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# **CITY OF SAN ANTONIO**

## **OFFICE OF THE CITY AUDITOR**



Audit of Transportation and Capital Improvements Department

Infrastructure Management Program

Project No. AU19-028

July 31, 2019

Kevin W. Barthold, CPA, CIA, CISA  
City Auditor

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## Executive Summary

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As part of our annual Audit Plan approved by City Council, we conducted an audit of the Transportation and Capital Improvements (TCI) Department, specifically Infrastructure Management Program (IMP). The audit objectives, conclusions, and recommendations follow:

**Determine if projects included in the TCI Infrastructure Management Program are completed in accordance with the timeline and project scope described in the plan.**

Projects included in the TCI Infrastructure Management Program (IMP) were completed in accordance with the plan. TCI has established processes for the development, implementation and monitoring of IMP projects. Additionally, TCI accurately issued payments in accordance with approved vendor contracts.

However, there are opportunities to strengthen controls associated with performing and documenting project inspections. Additionally, we identified improper segregation of duties for the management and oversight for a portion of IMP projects.

We recommend that TCI Management:

- Develop standardized procedures for the consistency of inspections, the required documentation, and the location for retaining that documentation in order to ensure adequate project quality and completion.
- Establish properly segregated duties for the management of the Natural Creekway Debris Removal Program to reduce the opportunity for fraud and misappropriation of assets.

TCI Management agreed with the audit findings and has developed positive action plans to address them. Management's verbatim response is in Appendix B on page 6.

# Table of Contents

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Executive Summary .....	i
Background.....	1
Audit Scope and Methodology .....	2
Audit Results and Recommendations .....	3
A. IMP Project Monitoring.....	3
B. Segregation of Duties .....	3
Appendix A – Staff Acknowledgement.....	5
Appendix B – Management Response.....	6

## Background

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The City's Infrastructure Management Program (IMP) is a five-year rolling program which focuses on maintenance of San Antonio's infrastructure and provides the City with a structured program schedule. As a rolling five-year plan projects are added to the program's fifth year and refinements are made to those scheduled in the previous four years. The proposed five-year IMP for each district is presented annually to City Council for their review and input. The finalized plan is approved by Council with the adoption of the annual budget for the upcoming fiscal year. Upon approval, funding for the first fiscal year of the five-year program is made available after October 1<sup>st</sup>. Programmed projects may be changed or reprioritized due to Council requests, budgetary constraints, or other unforeseen conditions.

The IMP is executed through the use of in-house City forces as well as contracts procured. The goal of the IMP is to provide the best possible maintenance for the City. Below is a table detailing the historical budgets approved across all categories of the IMP.

Budget Adoption History for Infrastructure Management Program (in 000's)								
FY	Streets	Sidewalks	Markings	Drainage Maint.	Signals & Intersections	Alley Maint.	Bike Facilities	Total
2015	\$41,000	\$7,900	\$1,000	\$3,500	\$1,160	\$800	\$1,000	<b>\$56,360</b>
2016	64,000	15,000	1,000	3,500	1,160	800	1,000	<b>86,460</b>
2017	64,000	15,000	1,000	3,500	1,160	1,100	1,000	<b>86,760</b>
2018	99,000	5,000	5,700	3,500	1,160	1,100	500	<b>115,960</b>
2019	110,000	9,000	5,700	3,500	1,300	1,100	1,000	<b>131,600</b>

## Audit Scope and Methodology

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The audit scope included project management efforts related to the Infrastructure Management Program (IMP) for fiscal years 2017 and 2018.

We interviewed Transportation and Capital Improvements (TCI) staff to gain an understanding of the development, implementation, and monitoring of the IMP. We performed walk-throughs and reviewed TCI's project management processes to include task order issuance, inspections, and invoice approval.

We compared the council approved IMP to the implemented plan for fiscal years 2017 and 2018 to determine if approved projects were implemented accordingly. We selected a sample of 109 projects and verified that invoiced quantities and amounts were submitted in accordance to approved contract values. We reviewed the pay application request and approval process to determine if roles were appropriately segregated.

In addition, we reviewed 25 random projects that exceeded their estimated end date by greater than 90 days to determine if projects were monitored and inspected thoroughly. We also reviewed data from TCI's asset management database, also known as the project development database, to determine if changes from completed projects were updated appropriately.

We relied on computer-processed data in Primelink to validate quantities and amounts submitted for pay applications were done in accordance to approved task order contracts. Our reliance was based on performing direct tests on the data rather than evaluating the system's general and application controls. Our direct testing included reviewing Primelink's user access listing to verify that users were active TCI employees and their access level was appropriate. We do not believe that the absence of testing general and application controls had an effect on the results of our audit.

We conducted this performance audit in accordance with generally accepted government auditing standards. 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 objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

## Audit Results and Recommendations

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### A. IMP Project Monitoring

TCI effectively monitors IMP projects beginning with the active engagement of managers from project development through the design phase, contractor retention and construction. TCI's inspection team provides active inspection of the projects and monitors the projects during the period to ensure projects are built in accordance with design and construction standards. We tested a sample of 25 projects that exceeded their estimated end date by greater than 90 days and determined that projects are being monitored and contain supporting documentation.

However, TCI lacks standardized procedures detailing the frequency and documentation requirements for the inspection of IMP projects. We identified inconsistencies in the inspection frequency, the level of documentation retained, and the location of where inspection documents are stored.

Consistent inspections combined with sufficient support documentation helps ensure projects are completed in accordance to approved plans and specifications. Failure to standardize the consistency of inspections with sufficient documentation may result in inadequate project quality and completion.

### Recommendations

TCI Management should develop standardized procedures for the consistency of inspections, the required documentation, and the location for retaining that documentation in order to ensure adequate project quality and completion.

### B. Segregation of Duties

TCI does not have properly segregated duties for the management and oversight of the Natural Creekway Debris Removal Program, a subcategory to the IMP.

The Natural Creekway Debris Removal Program is executed through the use of an annual contract assigned to one vendor. In fiscal years 2017 and 2018, the Natural Creekway Debris Removal Program consisted of 184 projects for a total estimated cost of approximately \$2.1 million.

At the time of review, it was determined that the project manager over the Natural Creekway Debris Removal Program is responsible for scheduling projects, monitoring and documenting inspections, and receiving, reviewing, and approving invoices.

Improper segregation of duties can increase the opportunity for fraud and misappropriation of assets.

**Recommendation**

TCI Management should establish properly segregated duties for the management of Natural Creekway Debris Removal Program to reduce the opportunity for fraud and misappropriation of assets.

## **Appendix A – Staff Acknowledgement**

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Gabriel Treviño, CISA, Audit Manager  
Lawrence Garza, CFE, Auditor in Charge  
Denise Trejo, Auditor



## Appendix B – Management Response



### CITY OF SAN ANTONIO

SAN ANTONIO TEXAS 78283-3966

June 27, 2019

Kevin W. Barthold, CPA, CIA, CISA  
City Auditor  
San Antonio, Texas

RE: Management's Corrective Action Plan for Audit of Transportation and Capital Improvements  
Department Infrastructure Management Program.

Transportation and Capital Improvements Department has reviewed the audit report and has  
developed the Corrective Action Plans below corresponding to report recommendations.


Recommendation					
#	Description	Audit Report Page	Accept, Decline	Responsible Person's Name/Title	Completion Date
1	<b>A. IMP Project Monitoring</b>  TCI Management should develop standardized procedures for the consistency of inspections, the required documentation, and the location for retaining that documentation in order to ensure adequate project quality and completion.	3	Accept	Razi Hosseini, Interim TCI Director	12/31/19
<b>Action plan:</b> As a result of the 2013 IMP Audit, TCI developed and executed standard operating guidelines for the IMP. TCI was receptive of this audit because of its commitment to continuous improvement. The IMP contains seven maintenance programs totaling 16 sub-categories requiring a varying degree of inspections per type. TCI will develop a schedule of inspections for each of the 16 maintenance sub-categories, identifying the frequency, the required documentation and the location for retaining said documentation. The schedule will then be incorporated in the IMP Standard Operating Guidelines. TCI staff will be trained on the process.					

Audit of Transportation and Capital Improvements Department  
Infrastructure Management Program

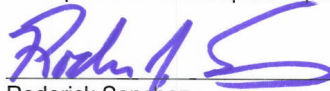
Recommendation					
#	Description	Audit Report Page	Accept, Decline	Responsible Person's Name/Title	Completion Date
2	<b>B. Segregation of Duties</b>  TCI Management should establish properly segregated duties for the management of Natural Creekway Debris Removal Program to reduce the opportunity for fraud and misappropriation of assets.	3	Accept	Nefi Garza, Assistant Director	12/31/19
<b>Action plan:</b> The Natural Creekway Removal Program is administered through a contract. The purpose of the program is to enhance channel capacity through brush and debris removal. The two largest creeks that impact the San Antonio River are Leon and Salado Creeks, which are maintained on a 3 year cycle, whereas the current maintenance cycle for smaller tributaries is 5 years. In August 2018, the duties were segregated by hiring one staff person to conduct inspections of the work prior to the approval of payment by the project manager. In addition, TCI will develop procedures addressing segregation of duties, to address all sub-programs, and include them in the IMP Standard Operating Guidelines.					

We are committed to addressing the recommendations in the audit report and the plan of actions presented above.

Sincerely,

  
 Razi Hosseini, P.E., R.P.L.S.  
 Interim Director /City Engineer  
 Transportation and Capital Improvements

7/23/19  
 Date

  
 Roderick Sanchez  
 Assistant City Manager  
 City Manager's Office

7-24-19  
 Date