

INTERNAL AUDIT REPORT

Maintenance of Way - Infrastructure

R-20-04

August 18, 2020

Executive Summary

Introduction

In conjunction with the Audit Committee, Internal Audit (IA) developed a risk-based annual audit plan. All of the audits on the audit plan are conducted in accordance with the International Standards for the Professional Practice of Internal Audit, published by the Institute for Internal Auditors (IIA), and provide several benefits:

- Management's continuous improvement efforts are enhanced
- Compliance is verified and shortfalls are identified so that they can be corrected
- Board of Trustee oversight of governance, control, and risk management is strengthened

All of these benefits contribute toward the Utah Transit Authority's strategic plan focus areas of:

- Customer Service Improve products, services, accessibility, and mobility
- Leadership and Advocacy Address current and future transportation challenges
- Access to Opportunity Enrich transit access and quality of life
- Strategic Funding Be wise stewards of public resources
- Workplace of the Future Foster dynamic, diverse, and engaged employees

As part of the 2019 audit plan, IA was directed by the Audit Committee to perform an audit to determine if controls over Maintenance of Way (MOW) - Infrastructure are designed adequately and operating effectively to ensure compliance with federal regulations, state laws, and internal policies and procedures as well as to support the achievement of management objectives. The preliminary stage of the audit was concluded in June 2019 and the final audit was completed in August 2020.

Background and Functional Overview

The Director of Asset Management for the Utah Transit Authority (UTA) provided a functional overview of the MOW-Infrastructure process to provide context to this report. Please note that all of the statements made are assertions by the Director of Asset Management and were not assessed by Internal Audit.

Management and MOW Infrastructure group would like to thank Internal Audit for their efforts in regards to the audit they performed on the MOW group. Management would like to provide the following information and background about the MOW Group.

The MOW Infrastructure group resides in the Asset Management Department and during the audit period consisted of 33 total staff. The staff breakdown is as follows; Manager, 2 Assistant Managers, 6 Supervisors, and 24 Rail Maintenance Workers. Since the audit, the structure has changed slightly in the group with the creation of the independent Compliance and Inspection group. MOW Infrastructure lost 1 Assistant Manager, 1 Supervisor, and 4 Rail Maintenance Workers.

The MOW Infrastructure group is responsible for all Federal Railroad Administration (FRA) mandated inspections contained in 49 Code of Federal Regulations (CFR) Part 213 Track Safety Standards. These mandated inspections include all inspections that need contractors to perform the work, including geometry and rail integrity testing. Outside of these mandated inspections, the group is responsible for all maintenance, rail repairs, and ride quality in the UTA rail corridor. Rail Infrastructure also provides Roadway Worker in Charge (RWIC) services to all third party contractors needing to access the rail corridor.

At times, the MOW Infrastructure group is known for maintenance activities like "weeds, trees, and trash", but like many departments within UTA, the MOW Infrastructure group has begun to use data to analyze and improve the timing of maintenance, repairs and replacements. This trend will continue as more inspections become digital and we are able to capture the needed data to make better decisions.

Again, we would like to thank the Internal Audit team for their efforts in helping us to align with best practices. The MOW Infrastructure team will work with the Executive team to develop plans to address the recommendations in this audit.

This concludes the functional overview of the MOW-Infrastructure process provided by the Director of Asset Management for UTA

Objectives and Scope

The period of the preliminary assessment started on May 1, 2018 and covered through April 30, 2019; the completion audit work continued on June 1, 2019 through July 31, 2020.

The primary areas of focus for the MOW preliminary assessment were:

- Governance
- Inspection
- Maintenance
- Third Party Contracts
- Training

Internal audit excluded from the scope of this preliminary assessment areas such as:

- MOW Systems
- Assessment of MOW performance

Audit Conclusion

Summary

During the Preliminary Assessment, the MOW-Infrastructure department was in the process of implementing a new organizational structure; it was fully executed in August of 2019. As part of the audit fieldwork, Internal Audit was afforded the opportunity to observe several key areas and processes that were changed by the restructure.

IA found that the infrastructure department of MOW has established processes, systematic controls, and a departmental tone of collaboration which is aiding in their ability to continue improving and documenting the individual areas within the department.

While observing work areas, in the main facility, IA identified a centrally located board of information. We commend the MOW management for providing the MOW staff with centrally located, easily identifiable, relevant information. The board provided not only information on shift crews, supervisors and work zones but also provided photographs of supervisors and work zones. This approach in our opinion is a strong control to avoid confusion of authority.

IA also noted that the MOW-Infrastructure department, to insure compliance for rail inspections, has implemented 28-day work schedules versus monthly schedules. This prevents monthly inspection delays due to shift rotations. The department has assigned specific functions to specific workers in order to standardize job and shift functions. The new assignment changes has allowed for consistency and provided the opportunity for the department to identify areas of strengths and weakness needing further improvements.

Internal Audit (IA) found that Management had strengthened their methods, processes, and controls to carry out departmental activities in accordance with the requirements of 49 CFRs 213 and 214 by formalizing and documenting roles, responsibilities, and procedures.

While this report details the results of the audit based on limited sample testing, the responsibility for the maintenance of an effective system of internal control and the prevention and detection of irregularities and fraud rests with management.

Internal Audit wants to thank management and staff for their cooperation and assistance during the audit.

Table of Contents

APPENDIX 1: Index of Findings	5
APPENDIX 2: Rating Matrix	
APPENDIX 3: Distribution List	

Index of Findings

1.	Governance	6
2.	Inspection	8
3.	Maintenance	10
4.	Contracting	11
5.	Roadway Worker in Charge	12
6.	Training	14

1. Governance

Preliminary Finding R-19-04-01

High

Criteria:

- Enterprise governance is an overarching system, which seeks to align priorities, funding, and resources and elevates decision making responsibility, authority, and accountability to the appropriate levels. Governance principles include:
 - Management establishes reporting lines, with board oversight, of the development and performance of internal control
 - Individually establishes accountability for internal control responsibilities in pursuit of entity objectives

Sources:

COSO Enterprise Risk Management: Establishing Effective Governance, Risk, and Compliance (GRC) Processes, Robert R Moeller COSO: How the COSO Frameworks Can Help, James DeLoach and Jeff Thomson

- 49 CFR 213 Track Safety Standards documents the minimum Federal standards for track inspection and maintenance.
- 49 CFR 214 Railroad Workplace Safety documents the minimum Federal standards for track personnel workplace safety.
- UTA Rail Maintenance Standards aligns UTA track inspection and maintenance operations with standards of 49 CFR 213
- Railway Worker Protection Plan (RWWP) aligns UTA on-track personnel activities with safety standards of 49 CFR 214

Condition:

- Although the Rail Maintenance Standards do identify some roles and responsibilities, they did not assign accountability or define how critical inspection and maintenance activities will be tracked, monitored, and followed up on
- Rail Maintenance Standards were last updated in 2014 and there was no evidence of periodic review
- No management review was performed to assure that the Rail Maintenance Standards aligned with 49 CFR 213 nor was a responsible party identified for ownership or approval authority of the Standards
- Although pocket handbooks for 49 CFR 213 and 49 CFR 214 were provided, were identified as
 the reliable standard for users to rely on, and was required to be carried at all times, there was
 no process in place to assure that all users required received one or that the handbooks were
 carried at all times
- Although job descriptions for Rail Maintenance Workers and Supervisors did include some aspects of roles and responsibilities, the job descriptions did not assign ownership, delegate responsibility, or ascribe accountability for critical MOW Infrastructure duties
- 3 (of 4) sign off sheets, for standard operating procedure training, tested were not complete with all employees signing off that they attended

Root/Cause Analysis:

Management placed reliance and trust on expertise of MOW personnel to perform

 Management placed reliance on FRA inspection reports to assess performance and inform corrective action rather than to design a comprehensive system of controls to ensure compliance with regulatory requirements

Effect:

Governance best practices such as formal delegation of authority, assignment of roles and responsibilities, as well as the design of critical controls for performance of critical processes was not undertaken, which increases the risk that UTA may be non-compliant with Federal regulations.

Recommendations

- Management should consider formally assigning roles and responsibilities through a policy, operating procedures, or a combination of both as deemed appropriate. Operating procedures should also include the controls designed by management to minimize risk in MOW-Infrastructure operations and align activities with the requirements of 49 CFR 213 and 49 CFR 214 for the following areas:
 - o Inspections
 - o Maintenance
 - o Training
- Management should review the set of standards to ensure it aligns with the CFRs

Management Agreement	Owner	Target Completion Date
Yes	Director of Asset Management	12/31/2019

- Management has recently (July 2019) restructured MOW and created an "Inspection and Compliance Group". This group is responsible for compliance to the CFRs. The group consists of both MOW Infrastructure inspectors (4) and MOW Systems Inspectors (19) as well as a Manager and Supervisors (4). Roles and responsibilities have been assigned by the approved restructure plan dated May 2019. This restructure plan was shared with everyone in the MOW departments and the organizational chart and group responsibilities will be posted in all MOW work areas.
- The Light Rail/MOW training department is working on a program to satisfy 49 CFR 243 that will be going into effect the start of 2020. With this new program all training will be tracked and logged through the LMS system and will ensure compliance with the CFRs.
- Management will be updating the Rail Maintenance Standards to include the new CWR plan that
 is in process of being reviewed by the FRA. Once the new plan is approved it will be included in
 the Rail Maintenance Standards and management will take the opportunity at that time to update
 the standards and ensure the standards align with the CFRs.

Final Status N/A

- IA reviewed MOWs restructure plan to verify responsibilities are assigned, and determine
 compliance is defined in responsibilities. IA also conducted a site visit to the 2264 South 900
 West location and verified the posting of the Inspection and Compliance Group information in
 the work areas. The department of MOW has established a formal delegation of authority, and
 assignment of roles, responsibilities and accountability. The issue has been mitigated.
- IA reviewed the new training program and verified it had been approved by the Federal Railroad Administration as satisfying the requirements dictated in 49 CFR 243. The program has been loaded into LMS for tracking. The issue has been mitigated.

 The CWR plan was separated from the Rail Maintenance Standards and approved by the Federal Railroad Administration (FRA). The issue has been mitigated.

Owner	Target Completion Date
Director of Asset Management	N/A

2. Inspection

Preliminary Finding R-19-04-02 High Criteria:

- 49 CFR 213 Track Safety Standards documents the minimum Federal standards for track inspection and maintenance.
- The Rail Maintenance Standards defines inspection expectations from Management, including:
 - o An inspection form is completed manually and filed for every inspection performed
 - o Remediation is documented for defects identified on inspection forms
 - o For each type of inspection performed (track, switch, special, temperature) there is a corresponding template for use in completing the inspection form
 - o 2 Track inspections are performed each week for every applicable section of track
 - Each track inspection week begins on Sunday and ends of Saturday
 - o Each switch is inspected once a month
 - Special Inspections are to be performed when potential damage has occurred to tracks due to accidents and derails
 - Temperature inspections are performed on applicable track sections when the temperature reaches 95 degrees

Condition:

- From a sample of 84 inspections tested, the following exceptions were identified:
 - o 7 out of 84 track inspections tested did not have an inspection form on file.
 - o 5 instances of a single segment and week tested were missing a single track inspection form.
 - o 1 week and segment tested was missing both inspection forms.
- One track inspection form (out of 6 total track inspections with a defect identified) had no remediation information
- Switch Inspections on same form occurred 12 days apart, increasing the risk that inspections are not performed within requisite 30 days.
- No standard for identifying, assessing, and tracking incidents for Special and Temperature Inspection need
- No documentation created to indicate completion and acceptance for the quarterly review of inspection logs
- Same person performing quarterly review of inspection forms also performed inspections and filed forms
- No tracking of defects identified outside the paper inspection forms to confirm that remediation happened in line with regulatory requirements or for further analysis of ongoing issues

Root/Cause Analysis:

- No documented procedures to guide users through the inspection process and requirements
- Reviews happened quarterly which inhibited timely identification of issues for correction and feedback

Effect:

- There was an elevated risk of fines and findings from the FRA due to inspection records not available in line with requirements
- All required special inspections may not be performed and if performed, may not be documented
- Poor segregation of duties for quarterly inspection form review increases the risk that inspections are not complete, valid, or correct
- Increased risk that switches may be inspected outside the requisite time period due to switch inspections on the same form happening 13 days apart

Recommendations

- Management should include critical controls in standard operating procedures to mitigate risk in FRA mandated inspection activities. Areas of risk include, but are not limited to:
 - o Insufficient number of inspections performed
 - o Inspections not occurring within required timeframe
 - o Inspection documentation not complete, valid, accurate, or retained
 - Requirements and responsibility for monitoring, communicating, recording, and performing FRA inspections not defined or understood, including for:
 - Track inspections
 - Switch Inspections
 - Special Inspections
 - Temperature inspections
- Management should also consider development or purchase of an electronic system to assist in monitoring, communicating, recording, and performing FRA inspections.

Management Agreement	Owner	Target Completion Date
Yes	Director of Asset Management	6/30/2020

- Management agrees that better control and tracking will help mitigate non-compliant or missed inspection risks. Management will create an inspection process flow chart that will be used to control, schedule and track FRA defect and maintenance work.
- Management will look into developing or purchasing a system that tracks inspections and maintenance work orders. Target completion date is pushed to mid-2020 in order to properly investigate FRA approved track inspection and maintenance tracking systems.

Final Status Low

- Wendia software contract 15-1494, with modification was selected to utilize the contract, and it
 will integrate into current systems. As of August 2020, the Director is waiting on the program
 mock-up for review. The issue is in process of being mitigated.
- IA verified a Priority Process flowchart was prepared and available for review. The issue is mitigated.

Management Agreement	Owner	Target Completion Date
Yes	Director of Asset Management	3/31/2021

3. Maintenance

Preliminary Finding R-19-04-03 High

Criteria:

- 49 CFR 213 Track Safety Standards documents the minimum Federal standards for track inspection and maintenance.
- In order to align with 49 CFR 213 Management requires that all defects be addressed immediately or as soon as possible. Additionally, all maintenance activities are overseen by a supervisor qualified under the requirements of 49 CFR 213.

Condition:

- Maintenance requests are not all tracked or linked to maintenance performed
- The appropriate methods of communicating and documenting maintenance requests has not been defined
- Although a system for logging maintenance is in place, not all maintenance performed is logged, nor is it clearly defined what meets the threshold for tracking
- Although standard practice is to reorder additional parts for long lead time items whenever the shelf stock gets down to 1, there is no assigned responsibility for monitoring and reordering or tracking of performance

Root/Cause Analysis:

Requirements for requesting, initiating, documenting, and tracking the maintenance process have not been defined.

Effect:

- Maintenance records may not be complete
- Maintenance activities may be different than Management expectations for example, all maintenance requests received may not have been addressed

Recommendations

- Management should consider formally documenting the critical policies and procedures of the maintenance process, such as, but not limited to:
 - o How maintenance needs should be identified, recorded, and tracked
 - o Procedures and assignment of responsibility for monitoring that maintenance needs identified have been followed up on and addressed
 - Assignment of authority to approve maintenance requests and how requests should be communicated
- Management should also consider developing or purchasing a system that tracks maintenance activities which integrates with the inspection system recommended in R-19-04-02.

Management Agreement	Owner	Target Completion Date
Yes	Director of Asset Management	6/30/2020

- Management will look into developing or purchasing a system that tracks maintenance work orders and integrates with the inspection system. Target completion date is pushed to mid- 2020 in order to properly investigate FRA approved track inspection and maintenance tracking systems.
- Management will create a maintenance process flow chart that will be used to control and track FRA defects and maintenance work orders based on priority rating. This flow chart will detail who has authority to approve maintenance requests and the communication procedures to be followed.

Final Status Low

- Wendia software contract 15-1494, with modification was selected to utilize the contract, and it
 will integrate into current systems. As of August 2020, the Director is waiting on the program
 mock-up for review. The issue is in process of being mitigated.
- IA verified a Priority Process flowchart was prepared and available for review. The issue is mitigated.

Management Agreement	Owner	Target Completion Date
Yes	Director of Asset Management	3/31/2021

4. Contracting

Preliminary Finding R-19-04-04

Medium

Criteria:

UTA Policy 3.1.6 Contracting Authority identifies the employees, by level of authority, who may execute contracts and agreements on UTA's behalf as well as define controls in place regarding the commitment and obligations of UTA to contractual obligations.

Condition:

- The Roadway Worker In Charge signed the 2 contracts selected for testing but his oversight authority is not defined or formally documented
- For 1 (of 2) contracts tested, there was a provision that held the Contractor not liable for any damages due to delay in testing, which elevated the risk of unforeseen or unmitigated obligations
- For 1 (of 2) contracts reviewed a contract provision automatically qualified the Contractor as an additional insured per UTA's insurance coverage, after a \$5M self-insurance retention. However, the Claims and Insurance Manager identified this clause as risky and not recommended or approved.

Root/Cause Analysis:

 Responsibility to assess contract value, including the estimated cost of UTA self-insuring a contractor, is not assigned by UTA Contracting Policy 3.1.6

The Claims and Insurance Manager was on vacation when review of the contract was required

Effect:

- Not all costs may have been properly considered in valuation, including cost to insure contractor
- Possible non-compliance with signature requirements of UTA Contracting Policy 3.1.6 with regard to an estimated cost of insurance that was not included
- Liability may have been created that UTA did not anticipate

Recommendations

- Management should consider documenting contract valuation procedures in an SOP including the following:
 - How contract provisions without a clear nominal value, but that does obligate UTA resources, should be identified and valued
 - Who may approve contract valuations where such provisions are identified
 - How total contract values should be documented, monitored, and reported in the contract database
- Additionally, consideration may want to be given to formally identifying who may approve inclusion of a contractor on UTA insurance or whether it is appropriate.

Management Agreement	OWING	raiget Completion Date
Yes	Senior Supply Chain Manager	12/31/2019
Supply Chain will revise our	SOP to define the difference between	en Negotiated Price Discounts
(NPD), Blanket Purchase Orders (BPO), and Contracts, and when to use each type. This definition		
will clarify when it is appropriate to use a NPD or BPO based on dollar value and if the contract is		

We will also review the Procurement SOP insurance section and make changes as agreed to by UTA and the AG legal counsel with regard to insurance requirement approvals.

Final Status Medium

This change was placed on hold due to department process changes. The department implemented a new program, Laserfiche, during 2019, and was in the process of determining the extent of utilization before the departments Preliminary Assessment. The Preliminary Assessment was completed April 2020 with SOP change recommendations. IA will evaluate the SOP during the Procurement Contract Audit for NPD, BPO and Contract dollar value and insurance requirements.

Management Agreement	Owner	Target Completion Date
	Supply Chain Manger	

5. Roadway Worker in Charge

an exclusivity contract or not.

Preliminary Finding R-19-04-05

Criteria:

- 49 CFR 214.319 requires working limits be established on controlled track and placed under the authority of a designated RWIC who is qualified, for the purpose of establishing on-track safety of UTA personnel, contractors, or others with permission to enter UTA track outside of normal operation.
- Roadway Worker Protection Plan section 2.7 Roadway Worker in Charge identifies the related responsibilities of the position. Additional guidance is given throughout the plan for specific situations.

Condition:

- RWIC oversight authority is not defined or formally documented for MOW Management to prioritize MOW activities as needed.
- Procedures for identifying, requesting, and scheduling a RWIC were in place, however, they were not documented

Root/Cause Analysis:

Management relied on the expertise and experience of personnel to carry out the RWIC assignments rather than a formally designed process with defined controls

Effect:

In the absence of delegated authority as well as documented roles and responsibilities there was an elevated risk of:

- Competing priorities not being correctly adjudicated, such as when maintenance responsibilities conflict with contractor needs or desires.
- Contract work may be scheduled without a RWIC, leading to charges for work scheduled but not able to be performed

Recommendations

Management should consider documenting RWIC roles, responsibilities, and procedures, including, but not limited to:

- Process to request a RWIC and to whom
- Individual authorized to approve, or reject, a RWIC request
- The schedule of fees for RWIC provisioning
- Responsible party for tracking, documenting, and approving RWIC hours to be charged
- Responsible party for billing RWIC charges according to tracked hours
- Process for reconciliation of RWIC fees collected and hours worked

	Owner	Target Completion Date
Yes	Director of Asset Management	3/31/2020

Management will work with the UTA property division to develop a process flow chart that documents the RWIC process for all items mentioned above. This flow chart will show responsible party for each step so no misunderstandings will occur.

Final Status	N/A
--------------	-----

IA verified a flow chart has been developed. The flow chart documents the processes for assigning and billing an RWIC for a 3rd party contractor. The RWP program manual dictates the RWICs responsibilities. The issues have been mitigated.

Management Agreement	Owner	Target Completion Date	
Yes	Director of Asset Management	N/A	

6. Training

Preliminary Finding R-19-04-06 Medium Criteria:

- Safety training is mandated by the FRA for all MOW employees, Inspectors, and Maintenance Supervisors.
- Management aligns its processes with FRA requirements through requiring the following:
 - All employees to be trained on the Roadway Worker Protection Plan (RWWP) prior to working on or near UTA tracks
 - Prior to becoming an Inspector or a Supervisor personnel must pass the basic and advanced courses of Track Maintenance from the Railway Educational Bureau

Condition:

- Internal Program:
 - Training was tracked using the learning management system (LMS). The Rail Maintenance Supervisor received weekly emails regarding past due or expired training but there was no standard timeframe or documentation created for following up with employees to ensure all outstanding training is completed
 - o LMS reports listing overdue training were not retained on file
 - There was no documentation on file evidencing the former UTA General Manager's approval of MOW General Code of Operating Rules (GCOR) training
 - There are no standard on the job training requirements for MOW workers for becoming a qualified inspector.
 - Although employees were trained and signed off on individual SOPs at department meetings, not all employees were present and no other process was identified to assure that all employees completed the training and signed off for each SOP
- FTA Standards:
 - The test administered by the Manager of Right of Way Assets for potential inspectors may be waived at his discretion with no standard criteria or written guidelines
 - Tests to certify Inspectors administered by management were not signed off indicating review and acceptance
 - There is no documentation of the review performed by the Manager of Right of Way Assets of candidate knowledge to perform switch inspection which may be required for some candidates to be elevated to Inspector

Root/Cause Analysis:

- No documented guidance for users in the form of an SOP or other governing document in how to ensure accuracy, validity, and completeness of MOW – Infrastructure personnel training
- The Rail Maintenance Supervisor stated that resources were not adequate in terms of time available to provide training and perform supervisory duties.

Effect:

- Increased risk that personnel may not be fully compliant with training requirements
- Elevated risk that personnel seeking certification as Inspector may not have consistent requirements or that commensurate qualification may not be well communicated resulting in the perception that requirements are inconsistent
- Practices may vary by supervisor and there is no documentation created to evidence what training was performed

Recommendations

Management should consider formally documenting in an SOP or other governing document the roles, responsibilities, and procedures for how to ensure the accuracy, validity, and completeness of MOW-Infrastructure personnel training.

Management Agreement	Owner	Target Completion Date
Yes	Director of Asset Management	3/31/2020

- The Light Rail/MOW training department is working on a program to satisfy 49 CFR 243 that will be going into effect the start of 2020. With this new program all training will be tracked and logged through the LMS system and will ensure compliance with the CFRs.
- Management will work with the Light Rail/MOW training department to develop a process flow chart that details the training cycle of employees.

Final Status N/A

IA reviewed the new training program and verified it had been approved by the Federal Railroad Administration as satisfying the requirements dictated in 49 CFR 243. The program has been loaded into LMS for tracking. Management established the Master training chart to assist in ensure all employees receive proper training. Issues have been mitigated.

Owner	Target Completion Date
Director of Asset Management	N/A

RATING MATRIX

DETAILED FINDING PRIORITY RATING

Descriptor	Guide
High	Matters considered being fundamental to the maintenance of internal control or good corporate governance. These matters should be subject to agreed remedial action within three months.
Medium	Matters considered being important to the maintenance of internal control or good corporate governance. These matters should be subject to agreed remedial action within six months.
Low	Matters considered being of minor importance to the maintenance of internal control or good corporate governance or that represents an opportunity for improving the efficiency of existing processes. These matters should be subject to agreed remedial action and further evaluation within twelve months.

DISTRIBUTION LIST				
Name, Title	For Action ¹	For Information	Reviewed prior to release	
Executive Director	*		*	
Chief Operating Officer	*		*	
Director of Asset Management	*		*	
Manager, Right of Way Assets	*		*	
Assistant Manager Rail	*		*	
Infrastructure Assets				
Rail Maintenance Supervisor	*		*	
Senior Supply Chain Manager	*		*	

¹For Action indicates that a person is responsible, either directly or indirectly depending on their role in the process, for addressing an audit finding.