Bridge Maintenance created a new drainage crew in 2016 for compliance with the Consent Decree and in accordance with the RIDOT Compliance Plan. This group is directly responsible for compliance efforts with the Consent Decree regarding the in-house drainage system cleaning and repairs.

Currently, management has engaged three consultants to complete the required inventory in the project area this year, and task orders have been issued to the consultants. Storm Water does not have task orders for our RIDOT Drainage Crew; they are directed to required areas through inter-office coordination.

During our review of the master inventory from which the EPA compliance report is generated, we found 71 out of 7,278 catch basins with ratings not within the rating scale of 1-100. This scale was devised by management and is listed 'on the inspection and cleaning report.' Although 7,247 catch basins were reported to the EPA, the numbers reported overlap those with errors.

Although the error is only 1 percent of reported catch basins, these basins require a second inspection, and are dispersed through the state; therefore, additional resources will have to be committed to resolving these issues. Mobile VUEWorks has built in controls that would provide GPS coordinates directly into the data base without any interpretation by office or field crews of hand-written coordinates obtained from using a cell phone road-side. Utilization of mobile VUEWorks would improve efficiency of the process.

Recommendations:

2. Provide training for the VUEWorks Asset Management and Mobile System to RIDOT Storm Water Office and Maintenance staff to appropriately utilize functionality of the system including use of the mobile application for inventory.
3. Monitor VUEWorks data and resolve discrepancies or issues in a timely manner.

Management's Response: Two drainage staff are trained inVueWorks and are reviewing the work of consultants and our drainage crew. GIS staff and Maintenance staff are also included on the team. All 4 are working on process, quality control, and overall functionality of the VUEWorks System as it pertains to drainage.

Three of the four team members all have administrative permissions in the program. They have the capabilities to format and configure the system. The fourth member has general user permissions.

Two team members have been identifying any errors or discrepancies with consultant and/or drainage crew staff. Some issues are easily resolved with current permission levels. If required we have had GIS staff and even DTS (owner of VUEWorks) help with issues.

The system was fully deployed with our drainage crews in April 2017. The system was deployed for the consultants (BETA Engineering, Triton Strom Water, Cataldo Associates) at the beginning of their contract. A staff member from the DOT Drainage section trained all using the system for drainage.

Responsible Party: Brian Moore, Administrator for Stormwater Management

Anticipated Completion Date: completed

Objective and Scope

The Office of Internal Audit (OIA) conducted an audit of RIDOT's process for Quarterly Reporting. The purpose of this engagement was to determine if the program is operating efficiently and effectively in accordance with applicable statutes and State procedures and with adequate controls.

Methodology

As part of our audit work, we gained an understanding of the Quarterly Reporting and Storm Water Reporting processes and controls in place. To address our objective, we performed the following:

- Interviewed personnel.
- Tested the data extract.
- Tested supporting budgetary and scheduling documentation.
- Developed flowcharts of processes.