



Office of Inspector General | United States Postal Service

Audit Report

Elevator Modernization Program

Report Number 20-200-R21 | February 1, 2021



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Highlights

Objective

Our objective was to determine whether the U.S. Postal Service is managing its elevator modernization program to minimize equipment downtime and the cost of repairs.

The Postal Service operates about 1,200 elevators at over 500 facilities, which includes passenger and freight elevators of various types and sizes. In November 2015, the Postal Service established the Elevator Modernization Program (EMP) to refurbish, upgrade, and modernize elevators at its facilities. The intent of the program was to improve elevator reliability for mail processing operations and ensure passenger elevators meet industry standards in terms of safety, reliability, performance, and aesthetics. Since January 2016, the EMP modernized 121 elevators at 53 facilities and expended about \$146 million in capital commitments.

Finding

The Postal Service has a program in place to modernize elevators, which generally decreased repair costs, improved facilities, and had a positive impact on operations. At the individual project level, the EMP has standard operating procedures and internal control measures in place to meet schedule and budget goals. In a survey conducted during the audit, most respondents stated that EMP projects positively affected operations and were completed timely.

However, the Postal Service did not manage the EMP to minimize equipment downtime and the cost of repairs. Specifically, they did not monitor and track

information in these areas to effectively measure program success. This occurred because the Postal Service did not formally establish program level goals, objectives, and measures for elevator downtime and repair costs to improve elevator safety, reliability, and performance. While management considered improving elevator reliability as a function of the EMP, they did not monitor, measure, or track information related to elevator downtime before or after completed modernization projects to identify improvement. Management also intended for the EMP to reduce elevator repair costs; however, they did not assess these costs before or after completed modernization projects to measure improvement.

Management focused on individual elevator project performance metrics such as adherence to the project budget, timelines, and completion as well as funding close out. Without program level goals, objectives, and measures in place for the EMP, management is hindered in their ability to identify project level issues or effectively measure program success, which includes elevator downtime, repair costs, and performance. Management did state that they intend to conduct a program evaluation in fiscal year 2021 and incorporate key performance indicators specific to the EMP when more projects are completed.

Recommendations

We recommended management develop and document program level goals, objectives, and measures for the EMP to assess elevator downtime, repair costs, and performance.

Transmittal Letter



OFFICE OF INSPECTOR GENERAL
UNITED STATES POSTAL SERVICE

February 1, 2021

MEMORANDUM FOR: TOM A. SAMRA
VICE PRESIDENT, FACILITIES

A handwritten signature in black ink, which appears to read "Jason M. Yovich", is centered below the memorandum header.

FROM: Jason M. Yovich
Deputy Assistant Inspector General
for Supply Management and Human Resources

SUBJECT: Audit Report – Elevator Modernization Program
(Report Number 20-200-R21)

This report presents the results of our audit of the U.S. Postal Service's Elevator Modernization Program.

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or need additional information, please contact Shirian Holland, Director, Supply Management and Facilities, or me at 703-248-2100.

Attachment

cc: Postmaster General
Corporate Audit Response Management

Results

Introduction/Objective

This report presents the results of our self-initiated audit of the Elevator Modernization Program (Project Number 20-200). Our objective was to determine whether the U.S. Postal Service is managing its elevator modernization program to minimize equipment downtime and the cost of repairs. See [Appendix A](#) for additional information about this audit.

Background

The Postal Service operates about 1,200 elevators at over 500 facilities. This includes passenger and freight elevators of various types and sizes. The age and condition of the elevators vary, but some equipment was installed over 50 years ago. This often results in higher repair costs, difficulty in finding parts due to obsolescence or a lack of materials, and increased downtime. To maintain uninterrupted mail processing operations, the Postal Service contracts with elevator service companies to provide regular preventive maintenance and address minor repairs. Additionally, some Postal Service facilities contract with on-site technicians to repair out-of-service elevators during scheduled operational hours.¹

In March 2015, the Postal Service awarded a contract to the National Elevator Inspection Services Corporation (NEIS) to assess the reliability and remaining useful life of elevators at its facilities.² The NEIS identified the elevators requiring modernization, code upgrades, and deficiencies, which included obsolete equipment, frequent malfunctions, and damaged door hardware and equipment. This assessment grouped Postal Service elevators into four categories based on remaining useful life (see Table 1).

Table 1. NEIS Assessment of Postal Service Elevators

Remaining Useful Life (in years)	Number of Elevators
0-2	105
2-5	295
5-10	566
Over 10	273
Total	1,239

Source: Postal Service Facilities Management.

In November 2015, the Postal Service established the Elevator Modernization Program (EMP) to refurbish, upgrade, and modernize elevators at its facilities. The intent of the program was to improve elevator reliability for mail processing operations and ensure passenger elevators meet industry standards for safety, reliability, performance, and aesthetics. The program initially focused on freight elevators, which are most critical to Postal Service operations, and prioritized those near the end of their remaining life. Over time, the Postal Service expanded the program to include passenger elevators.

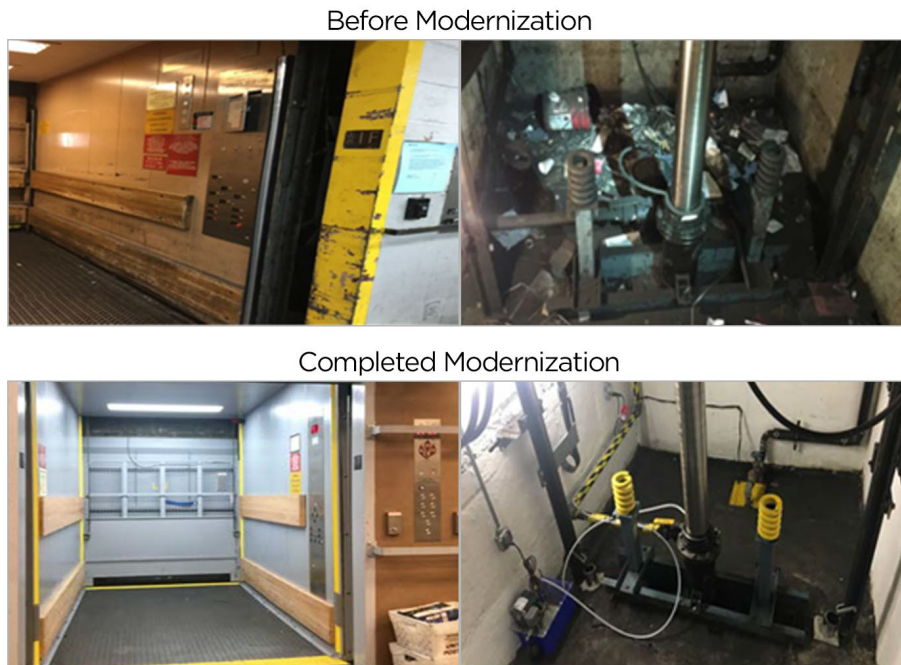
“In November 2015, the Postal Service established the Elevator Modernization Program (EMP) to refurbish, upgrade, and modernize elevators at its facilities.”

¹ These are defined as resident technician services.

² The assessment of all vertical lift equipment included freight and passenger elevators, escalators, dumbwaiters, and material lifts located at Postal Service facilities.

Since January 2016, the EMP upgraded and modernized 121 elevators at 53 retail post offices and mail processing facilities. These facilities were in the Atlantic (78), Central (26), Southern (10), and Western-Pacific (7) Retail and Delivery Operations areas. See Figure 1 as an example of a post office with modernized elevator equipment.

Figure 1: Freight Elevator at New York Manhattanville Station, NY



Source: USPS photographs from July 2016 and September 2018.

Currently, there are an additional 205 facilities with over 400 elevators scheduled for future modernization projects. The Postal Service has expended about \$146 million in capital commitments for the EMP (see Table 2).

Table 2. EMP Total Capital Commitments by Fiscal Year

Fiscal Year	Actual	Plan
2017	\$21,201,777	\$37,000,000
2018	49,439,817	50,000,000
2019	40,708,808	40,000,000
2020	34,821,734	35,000,000
Total	\$146,172,136	\$162,000,000

Source: Electronic Data Warehouse - Financial Performance Report.

Finding #1: Program Goals and Measures Not Established

The Postal Service has a program in place to modernize elevators, which generally decreased repair costs, improved facilities, and had a positive impact on operations. At the individual project level, the EMP has standard operating procedures and internal control measures in place to meet schedule and budget goals. In a survey conducted during the audit, most responded that EMP projects positively affected operations and were completed timely.

However, the Postal Service did not manage the EMP to minimize equipment downtime and the cost of repairs. Specifically, they did not monitor and track information in these areas to effectively measure program success. This occurred because the Postal Service did not formally establish program level goals, objectives, and measures for elevator downtime and repair costs to improve elevator safety, reliability, and performance.

“The Postal Service did not formally establish program level goals, objectives, and measures for elevator downtime and repair costs to improve elevator safety, reliability, and performance.”

Elevator Downtime

EMP management did not develop a uniform method to capture elevator downtime from the facilities. While management considered improving elevator reliability as a function of the EMP, they did not monitor, measure, or track information related to elevator downtime before or after completed modernization projects to identify improvement.

We surveyed personnel at Postal Service facilities with recently completed modernized elevators (see [Appendix B](#)). Facility personnel reported that the elevators at their location were critical to maintaining efficient and normal operations (87 percent). Additionally, they agreed that the EMP projects resulted in an improvement to their facility (80 percent) and had a positive impact on operations (64 percent). Further, nearly half of facility personnel (43 percent) responded that elevator downtime is tracked at their facility using different methods, such as manual logs or electronic spreadsheets, as well as using the contractor website and the electronic Facilities Management System (eFMS).³

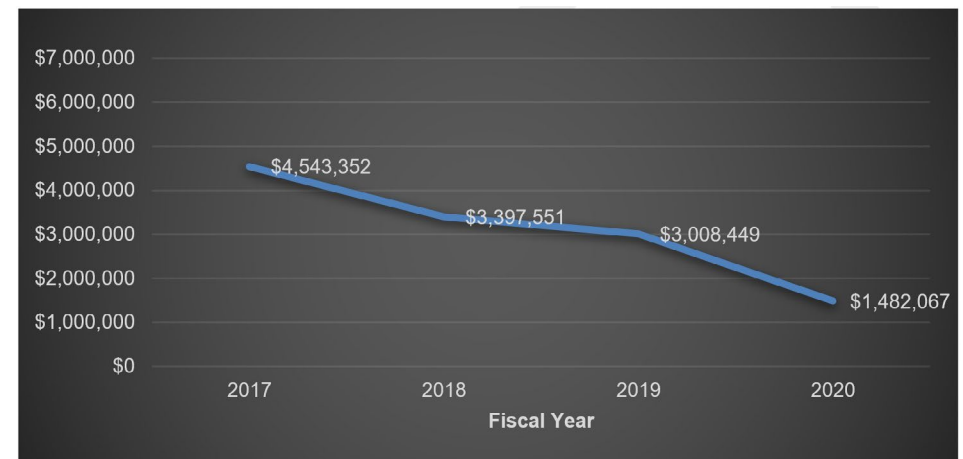
Management stated that older elevator equipment remained out of service longer prior to a modernization due to the challenges of locating replacement parts. As a result, they believed it was difficult to identify improvements in downtime. We identified information in the contractor's database that measures the time elevator equipment is out of service that could be used to assess downtime performance. Management expressed concerns about the accuracy of this data because the contractor manually entered the information. However, we found no evidence to support that management ever discussed their concerns with the contractor about the data or took other actions to identify improvements in downtime.

Elevator Repair Costs

Management also intended for the EMP to reduce elevator repair costs; however, they did not assess these costs before or after completed modernization projects to measure improvement. We reviewed elevator repair costs before and after the EMP and found they generally decreased since the start of the program.⁴ In the three years since completion of the first modernization projects in FY 2017, repair costs have averaged about \$2.6 million per year (see Figure 2).

“We reviewed elevator repair costs before and after the EMP and found they generally decreased since the start of the program.”

Figure 2. Total Elevator Repair Costs for FYs 2017 - 2020



Source: U.S. Postal Service Office of Inspector General (OIG) analysis.

³ The official Postal Service record for real property inventory and the management of all property related projects.

⁴ We obtained and reviewed payments for elevator repairs from fiscal years (FY) 2015 through 2020.

During our review, we judgmentally sampled 14 facilities that had recently modernized elevators within the EMP. We identified the elevator repair costs paid by the Postal Service before and after the modernization project. For these facilities, we determined that repair costs generally decreased in the periods following the elevator modernization.

Program Measures

The EMP is comprised of a portfolio of individual projects within the Facilities Repair and Alterations programs. While standard operating procedures, goals and objectives, and internal control measures are in place at the individual project level, management did not document program level controls for the EMP. Specifically, management did not design key program elements such as goals and objectives, or a description of how they are to be achieved.

The Postal Service has project managers and contracts with architectural and engineering firms to oversee individual elevator modernization projects. The contractors manage the projects and communicate project status with EMP management. Management considered the EMP manager to be the individual solely responsible for oversight of all individual modernization projects. Management also relied on the EMP manager to prepare and monitor the budget, select projects, and report on ongoing and completed projects.

The EMP has expanded since its inception in 2015, yet elevator modernization projects were not formally prioritized nor were program management responsibilities established and documented. To their credit, we found the EMP manager incorporated best practices during project initiation and planning, including identifying cost savings for the Postal Service, based on personal expertise gained as a prior contracting officer. The EMP manager selected

elevator modernization projects based primarily on the 2015 NEIS assessment. In addition, the manager selected elevators based on the proximity to larger projects or included modernizations on all equipment within the same facility.

We identified other factors the EMP manager did not consider, such as frequency of usage and criticality to Postal Service operations, which may be instrumental in prioritizing elevators for the modernization program. Management stated that they are in the process of identifying the next phase of the modernization program and are considering conducting a re-assessment of all elevators.

This occurred because management regarded the EMP as a headquarters component of the Repair and Alterations group and did not design EMP-specific program goals, objectives, and measures. Further, they focused on individual elevator project performance metrics such as adherence to project budget, timelines, and completion as well as funding close out. Management stated that they intend to conduct a program evaluation in FY 2021 and incorporate key performance indicators specific to the EMP when more projects are completed.

Program management consists of overseeing multiple projects and operations to achieve a common strategic objective, while project management focuses on delivering a single project. Project management definitions generally identify five phases of a project lifecycle: (1) Initiating, (2) Planning, (3) Executing, (4) Monitoring and Controlling, and (5) Closing.⁵ While several aspects of program and project management are similar, they require different people, experience, and processes. Program managers are responsible for effectively managing the program within budget at required levels of performance and for overseeing subordinate projects. Within the program, project managers are responsible for the planning, controlling, and reporting of individual projects to ensure they are completed on schedule and within budget.

⁵ Project Management Institute, *A Guide to the Project Management Body of Knowledge*.

Management is responsible for reviewing program performance by setting goals and measuring the results.⁶ Further, accountability for individual project results is accomplished by documenting project goals and performance and should be considered as part of a recurring risk assessment for the program. Without program level goals, objectives, and measures in place for the EMP, management is hindered in their ability to identify project level issues or effectively measure program success, which includes elevator downtime, repair costs, and performance.

“Without program level goals, objectives and measures, management is hindered in their ability to measure program success.”

Recommendation #1

We recommend the **Vice President, Facilities**, develop and document program level goals, objectives, and measures for the Elevator Modernization Program to assess elevator downtime, repair costs, and performance.

Management’s Comments

Management agreed with the recommendation in the report and stated that they will develop program level goals, objectives, and measures for the EMP. The target implementation date is April 30, 2021. See [Appendix C](#) for management’s comments in their entirety.

Evaluation of Management’s Comments

The OIG considers management’s comments responsive to the recommendation and their planned actions should resolve issues identified in the report.

All recommendations require OIG concurrence before closure. Consequently, the OIG requests written confirmation when corrective actions are completed. Recommendation 1 should not be closed in the Postal Service’s follow-up tracking system until the OIG provides written confirmation that the recommendation can be closed.

⁶ Title 39 U.S. Code §2801-2805.

Appendices

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Appendix A: Additional Information

Scope and Methodology

The team assessed the program management of completed and active elevator modernization projects from January 2016 through December 2020. This included a review of completed projects to assess associated repair costs and equipment downtime before and after a completed modernization.

To accomplish the objective, we:

- Reviewed applicable policies and procedures, process flowcharts, and contracts to gain an understanding of how the Postal Service manages the modernization projects and the EMP. The team also reviewed documentation to identify internal controls related to project management, such as work reviews, invoice approvals, and project closeout.
- Interviewed Postal Service management to gain an understanding of the management, responsibilities, and monitoring of elevator projects and overall program goals and assessments. The team also discussed information system capabilities, limitations, and reporting with responsible officials.
- Visited a processing and distribution center in Boston, MA and observed completed and ongoing elevator modernization projects. The team also interviewed the plant manager, manager maintenance operations, industrial engineer, and the on-site technician about the elevator modernization process.
- Reviewed and conducted analyses on a sample of modernization projects to assess the effectiveness of the program to reduce the number of elevator repair and maintenance problems and repair costs.
- Reviewed data in eFMS and the contractor database for elevator out-of-service time information.

- Interviewed Supply Management personnel to discuss contract solicitation and award processes associated with the EMP.
- Reviewed and analyzed electronic and credit card cost data for repairs associated with modernized elevator equipment.
- Selected and reviewed a judgmental sample of elevator modernization projects for testing of project controls and to identify the impact on equipment downtime and repair costs.
- Conducted and analyzed results from an electronic survey of personnel at 53 facilities with completed elevator modernization projects.

We conducted this performance audit from May 2020 through February 2021 in accordance with generally accepted government auditing standards and included such tests of internal controls as we considered necessary under the circumstances. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our finding and conclusion based on our audit objective.

We assessed the reliability of computer-generated data from the Postal Service's eFMS system. Although we did not test the validity of controls over these systems, we assessed the accuracy of the data by reviewing existing information, comparing data from other sources, and interviewing Postal Service officials knowledgeable about the data. Therefore, we determined the data were sufficiently reliable for the purposes of this report.

Prior Audit Coverage

The OIG did not identify any prior audits or reviews related to the objective of this audit within the last five years.

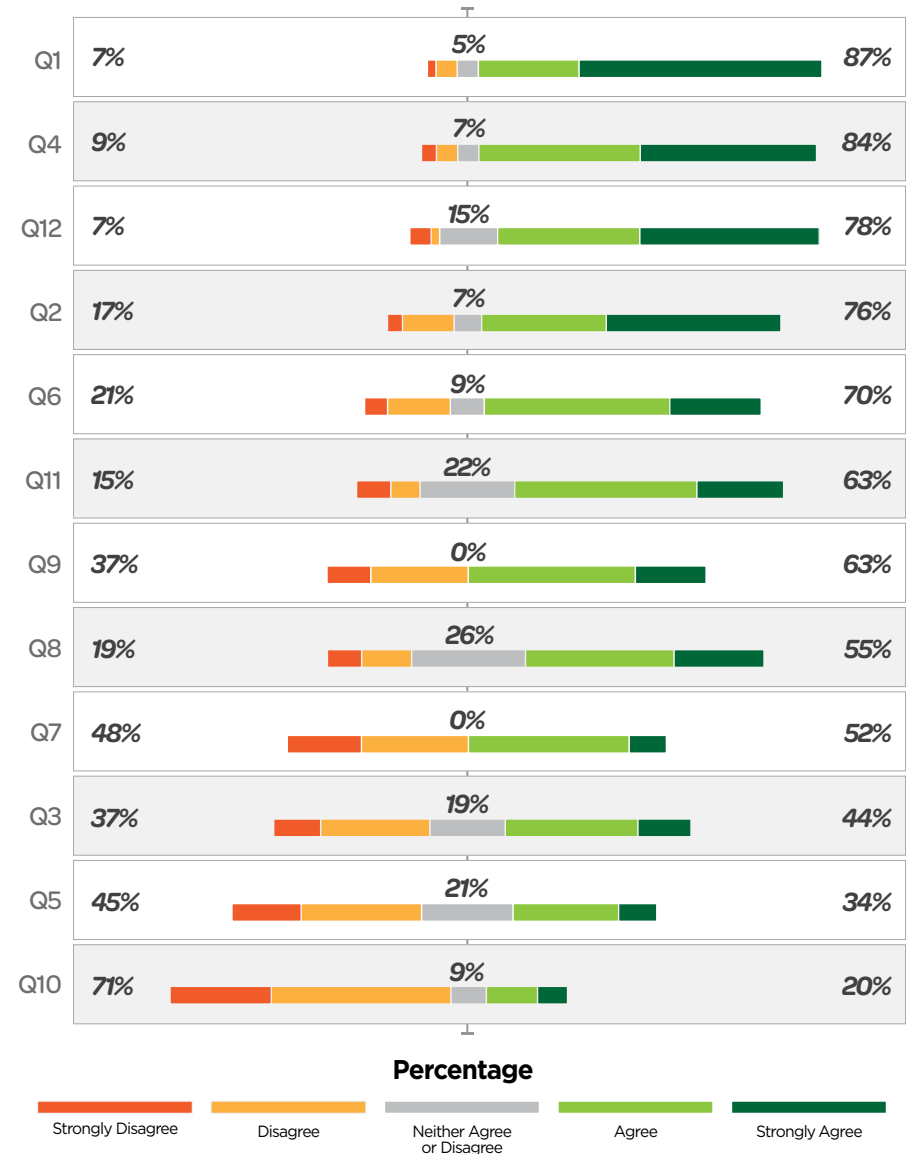
Appendix B: Survey Results

Elevator Modernization Program Facilities Survey

In September 2020 we conducted an electronic survey of postmasters, maintenance personnel, and first-line managers at 53 facilities with modernized elevators. We received responses from 55 of 61 (90 percent) selected personnel at 50 facilities. We asked respondents to indicate their level of agreement with the following questions:

1. The elevator(s) at my location is/are critical to maintaining efficient and/or normal operations.
2. The elevator(s) at my location frequently needed repair or maintenance before the modernization project started.
3. The amount of time the elevator(s) is out of service is tracked at my facility.
4. The activities of the elevator modernization project were coordinated with local facility personnel.
5. The elevator modernization project negatively affected operations at my location.
6. Normal operational processes had to be changed at my location to accommodate work on the elevator modernization project.
7. Additional operational costs or workhours were incurred at my location due to the elevator modernization project.
8. The elevator modernization project was completed timely.
9. The elevator(s) at my location has needed maintenance and/or repairs, in addition to regularly scheduled maintenance.
10. The elevator(s) at my location have needed repair or maintenance due to possible/suspected misuse or abuse.
11. The elevator modernization project positively affected operations at my facility.
12. Overall, I consider the results of the elevator modernization project to be an improvement at my facility.

Elevator Modernization Survey Respondents: 55



Source: OIG analysis.
Note: Percentages may not total 100 due to rounding.

Appendix C: Management's Comments

TOM A. SAMRA
VICE PRESIDENT, FACILITIES



January 26, 2021

JASON M. YOVICH
DEPUTY ASSISTANT INSPECTOR GENERAL FOR SUPPLY MANAGEMENT AND HUMAN
RESOURCES

SUBJECT: Elevator Modernization Program (Project Number 20-200-DRAFT)

Thank you for the opportunity to review and comment on the above referenced audit regarding the Elevator Modernization Program. Management appreciates that the OIG recognizes the positive impact that the elevator modernization program has on USPS operations.

Recommendations:

*OIG Recommendation #1: We recommend the **Vice President, Facilities**, develop program level goals, objectives, and measures for the Elevator Modernization Program to assess elevator downtime, repair costs, and performance.*

Management agrees with the OIG recommendation and will develop program level goals, objectives and measures for the Elevator Modernization Program.

Target Implementation Date:

April 30, 2021

Responsible Official:

Manager, Repair and Alteration – East

In conclusion, Management appreciates the OIG's efforts in auditing the Postal Service's Elevator Modernization Program and preparing this Draft Audit Report.

A handwritten signature in black ink, appearing to read "Tom Samra".

Tom Samra
Vice President, Facilities

c: Manager, Corporate Audit Response Management

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