

**AUDIT TEAM**

***Jim Williamson, CPA, CIA, City Auditor***

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**PUBLIC WORKS DEPARTMENT  
PRIVATE ROAD DEVELOPMENT  
FOLLOW-UP AUDIT**

**AUGUST 12, 2014**

**MAYOR AND CITY COUNCIL**

<b><i>Mick Cornett</i></b>	<b><i>Audit Committee, Mayor</i></b>
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<b><i>Larry McAtee</i></b>	<b><i>Audit Committee, Ward 3</i></b>
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<b><i>Patrick J. Ryan</i></b>	<b><i>Ward 8</i></b>



August 12, 2014

The Mayor and City Council:

The Office of the City Auditor has completed an audit to evaluate the status of recommendations and related management responses included in our previous investigation report dated September 25, 2007 regarding the private road development process.

Based upon the results of our audit, we believe that inspection related recommendations for privately constructed road projects have been substantially implemented. However, recommendations related to material verification and project close-out procedures have not been fully implemented as of September 14, 2013.

The content and emphasis of the items in this report have been discussed with appropriate management representatives to assure a complete understanding of the observations arising from our audit. Management responses are attached to this report in their entirety.

Handwritten signature of Jim Williamson in black ink.

Jim Williamson  
City Auditor

Handwritten signature of Marilyn J. Dillon in black ink.

Marilyn J. Dillon  
Audit Manager

**PUBLIC WORKS DEPARTMENT  
PRIVATE ROAD DEVELOPMENT FOLLOW-UP AUDIT**

**AUDIT OBJECTIVE, BACKGROUND, SCOPE AND METHODOLOGY**

This audit evaluated the status, as of September 14, 2013, of recommendations and related management responses included in our previous investigation report dated September 25, 2007. Our report stemmed from an investigation of complaints regarding oversight of the private road development process within the Public Works Department. Upon completion, these private roadways can be accepted by the City Council with subsequent maintenance becoming the responsibility of the City of Oklahoma City. Specifically, the previous investigation identified several operational weaknesses that allowed sub-standard construction of private roads, which was not detected by departmental staff.

Regardless of the funding source, private contractors construct all streets within the City of Oklahoma City. Engineering standards and construction specifications are identical for both public and privately constructed roads. In a new sub-division, the developer funds the design and construction of all streets. During the period of July 1, 2011 through September 14, 2013, there were 74 active private development projects with work orders issued and 81 completed projects. Any privately constructed roadway that will become public requires a maintenance bond and presentation to the City Council for acceptance. Streets that will stay private are maintained by the developer or the neighborhood homeowners association.

The Public Works Department is responsible for enforcing the engineering standards and construction specifications on privately constructed road projects. Staff members in the Engineering Line of Business review and approve proposed sub-division plans, issue work orders, and maintain the permanent electronic project record file. Once plan approval is complete, a work order is issued that provides notice of a new project and assigns an Inspector from the Field Services Line of Business. Staff members in Field Services are responsible for monitoring test schedules, materials delivery, and daily inspection of the construction work. During the course of construction, Field Services maintains the active project file. If the roadway will become public, the project file is retained in Field Services throughout the duration of the maintenance bond.

Procedures performed during this audit include assessment of the daily project inspection process; analysis of daily project inspections; interviews with management regarding processes, policies, and controls; review of current project files; assessment of materials testing, load tickets, and tracking of maintenance bonds and maintenance bond inspections.

We conducted this audit in accordance with generally accepted government auditing standards, which require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our audit 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.

The following section presents the status of recommendations and related management responses from the previous investigation report. A departmental response follows each status summary, and the complete management responses are provide as an attachment to this report.

## **CURRENT STATUS OF RECOMMENDATIONS FROM PREVIOUS REPORT**

*Inspection related recommendations for privately constructed road projects have been substantially implemented. However, recommendations related to material verification and project close-out procedures have not been fully implemented as of September 14, 2013.*

**Status of Recommendation 1 – Partially Addressed.** Procedures are not sufficient to ensure that project files related to privately constructed roads contain documentation of required materials testing and staff review of individual test reports. Although the Standard Specifications were modified to direct contractors to return testing schedules along with copies of the individual testing reports to the Field Services staff as a requirement for finalizing a project, the results of our follow-up testing indicate that this requirement is not being enforced.

We examined the files of two completed projects from the period July 1, 2011 to September 14, 2013 for evidence of materials testing and staff review of testing results. The two projects selected required 188 individual test reports, but 49.5% of the required tests were not supported by result reports in the project files. Those test reports found in the project file did not include evidence of staff review and approval of the test results.

**Testing documentation provisions of the Standard Specifications should be enforced.** Staff should ensure that contractors are turning in a final testing schedule and evidence of acceptable test result reports.

**Management should enforce the testing penalty provision in the Standard Specifications.** The updated language of the Standard Specifications includes a penalty provision for contractors failing to perform the required tests. The department should develop administrative procedures to enforce the testing penalty provision.

**Controls and processes for inspection documentation were improved.** Although the department automated the daily inspection report process, we found significant discrepancies between the expected number of work days for a private road development project and the number of inspection reports in the project files. Management reviewed the discrepancies and was able to provide a reasonable and acceptable explanation.

**Management Response 1.** The Standard Specifications for Construction of Public Improvements have been revised to include an additional paragraph requiring contractors to return the testing schedule with test results to the Field Services Division as part of the requirement for completing of a project (Section 109.24). Field Services will issue a letter with

all new private development work orders informing contractors that the requirements must be completed before the project may be final accepted. The letter will also notify the contractor of the penalties that will be assessed for failure to perform the required tests. The review and acceptance of the test schedule and completed test results will be required before the project is accepted.

**Status of Recommendation 2 – Partially Implemented.** The Project Completion Form was modified to assert that the project had been completed and that all material testing and construction was performed in accordance with the approved plans and specifications. Signed Project Completion Forms were included in all 10 completed project files examined during our follow-up.

**Controls should be implemented to prevent staff sign-off on projects that have incomplete file documentation.** There is not adequate documentation that tests were performed and that the test results were reviewed and acceptable. The two completed project files examined for evidence of test results (see status of Recommendation 1) did not contain 46% and 55% of the required test reports, respectively; however these two project files contained a signed Project Completion Form attesting to the completion of all scheduled testing.

***Management Response 2.*** The Field Services Superintendent will ensure the submitted testing schedule is complete and reviewed before signing the Project Completion Report. The completed and reviewed testing schedule and testing results along with the Completion Report will be filed electronically for permanent retention.

**Status of Recommendation 3 – Not Implemented.** Inspectors are not collecting load tickets to verify that the quantity of materials delivered comply with the project specifications, and they are not performing yield tests to assess the reasonableness of the quantities of materials delivered. Although a few load tickets were found in the 14 project files tested, these were illegible and did not evidence any yield testing.

***Management Response 3.*** Previously, load tickets were being collected by the inspectors and filed in the Field Service office rather than being electronically filed. Field Services recently implemented a new process of dating the load tickets with the corresponding inspection report and sending all tickets to be scanned into the permanent electronic files. This updated process will ensure the retention of the load tickets, as well as link the tickets to the Field Inspector's daily inspection report which contains the quantity and testing information for the materials delivered.

**Status of Recommendation 4 – Implemented.** Maintenance bond terms were amended to require 100% coverage and extend the duration to two-years after City Council acceptance. During the FY2007-2008 budget process, a full-time position was added for a maintenance bond inspector. This inspector is assigned exclusively to monitor maintenance bond expirations and provide pre-expiration inspections.

**Maintenance bond inspections should be tracked in the project database.** Currently, maintenance bonds and bond inspection due dates are tracked in the Maintenance Bond Inspector's Microsoft Outlook calendar. This information should be included with other relevant project information and be tracked in the private development project database.

**Management Response 4.** The maintenance bond inspection report forms have recently been digitized and will be completed electronically. The maintenance bond inspections and due dates will be completed and linked to the Private Development Project Database once it is upgraded.

**Status of Recommendation 5 – Implemented.** Daily Inspection Reports are now generated through SharePoint and the Field Services inspectors have been provided with tablet computers that allow completion of the form online, which provides increased consistency and legibility of inspection results. In addition, the online form provides prepopulated project information fields that increase overall accuracy and efficiency.

**Management Response 5.** Field Services is now generating the Daily Inspection Reports electronically which has improved the consistency and legibility of the inspection documentation. The project identification information (project number, location, contractor, etc.) is pre-populated on the form which has reduced the amount of time to complete each daily report by the Field Inspectors.

**Status of Recommendation 6 – Partially Implemented.** Although Field Services is retaining all testing and inspection documentation for privately constructed roads until the project is complete, this file is destroyed upon project completion and no procedures have been implemented to verify that the items contained in the Field Services file are forwarded to the Engineering division and properly archived in the permanent electronic project file. For example, testing labs send electronic test reports to the Records Coordinator in Engineering where they are scanned to the electronic project file. A second test result copy is sent electronically to the Engineering Assistant in Field Services where the results are reviewed. Although automation of testing report receipt improves efficiency, the current system fails to provide evidence of test result review in the permanent file.

**Management should evaluate the process for scanning and permanent electronic project file archiving.** Controls and procedures should be developed to ensure that items in the permanent electronic project file are complete, are scanned properly, and are legible. Of the 14 permanent project files evaluated, 11 did not contain a testing schedule, 4 did not contain testing reports, and none contained legibly scanned load tickets to document material quantities.

**Management Response 6.** Field Services will review the permanent electronic file prior to final acceptance to ensure the files are complete and legible. This will include verification that project documents (testing schedule, test reports, load tickets, inspection reports, etc.) are complete and filed in the permanent electronic file.

**Status of Recommendation 7 – Not Implemented.** As of September 14, 2013, the department has not implemented a Project File Checklist that would ensure all important administrative and oversight activities were completed. Use of a checklist for key activities could ensure that project files are complete. The checklist could contain the following items:

- Construction plans approved
- Inspection fees collected
- Maintenance bond obtained for projects with public improvements
- Permit, work order, and test schedule issued
- Test results obtained and assessed
- Inspections performed
- Inspector Completion Form executed
- Road entered into GIS
- Maintenance bond accepted by the City Council

***Management Response 7.*** The Public Works Department will develop a checklist which will track all project documentation from plan approval through final acceptance of the projects, and will identify key activities that need to be completed as part of the project.

**Status of Recommendation 8 – Substantially Implemented.** As of September 14, 2013, complete and reliable information has been included in the majority of project records contained in the private development database. However, of the 81 completed projects in the database, the seven selected for testing contained blank fields and ‘N/A’ is not being used to indicate if the field information does not apply to the project.

***Management Response 8.*** A Private Development Project Database has been created to record a wide variety of construction activities, and not all fields are applicable for all the projects. For example, the projects with private streets may not have maintenance bond requirements, and are not sent to the City Council making the information related to this activity Not Applicable (N/A). Therefore, more detailed information is required for responding to the recommendation including the list of the eighty one projects used for making this assessment.

**Status of Recommendation 9 – Not Implemented.** Maintenance bonds for privately constructed road projects that will be maintained by the City are not being presented to the City Council in a timely manner. As of September 14, 2013, there were 80 maintenance bonds pending City Council acceptance. Eight of the nine projects tested had a City Council acceptance time delay greater than three months after the date of final project inspection. Of these eight, two projects had a time delay of over 11 months; and one project had a time delay of 26 months. Roads must be accepted in a timely manner so that the maintenance bond can be placed into effect and the City can begin maintenance oversight.

***Management Response 9.*** The delays in processing maintenance bonds has been due to a lack of available resources and staff. A request for an overage position is currently being processed by Public Works which will assist in the timely processing of maintenance bonds.





**MEMORANDUM**  
The City of  
**OKLAHOMA CITY**



TO: Jim Williamson  
City Auditor

THROUGH: James D. Couch  
City Manager

FROM: Eric J. Wenger, P.E., Director  
Public Works / City Engineer

DATE: July 22, 2014

SUBJECT: Public Works Department Privately Constructed Roads Investigation  
Report – Responses

Attached please find Management's response to the comments and recommendations for the Public Works Department Privately Constructed Roads Investigation Report. Should you require an electronic copy of the response please contact Assistant Public Works Director Paul Bronson at 297-2123 or e-mail at [paul.bronson@okc.gov](mailto:paul.bronson@okc.gov).

pc: Dennis Clowers, P.E., Assistant City Manager  
Jane Abraham, City Manager's Office

Attachments

**PUBLIC WORKS DEPARTMENT  
PRIVATE ROAD DEVELOPMENT FOLLOW-UP AUDIT**

**Responses to Auditor's Recommendations**

1. The Standard Specifications for Construction of Public Improvements have been revised to include an additional paragraph requiring contractors to return the testing schedule with test results to the Field Services Division as part of the requirement for completing of a project (Section 109.24). Field Services will issue a letter with all new private development work orders informing contractors that the requirements must be completed before the project may be final accepted. The letter will also notify the contractor of the penalties that will be assessed for failure to perform the required tests. The review and acceptance of the test schedule and completed test results will be required before the project is accepted.
2. The Field Services Superintendent will ensure the submitted testing schedule is complete and reviewed before signing the Project Completion Report. The completed and reviewed testing schedule and testing results along with the Completion Report will be filed electronically for permanent retention.
3. Previously, load tickets were being collected by the inspectors and filed in the Field Service office rather than being electronically filed. Field Services recently implemented a new process of dating the load tickets with the corresponding inspection report and sending all tickets to be scanned into the permanent electronic files. This updated process will ensure the retention of the load tickets, as well as link the tickets to the Field Inspector's daily inspection report which contains the quantity and testing information for the materials delivered.
4. The maintenance bond inspection report forms have recently been digitized and will be completed electronically. The maintenance bond inspections and due dates will be completed and linked to the Private Development Project Database once it is upgraded.
5. Field Services is now generating the Daily Inspection Reports electronically which has improved the consistency and legibility of the inspection documentation. The project identification information (project number, location, contractor, etc.) is pre-populated on the form which has reduced the amount of time to complete each daily report by the Field Inspectors.
6. Field Services will review the permanent electronic file prior to final acceptance to ensure the files are complete and legible. This will include verification that project documents (testing schedule, test reports, load tickets, inspection reports, etc.) are complete and filed in the permanent electronic file.

7. The Public Works Department will develop a checklist which will track all project documentation from plan approval through final acceptance of the projects, and will identify key activities that need to be completed as part of the project.
8. A Private Development Project Database has been created to record a wide variety of construction activities, and not all fields are applicable for all the projects. For example, the projects with private streets may not have maintenance bond requirements, and are not sent to the City Council making the information related to this activity Not Applicable (N/A). Therefore, more detailed information is required for responding to the recommendation including the list of the eighty one projects used for making this assessment.
9. The delays in processing maintenance bonds has been due to a lack of available resources and staff. A request for an overage position is currently being processed by Public Works which will assist in the timely processing of maintenance bonds.