

OFFICE OF THE CITY AUDITOR PERFORMANCE AUDIT

April 2019

GOkc Sidewalk Repair Program Could Be Improved



CITY OF
KANSAS CITY,
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CITY OF FOUNTAINS
HEART OF THE NATION



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April 22, 2019

Honorable Mayor and Members of the City Council:

This audit focuses on the Public Works Department's GOkc Sidewalk Repair Program's first year of operation and whether its practices and observable outcomes could be improved. The program evaluates, repairs, and replaces damaged or deteriorating sections of residential sidewalks, driveway entrances, and curbs and installs accessible curb ramps.


Program construction started in April 2018 and will continue over the next 20 years using a minimum of \$150 million funded by the 2017 voter approved tax increase. Construction contractors perform the work and city inspectors monitor the contractors' work.

The Sidewalk Repair Program has opportunities for improvement. We identified a number of contract requirements that the city did not enforce, including some concrete joints not placed where required or installed at required depths; not locating or protecting water curb stop boxes; some accessible curb ramps not installed according to the city's adopted accessibility requirements; and some construction cleanup activities not being completed timely. In addition, city inspectors do not use a checklist that includes the contract requirements to inspect the contractors' work, which can increase the chances for something to be missed. Also, the inspection process does not ensure mistakes are not repeated.

We also identified improvements that could strengthen the program including developing written procedures for how staff should accommodate trees on private property that are close to the sidewalk and communicating with residents about landscape restoration on their property.

We make recommendations to improve the integrity, safety, and appearance of sidewalks, driveways, and ADA accessible curb ramps; and improve the effectiveness of the inspection process and the sidewalk repair program.

The draft report was made available to the director of public works on March 28, 2019, for review and comment. Her response is appended. We would like to thank Public Works staff for their assistance during this audit. The audit team for this project was Terry Bray and Sue Polys.


Douglas Jones
City Auditor

GOkc Sidewalk Repair Program Could Be Improved

Table of Contents

INTRODUCTION	1
Objectives	1
Scope and Methodology	1
Background	3
GOkc Sidewalk Repair Program	3
Funding for GOkc Sidewalk Repair Program	3
Department of Justice Settlement Agreement	4
Prioritization of Sidewalk Repairs	4
Gokc Sidewalk Repair Program Work Flow	4
FINDINGS AND RECOMMENDATIONS	5
Public Works Not Ensuring All Contract Requirements Are Met	5
Expansion Joints Not Installed As Required	5
Contraction Joints Not Installed at Required Depth	7
Some Water Curb Stop Boxes Not Located or Protected	7
Curb Ramps Not Always Installed Correctly	11
Open Sidewalk Excavations Not Secured	13
Construction Activities on Blocks Not Completed Timely	14
Checklists Could Help Monitor Contractors and Prevent Repeat Mistakes	15
Ways to Improve Sidewalk Spot Repair Program	16
Address Sidewalks Too Close to Trees on Private Property	16
Communicate with Property Owners about Landscape Restoration	17
Recommendations	18
APPENDIX A	19
Director of Public Work's Response	19

GOkc Sidewalk Repair Program Could Be Improved

List of Exhibits

Exhibit 1. GOkc Sidewalk Repair Program Process	4
Exhibit 2. Expansion Joint Not Extended Across Entire Concrete Slab	6
Exhibit 3. Curb Stop Box (Marked with Blue Circle) Covered by New Sidewalk	8
Exhibit 4. New Sidewalk Removed to Make Curb Stop Accessible	9
Exhibit 5. New Sidewalk Removed to Access and Replace Damaged Curb Stop Box	10
Exhibit 6. Curb Ramp Not Flush with Pavement	11
Exhibit 7. Detectable Warning Not Extended Across Full Width of Ramp	12
Exhibit 8. Detectable Warnings Too Far Back on Ramp	13
Exhibit 9. Sidewalk Too Close to Tree on Private Property	17

Introduction

Objectives

We conducted this audit of the Public Works Department's GOKc Sidewalk Repair Program under the authority of Article II, Section 216 of the Charter of Kansas City, Missouri, which establishes the Office of the City Auditor and outlines the city auditor's primary duties.

A performance audit provides "findings or conclusions based on an evaluation of sufficient, appropriate evidence against criteria. Performance audits provide objective analysis to assist management and those charged with governance and oversight in using the information to improve program performance and operations, reduce costs, facilitate decision making by parties with responsibility to oversee or initiate corrective action, and contribute to public accountability."¹

This report is designed to answer the following question:

- Could the GOKc Sidewalk Repair Program improve program practices and observable outcomes?

Scope and Methodology

Our review focuses on whether the Public Works Department could improve the sidewalk repair program's practices and observable outcomes. We defined observable outcomes as those outcomes that someone who has some knowledge about the city's sidewalks, driveway entrances, curbs, and curb ramps construction specifications can observe and easily test.

The audit does not review the appropriateness of the contract specifications, the contractor's adherence to all contract specifications, contract payments, or prioritization of sidewalk repairs.

¹ Comptroller General of the United States, *Government Auditing Standards* (Washington, DC: U.S. Government Printing Office, 2011), p. 17.

GOKc Sidewalk Repair Program Could Be Improved

We reviewed a sample of sidewalks, driveway entrances, curbs, and curb ramps on city blocks. The blocks we reviewed were part of two different projects awarded to two different city contractors. One project covered about 27 blocks from the Missouri River to 39th Street and started March 19, 2018. The second project started April 9, 2018 and covered about 34 blocks from 39th Street to 85th Street.

Our audit methods included:

- Observing 11 blocks from two sidewalk repair projects and comparing observable outcomes on those blocks to city contract requirements.
- Reviewing contract documents for the GOKc Sidewalk Repair Program to identify installation requirements for sidewalks, driveways, curbs, and curb ramps.
- Interviewing Public Works Department management to confirm our understanding of the contract requirements.
- Interviewing City Planning and Development Department and City Manager's Office engineering staff and the city's Americans with Disabilities Act coordinator to understand city sidewalk and curb ramp construction specifications.
- Interviewing Public Works Department engineers and sidewalk inspectors and observing contractors and city staff to identify current sidewalk repair practices.
- Reviewing Public Works and Water Services department reports and interviewing residents about sidewalk repair work to determine the impact of sidewalk work on the accessibility of water curb stop boxes.
- Reviewing concrete professional literature to understand the purpose of concrete construction specifications.
- Reviewing Public Works Department sidewalk inspectors' daily reports and punch lists to identify when work was performed by the inspector and contractor.

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. No information was omitted from this report because it was deemed privileged or confidential.

Background

GOKc Sidewalk Repair Program

The GOKc Sidewalk Repair Program evaluates, repairs, and replaces sections of residential sidewalks and driveway entrances, which cross the sidewalk; installs curb ramps; and evaluates and replaces curbs based on functionality. The program is designed to repair or replace only the squares of concrete that are damaged or deteriorated rather than all of the sidewalk and driveway entrances on a block. The Public Works Department identifies sidewalks and driveway entrances needing repair or replacement based on, but not limited to, the following criteria:

- a sidewalk square having a crack ½" or more wide;
- a sidewalk square with an adjoining square whose edge differs vertically by more than ½";
- a sidewalk square that is upheaved or depressed thereby causing an abrupt change in grade beyond specification;
- loose material used as a sidewalk;
- a driveway having a ½" or more wide crack or missing piece in it; and
- a driveway whose edge differs vertically by more than ½" at the sidewalk or by more than 1" on the rest of the driveway.

The program contracts require construction compliant with Public Works Department standards including Public Right-of-Way Accessibility Guidelines. Program management said the program is doing spot repairs rather than complete sidewalk replacement to stretch public dollars further.

Funding for GOKc Sidewalk Repair Program

The Sidewalk Repair Program is funded by a voter-approved tax increase passed in April 2017 for improvements and repair of the city's infrastructure. The city plans to fund the program at a minimum of \$150 million over 20 years.

Department of Justice Settlement Agreement

On July 25, 2012, the city and the Department of Justice (DOJ) entered into a settlement agreement under Title II of the Americans with Disabilities Act of 1990 (ADA) following a DOJ compliance review and the parties' agreement that the city will ensure greater access for individuals with disabilities to local government programs, services, activities, and facilities. The agreement requires the city to install ADA compliant curb ramps to new or altered sidewalks where the sidewalks intersect a street.

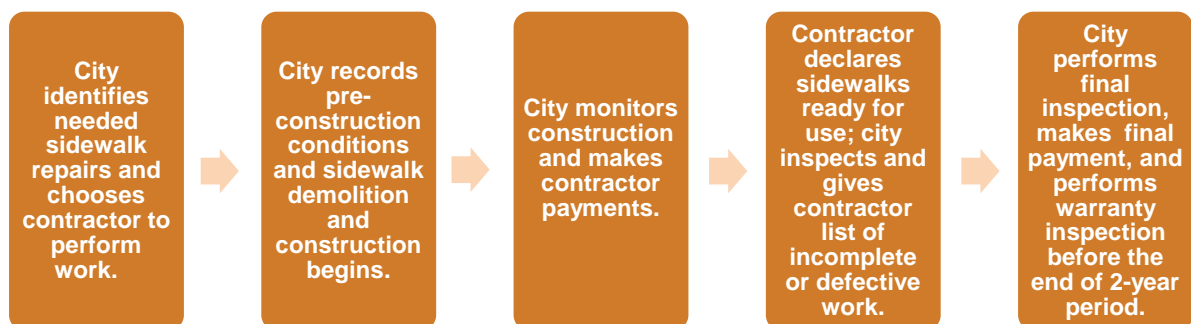
Prioritization of Sidewalk Repairs

The first blocks chosen for sidewalk repairs were based on 311 complaints received between 2008 and 2016. The next round of blocks repaired will be based on inspections. Public Works created an inspection prioritization plan based on a point system which assigns points for proximity to locations and other household factors, such as schools, hospitals, median household income, transit stops, and grocery stores.

Gokc Sidewalk Repair Program Work Flow

The GOkc Sidewalk Repair process starts with identifying what repairs are needed and ends with a re-inspection of repairs two years after construction. (See Exhibit 1.)

Exhibit 1. GOkc Sidewalk Repair Program Process



Source: Public Works staff and sidewalk repair contracts.

Findings and Recommendations

Public Works Not Ensuring All Contract Requirements Are Met

Expansion Joints Not Installed As Required

Sidewalk contractors did not install expansion joints in all locations required by the contract and some installed expansion joints do not extend across the whole concrete section, as required by the contract.

Contractors did not consistently install expansion joints where new concrete abuts existing concrete and structures.

The city's sidewalk repair contract requires expansion joints to be constructed where a new sidewalk abuts an existing sidewalk, curb, or driveway. The contract also requires expansion joints between new concrete and structures including poles, catch basins, and fire hydrants.² Expansion joints separate sections of concrete or concrete and structures with a ½", one-piece, preformed, full depth, joint filler, which allows the concrete to expand and contract with temperature changes. The filler should be left ½" below the surface to allow for caulking.³

We counted multiple expansion joints missing on several blocks in our sample. On one block, we observed expansion joints were not installed at 35 locations where old and new concrete met. We also observed a new sidewalk installed around a pole without the required joint.

Expansion joints allow two concrete sections or concrete around a structure to move independently, which reduces stress on the concrete. Public Works management stated that expansion joints between old and new concrete allow a clean break if the old section needs to be separated from the new section, avoiding damage to the new concrete. In a repair program, expansion joints between new and old concrete sections are important

² 02775, *Portland Cement Concrete Sidewalks, Driveways and ADA Accessible Ramps*; A. Sidewalks, 2. Joints; Kansas City, Missouri, Public Works Department Project Manuals, Project No. 89060524, Contract No. CS170021; GO Bond Citywide Sidewalk Repairs, Missouri River to 39th Street and Project No. 89060525, Contract No. CS170022; GO Bond Citywide Sidewalk Repairs, 39th Street – 85th Street.

³ *Division II, Construction and Material Specifications, 2300 Incidental Construction, Section 2301 Standard Sidewalks, Sidewalk Ramps, Driveways, and Bicycle/Pedestrian Paths, 2301.4 Joints, B. Isolation joints, 2. Material*; Kansas City Metropolitan Chapter of the American Public Works Association; Approved and Adopted December 18, 2002; Amended June 4, 2015 by Ordinance 150411; Amended February 8, 2018 by Ordinance 180006.

because older sections that were not replaced may eventually need to be removed without disturbing recently replaced sections.

Some expansion joints do not cross the entire section of concrete. An expansion joint should extend across an entire width of a section of concrete.⁴ We observed expansion joints on curb ramps that ended several inches before the end of the concrete slab. (See Exhibit 2.) If an expansion joint does not extend across the entire slab of concrete, then the two abutting concrete sections cannot move independently. The lack of independent movement creates stress on the concrete.

Exhibit 2. Expansion Joint Not Extended Across Entire Concrete Slab



Source: City Auditor's Office, 10/9/2018.

⁴ Public Works Standard Drawing, Driveway Entrances, D-1 and D-2, p. 1; Kansas City Missouri, Latest Revision October 1, 2005.

Contraction Joints Not Installed at Required Depth

Contractors did not always install sidewalk, driveway, or ramp contraction joints at the depths required by the contract. Contraction joints are surface joints installed at predetermined locations and depths. Proper contraction joint depth is necessary to control random cracking. Concrete cracks occur due to temperature changes and concrete shrinkage. The contraction joint allows the concrete to crack, in a planned location and straight line below the surface.

Sidewalks. The city's contract requires most sidewalk contractions joints to be 1" deep.⁵ Of the 32 contraction joints we measured, only 1 was at the required depth. Most of the joints were .5" deep.

Driveway entrances. The contract requires driveway contraction joints to be 2" deep.⁶ Of the 11 driveway contraction joints we measured, none of the joints were at the required depth. Most of the joints were .75" deep.

Curb ramps. The contract requires 2" contraction joints for curb ramps.⁷ Of the 11 curb ramp contraction joints we measured, none of the joints were at the required 2" depth. Most of the joints were .5" deep.

Some Water Curb Stop Boxes Not Located or Protected

A sidewalk contractor did not take all contractually-required actions to locate and protect water curb stop boxes during the sidewalk repair project. The Water Services Department's curb stop boxes provide access to a valve that can be used to shut off water to a house or building in an emergency, such as a burst pipe or to perform repairs. To operate the valve, the metal cover is removed from the box and a long key is inserted into the shaft of the box. The key turns a rod that opens and closes the valve.

The sidewalk contractor failed to locate and/or protect the curb stop boxes at three different properties on one block. (See Property 1, 2, and 3 on the following pages.) Water curb stop boxes on this block are below ground and can be accessed through

⁵ Public Works Standard Drawing, SW-1, Curb Ramp Template, General Note 3, p. 1; Kansas City Missouri, Date Adopted: September 8, 2016.

⁶ Public Works Standard Drawing, Driveway Entrances, D-1 and D-2, p. 1; Kansas City Missouri, Latest Revision October 1, 2005.

⁷ Public Works Standard Drawing, SW-1, Curb Ramp Template, General Note 3, p. 1; Kansas City Missouri, Date Adopted: September 8, 2016.

GOKc Sidewalk Repair Program Could Be Improved

a round metal cover that is either between the curb and the sidewalk or in the sidewalk.

Property 1

The sidewalk contractor concreted over the curb stop box in May 2018. By making the box inaccessible, the contractor did not take all precautions to prevent damage to utilities, as required by the contract.⁸

In September 2018, the Water Services Department inspected the property to locate the water curb stop box. Spray paint markings of utilities showed that the water curb stop box was buried underneath the new sidewalk. (See Exhibit 3.)

Exhibit 3. Curb Stop Box (Marked with Blue Circle) Covered by New Sidewalk



Source: City Auditor's Office, 9/15/2018.

⁸ 00700 General Conditions, 6.14, Kansas City, Missouri, Public Works Department, Project Manual, Project No. 89060525, Contract No. CS170022; GO Bond Citywide Sidewalk Repairs, 39th Street – 85th Street.

To make the curb stop valve accessible, part of the new sidewalk had to be removed and replaced. (See Exhibit 4.)

Exhibit 4. New Sidewalk Removed to Make Curb Stop Accessible



Source: City Auditor's Office, 9/20/18.

Property 2

The sidewalk contractor did not locate the curb stop at property 2 before installing the new sidewalk in May 2018. Although, the curb stop box lid was not visible preconstruction, the contract requires the contractor to take all actions necessary to identify and confirm the exact location, size, and type of utilities within the project limits that may be impacted by the work.⁹

The resident contacted 311 in August 2018 saying the curb stop box was not visible and had possibly been buried by the sidewalk restoration work. Water Services crews came to the address at least four separate times in October trying to locate the curb stop box without success. The curb box could be underneath the sidewalk or driveway entrance or in the grass between the curb and sidewalk. Water Services told the homeowner the new sidewalk and possibly the driveway would need to be dug up in order to locate it.

By not locating the curb stop before construction, the contractor did not take actions necessary to identify and confirm the exact location of utilities that may be impacted by the work. If covered by concrete, the curb stop is not accessible to shut off water in an

⁹ 01180, General Utility Work Obligations, 2.0 Identification of Utilities, Kansas City, Missouri, Public Works Department, Project Manual, Project No. 89060525, Contract No. CS170022; GO Bond Citywide Sidewalk Repairs, 39th Street – 85th Street.

GOKc Sidewalk Repair Program Could Be Improved

emergency or for repair. Additionally, the sidewalk contractor's failure to locate the curb stop before construction resulted in Water Services wasting resources trying to find the curb stop after the new sidewalk and driveway were installed.

Property 3

The resident contacted 311 on May 17, 2018, to report the curb stop box was broken and that sidewalk repair work was underway on his street. The resident said he also talked to a contractor's sidewalk repair crew member telling him that the curb box needed to be repaired before the sidewalk was installed. He said the contractor's crew member assured him he knew that the box needed to be repaired.

When Water Services responded to the 311 call on May 24, the new sidewalk had been installed and the curb box was in place and accessible in the sidewalk; however, the Water Services inspector found concrete inside of it, which meant the stop valve was inoperable. The contractor did not take necessary precautions for the protection of utilities to prevent damage or loss, as required by the contract. Water Services had to remove a section of new sidewalk around the curb stop box to replace the valve. (See Exhibit 5.) Water Services used 5 employees and a total of 30 hours to dig up and replace the curb box and another 6 employees and 6 hours to clean up the job site and straighten the curb box.

Exhibit 5. New Sidewalk Removed to Access and Replace Damaged Curb Stop Box



Source: City Auditor's Office, 5/28/2018.

At each of these properties, city resources were wasted when Water Services had to locate, attempt to locate, and/or repair the curb stop box; the residents were inconvenienced; and residents' impression of the city's performance was poor.

Curb Ramps Not Always Installed Correctly

Contractors installed some curb ramps without the contractually required smooth, slip-resistant transition between ramp and street and incorrectly installed some curb ramps' detectable warnings that are there for the safety of the visually impaired.

Curb Ramp and Detectible Warning

A curb ramp is a ramp cutting through a curb or built up to it that provides an accessible route for people with disabilities to safely transition from a street to a curbed sidewalk.

Detectable warnings are built into or applied to curb ramps to warn visually impaired individuals that they are approaching the street or intersection and should determine whether there are hazards before continuing into the street. The surface is visually contrasting in color to the ramp and consists of truncated domes aligned in a square or radial grid pattern. It should extend across the full walking surface of the ramp and extend 2 feet in the direction of pedestrian travel.

Contractors are not consistently ensuring a smooth, slip-resistant transition between curb ramps and the street.

Curb ramps should have a flush transition where the curb ramp meets the pavement.¹⁰ We observed one curb ramp with a 1.5" drop between the curb ramp and the street and another ramp with a .75" drop.¹¹ (See Exhibit 6.)

Exhibit 6. Curb Ramp Not Flush with Pavement



Source: City Auditor's Office, 12/5/2018.

¹⁰ Public Works Standard Drawing, SW-1, Curb Ramp Template, General Note 9, p. 1; Kansas City Missouri, Date Adopted: September 8, 2016.

¹¹ Vertical surface discontinuities are permitted up to .5"; however, discontinuities between .25" and .5" should be beveled with a slope not steeper than 50 percent. Proposed Public Rights-of-Way Accessibility Guidelines, R302.7.2; 2012; United States Access Board.

On another ramp in our sample, contractors installed an asphalt wedge to create a smooth transition, but the wedge resulted in a 1" asphalt hump at the ramp-street transition. On two other ramps where asphalt wedges were used, water pooled at the bottom of the ramps, which conflicts with the required slip-resistant surface.¹²

Uneven conditions and pooled water at curb ramps could cause trip and fall hazards and make it difficult to maneuver a wheelchair on and off the ramp.

The contractor did not install a detectable warning surface across the entire width of the ramp run. (See Exhibit 7.) The contract requires the contractor to follow the city's accessibility guidelines that detectable warning surfaces should extend the full width of the walking surface.¹³ Detectable warnings provide a tactile equivalent of a curb line to a sight impaired person. Without the surface extending across the entire width of the walking surface, there is a risk that a visually impaired person could miss the warning surface and step into traffic unknowingly.

Exhibit 7. Detectable Warning Not Extended Across Full Width of Ramp



Source: City Auditor's Office, 12/5/2018.

The contractor did not place some detectable warnings on perpendicular curb ramps¹⁴ according to contract requirements. Contractors should install detectable warnings on

¹² Proposed Public Rights-of-Way Accessibility Guidelines, R302.7; 2012; United States Access Board.

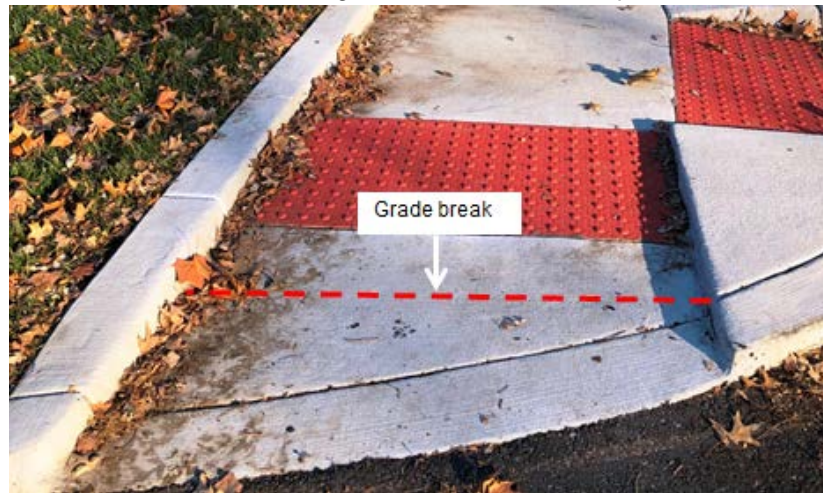
¹³ Proposed Public Rights-of-Way Accessibility Guidelines, R305.1.4; 2012; United States Access Board.

¹⁴ Perpendicular curb ramps have a running slope that cuts through or is built up to the curb at right angles or meets the gutter break at right angles where the curb is curved. On large corner radiuses, it will be necessary to indent the gutter break on one side of the curb ramp in order for the curb ramp to meet the gutter break at right angles.

perpendicular curb ramps in particular locations depending on the location of the ramp grade break.¹⁵

We identified two ramps with the detectable warnings placed too far back on the ramp rather than behind the back of the grade break. (See Exhibit 8.)

Exhibit 8. Detectable Warnings Too Far Back on Ramp



Source: City Auditor's Office, 12/10/2018.

Incorrectly placed detectable warnings are a safety risk for the visually impaired. Visually impaired pedestrians use the detectable warning as a tactile warning of entering an intersection. Consistently following the city's contract requirements, which are based on national guidelines for building accessible curb ramps, will assist visually impaired persons to more safely predict when they are entering an intersection.

Open Sidewalk Excavations Not Secured

Contractors are not securing sidewalk excavations as required by the contract. The sidewalk contract states that if any unsupervised, open excavation is made in the sidewalk, then the contractor is to provide effective protection to the public. The contract goes on to describe effective protection as either placing a protective covering over or fencing around the excavation site to prevent entry.¹⁶

¹⁵ Proposed Public Rights-of-Way Accessibility Guidelines, Detectable Warning Surfaces, Placement, Perpendicular Curb Ramps, R305.2.1; 2012; United States Access Board.

¹⁶00700 General Conditions, 6.10 Compliance with Laws and Regulations, N. Guidelines for Open Excavations, 1-2; Kansas City, Missouri, Public Works Department, Project Manual, Project No. 89060525, Contract No. CS170022; GO Bond Citywide Sidewalk Repairs, 39th Street – 85th Street.

On one of the blocks, the contractor used cones on each end of a sidewalk excavation rather than a protective covering over or fencing around the excavation site as specified in the contract. Public Works management does not think the contract requirement applies to sidewalk repair excavations and believes the contractor's use of cones is adequate. If management has determined the requirement does not apply, it may want to consider removing the requirement from future contracts so that previous and future contract bidders have the same understanding of the program's requirements.

Construction Activities on Blocks Not Completed Timely

Inspectors are not enforcing the timeliness requirements for end of block construction activity. The city's contract requires that within a maximum period of five working days after the concrete is placed, the contractor complete all joint caulking, pavement restoration, and sodding.¹⁷ If cleanup, backfilling, sodding, and joint caulking or pavement restoration are not complete within the stated limits, all tear-out operations are to cease until finished or directed by the engineer.¹⁸ City inspectors are not enforcing this requirement.

Caulking. Contractors did not caulk within five working days after concrete placement and before moving on to new blocks. On several blocks the contractors did not caulk expansion joints as required until weeks after the concrete was placed. Caulking seals and prevents moisture from getting into expansion joints.

Pavement restoration. Some pavement problems were not addressed by the contractor until weeks after leaving the block. Those items included a hole left in the asphalt street next to a new curb, a 2" gap left between the driveway and new driveway entrance, asphalt transitions between driveways and the street only partially complete, and asphalt humps left at new curb ramps.

In addition to noncompliance with contract requirements, leaving the block without the work completed, gives residents the impression that the contractor's work is finished but of poor quality. By waiting until the end of the project, some required work could

¹⁷ 01740 Cleanup Operations, A. General, 5; Kansas City, Missouri, Public Works Department, Project Manual, Project No. 89060525, Contract No. CS170022; GO Bond Citywide Sidewalk Repairs, 39th Street – 85th Street.

¹⁸ 01740 Cleanup Operations, A. General, 6; Kansas City, Missouri, Public Works Department, Project Manual, Project No. 89060525, Contract No. CS170022; GO Bond Citywide Sidewalk Repairs, 39th Street – 85th Street.

be forgotten all together. For example, some blocks or sections of blocks in the projects were not caulked even though construction was considered complete.

Recommendation To ensure that residents receive sidewalks, driveway entrances, curbs, and curb ramps that meet contract requirements, the director of public works should ensure staff enforce GOKc Sidewalk Repair contract requirements.

Checklists Could Help Monitor Contractors and Prevent Repeat Mistakes

Inspectors are not using inspection checklists to ensure contractors receive consistent and comprehensive feedback. The inspection process does not ensure that contractors do not repeat mistakes on subsequent blocks.

Inspectors are not using an inspection checklist to ensure contractors receive consistent and comprehensive feedback.

A checklist is a standardized list of tasks or steps used for tracking repetitive jobs. Near the end of the project, inspectors walk the project blocks to review the contractor's work and write a list of incomplete work rather than using a checklist which lists all the requirements.

There are many contract requirements/city construction specifications and drawings the city inspectors must enforce. Making a list of items that need to be addressed rather than using a checklist requires the inspector to consistently remember all specifications. This practice can result in requirements being forgotten or overlooked. For example, inspectors did not include some incomplete and defective work on their list for contractors that we identified after the contract work was complete. The city is paying for a project that should meet the requirements outlined in the contract.

The inspection process is not preventing repeat errors. The inspection process should ensure contractors do not repeat mistakes made on prior blocks. Inspectors prepared a list of incomplete and defective work late in the project when the contractor and city determine that the work is substantially complete.¹⁹ Waiting until the end of the project to tell the contractor about defective work allows the contractor to repeat the

¹⁹ To be considered substantially complete, all work must be operational and ready for the city's continuous use as intended with the exception of landscape restoration. 00700 Supplementary Conditions, 14.04; Kansas City, Missouri, Public Works Department, Project Manual, Project No. 89060525, Contract No. CS170022; GO Bond Citywide Sidewalk Repairs, 39th Street – 85th Street.

mistakes block after block. For example, the contractor did not install expansion joints in required places and incorrectly set contraction joint depths on multiple blocks. Those errors cannot be easily fixed at the end of the project. Identifying defective or missed work early will help contractors avoid repeat mistakes or mistakes that cannot be easily fixed.

Recommendation To ensure residents receive sidewalks, driveway entrances, curbs, and curb ramps that consistently meet the contract requirements and contractors do not make the same mistakes throughout the project, the director of public works should ensure inspectors use a standardized inspection checklist for GOKc Sidewalk Repair projects consisting of all contract requirements and do inspections throughout the project.

Ways to Improve Sidewalk Repair Program

Address Sidewalks Close to Trees on Private Property

A contractor constructed a new sidewalk very close to a tree on private property. The contractor built a sidewalk 5.5" from the tree, although there was room to shift the sidewalk closer to the curb. (Exhibit 9.) Public Works does not have written procedures about relocating a sidewalk closer to the curb if necessary to accommodate a tree on private property. A city drawing shows that the appropriate distance between a sidewalk and a city tree should be at least 12".²⁰ Allowing distance between the sidewalk and tree reduces the chance of the tree damaging the sidewalk or the sidewalk damaging the tree.

²⁰ Block out for trees, 01115-2, Kansas City, Missouri Public Works Department, Contracts CS170021 and CS170022.

Exhibit 9. Sidewalk Very Close to Tree on Private Property



Source: City Auditor's Office, 12/5/2018.

Recommendation

To protect the city's new sidewalk from tree root damage and the resident's tree from damage due to sidewalk construction, the director of public works should establish written procedures for GOKC Sidewalk Repair projects on how sidewalks should be installed to accommodate trees on private property.

Communicate with Property Owners about Landscape Restoration

Sidewalk contractors did not communicate with residents about landscape restoration after construction on their block. The sidewalk contract requires the contractor to lay sod or hydro seed the landscape that was torn up due to construction. Although contractors are required to communicate with residents on affected blocks about construction beginning, parking limitations, and when driveways cannot be used, they are not required to communicate with residents about the timing of landscape restoration. The contractors did hydro seed and sod in October but in some cases, that was months after the construction was done. Without knowing the contractor would return to do restoration, some homeowners planted their own grass seed.

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Recommendation To ensure residents are aware of the landscape restoration process, the director of public works should add a requirement in GOkc Sidewalk Repair contracts that contractors must communicate to residents when grass will be restored to areas affected by sidewalk construction.

Recommendations

1. The director of public works should ensure staff enforce GOkc Sidewalk Repair contract requirements.
2. The director of public works should ensure inspectors use a standardized inspection checklist for GOkc Sidewalk Repair projects consisting of all contract requirements and do inspections throughout the project.
3. The director of public works should establish written procedures for GOkc Sidewalk Repair projects on how sidewalks should be installed to accommodate trees on private property.
4. The director of public works should add a requirement in GOkc Sidewalk Repair contracts that contractors must communicate to residents when grass will be restored to areas affected by sidewalk construction.

Appendix A

Director of Public Work's Response

GOkc Sidewalk Repair Program Could Be Improved



Public Works Department

Office of the Director

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Kansas City, Missouri 64106

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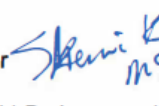
APR 18 2019

CITY AUDITOR'S OFFICE

(816) 513-9970
Fax: (816) 513-2615

Date: April 18, 2019

To: Douglas Jones, City Auditor

From: Sherri K. McIntyre, PE, Director of Public Works/Assistant City Manager 

Subject: Response to Performance Audit: *GOkc Sidewalk Repair Program Could Be Improved*

1. The director of public works should ensure staff enforce GOkc Sidewalk Repair contract requirements.

Agree/Agree in Part/Disagree.

Agree: Contract requirements should be followed and in areas that our standard practices do not match requirements, changes will be made to closer align with these requirements. This specifically will address the time for backfilling next to new concrete, and the allowance to proceed to work at other locations.
Completion is estimated for July 2019.

2. The director of public works should ensure inspectors use a standardized inspection checklist for GOkc Sidewalk Repair projects consisting of all contract requirements and do inspections throughout the project.

Agree/Agree in Part/Disagree.

Agree in Part: We will develop standard inspection checklists for all staff to follow. The checklist may not include all contract requirements, but will include the major items within the contract. The checklist will identify the field items that need to be checked. All of the other paperwork items may not be included on a check list.
Completion is estimated for June 2019

3. The director of public works should establish written procedures for GOkc Sidewalk Repair projects on how sidewalks should be installed to accommodate trees on private property.

Agree/Agree in Part/Disagree.

Agree: Procedures are put in place. We will follow the procedures used to address trees within the right-of-way, and sample drawings will be developed for where sidewalk adjustments are necessary.
Completion is planned for the end of April 2019.

- 4. The director of public works should add a requirement in GOKc Sidewalk Repair contracts that contractors must communicate to residents when grass will be restored to areas affected by sidewalk construction.**

Agree/Agree in Part/Disagree.

Agree: We will require communication by the contractor on the final stages of the work for landscape restoration. This work is often performed by sub-contractors, and is scheduled after the sidewalk work is deemed completed. We will also improve communication with the property owners and residents when work has been rejected and further work is required.

Completion is estimated for all new contracts bid by end of June 2019. Will implement on existing contracts when we can.

cc: Troy M. Schulte, City Manager
Ralph Davis, Deputy Director of Public Works
Mark Montgomery, Assistant City Engineer over Construction Management