



AUDIT DEPARTMENT

Audit Report

Public Works Las Vegas Paving Expenditures

August 2013

Angela M. Darragh, CPA, CISA, CFE
Audit Director

AUDIT COMMITTEE:

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Audit Department

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Angela M. Darragh, CPA, CFE, CISA, Director



August 23, 2013

Mr. Don Burnette
Clark County Manager
500 South Grand Central Parkway, 6th Floor
Las Vegas, Nevada 89106

Dear Mr. Burnette:

In accordance with our annual audit plan, we conducted an audit of the Public Works Las Vegas Paving Expenditures. The audit reviewed procedures for the period July 1, 2011, through March 31, 2013.

The objective of the audit is to determine whether proper controls are in place over the expenditure of funds to Las Vegas Paving and if construction costs are accurate, adequately supported, and in compliance with Clark County policy.

To accomplish our objectives, we selected three Las Vegas Paving projects and reconciled general ledger payments to contractor amounts. We also agreed bid quantities and unit prices to the original bid documents for these projects. We then obtained project tally sheets and agreed quantities to the application for payment to verify construction payments are based on verified quantities each month. Finally, we reviewed construction change authorization forms and stockpile listings to ensure costs agreed to supporting documentation.

Overall, it appears that sufficient controls are in place over the expenditure of funds to Las Vegas Paving and construction costs are accurate, adequately supported, and in compliance with policy. However, we did note a few areas for potential improvement. Tally sheets were not available for one payment request and the inspector documentation was not available for five payment requests, making it difficult to substantiate the related payments. We also found that the application for payment spreadsheet used to track contractor payments was not always cell protected, exposing the spreadsheet to potential accidental change. Finally, the Board of County Commissioners was not informed of a \$2.1 million credit on the Beltway project, which we believe should have been presented to them.

A draft report was provided to the Director of Public Works for comment and his response is included. We appreciate the cooperation and assistance provided by the Department of Public Works.

Sincerely,

/s/ Angela M. Darragh

Angela M. Darragh, CPA
Audit Director

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BACKGROUND The Department of Public Works (Department) delivers a wide range of services to the community including the design, construction, inspection and maintenance of essential public infrastructure such as roadways, bridges, traffic control devices, flood control facilities and trails. The Department uses many different contractors to help construct various public infrastructure projects that are important to the community. Contractors are selected through a bidding process. A project listing dated February 22, 2013 reflected 28 active projects with 20 different contractors. Las Vegas Paving is the contractor on three of these projects, Carey Avenue Storm Drain, Northern 215 Beltway, and Paradise and Spring Valley Pulverize and Pave, and they will be the focus of this audit. For fiscal year 2012, the Department paid out \$39.3 million to Las Vegas Paving.

OBJECTIVES, SCOPE, AND METHODOLOGY The objective of our audit is to determine whether proper controls are in place over the expenditure of funds to Las Vegas Paving and if construction costs are accurate, adequately supported, and in compliance with Clark County policy.

To achieve our audit objectives, we conducted interviews with key personnel, performed observations and walkthroughs, reviewed bid documents and contracts, and examined supporting documentation of transactions.

We selected three Las Vegas Paving projects and reconciled general ledger payments to contractor amounts. Bid quantities and unit prices were also agreed to the original bid documents for these projects. We obtained project tally sheets and agreed quantities to the application for payment to verify construction payments are based on verified quantities each month. The application for payment was reviewed to determine that spreadsheet formulas were correctly calculating the monthly payment amount based on input quantities from the tally sheets. For each project, we selected costs from the construction change authorization form and traced costs to supporting documentation to determine that costs were appropriate and necessary. Finally, we selected items from the stockpile listing and physically examined for existence, traced costs to supporting documentation, determined that earned credits were applied correctly, and that the paid receipt stockpile form was correctly calculating payment amounts.

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.

Our procedure examined controls in place through the last day of fieldwork, June 5, 2013. Our samples were selected from transactions during the period from July 1, 2011 to March 31, 2013.

RESULTS IN BRIEF

Overall, it appears that sufficient controls are in place over the expenditure of funds to Las Vegas Paving and construction costs are accurate, adequately supported, and in compliance with policy. We did note on one project reviewed that tally sheets were not available for one payment request and the inspector documentation was not available for five payment requests. Also, the application for payment spreadsheet is not always cell protected and the Board of County Commissioners was not informed of a large credit of \$2.1 million on the Beltway project.

DETAILED RESULTS

Application for Payment Spreadsheet not Protected from Changes

The application for payment used by the Construction Management Division to process construction payments is done using a spreadsheet. The application uses a series of sheets, formulas, and macros to calculate the monthly construction payment that is paid to the contractor. Construction projects can last for several months or years. Year-to-date amounts are carried forward from month to month. Initial quantities based on the original bid document are entered into the spreadsheet by a Senior Engineering Technician and then cells are password protected to prevent changes of quantities or changes to the formulas and macros. We requested an electronic version of the application for payment for the Northern 215 Beltway and the Paradise and Spring Valley Pulverize project. The Beltway application was cell protected but the Paradise application was not. The use of a spreadsheet to track and calculate payments on a \$116 million dollar Beltway or a \$3 million dollar Paradise project increases the risk that payments may not be correct, since it is very easy to change unprotected cell information, such as formulas or year-to-date information in a spreadsheet.

Recommendation

1. The Assistant Manager of Off-Site Construction should verify that all cells are protected prior to the application for payment being released to the project manager.

Board of County Commissioners not aware of Project Credit

Each project we examined has a bid line item titled "Construction Conflicts and Additional Work". The Carey Avenue Storm Drain amount was \$200,000, the Northern 215 Beltway was \$1 million, and the Paradise and Spring Valley amount \$100,000. This bid line item is included in every project. It is established by Public Works and is based on the complexity of the project and the number of unknowns associated with construction projects, for example underground work, since records showing locations of utilities are generally not very accurate. This bid line item provides an avenue for the project owner and contractor to deal with the unknowns and prevent construction delays.

Due to a litigation delay on the Northern 215 Beltway project, there were design changes resulting in some additions and a large number of deletions to the project. As a result, there was a \$2.1 million credit to the County documented on a construction change authorization form. After this credit, the "Construction Conflicts and Additional Work" was \$3.1 million (the credit of \$2.1 plus the original \$1 million). Subsequent to the credit, a decision was made to add a piece to the beltway to make the roadway fit together at a cost of \$2.3 million. The added roadway was paid by a contract change order for \$1.3 million (approved by the Board of County Commissioners) plus \$1 million from the Construction Conflicts and Additional Work account, leaving a balance of \$2.1 million in this account. However, the credit balance is not tracked anywhere in the contract, meaning that the overall contract price is not reduced, nor were contract quantities changed. It is only tracked by the project manager and the project consultant.

Using this type of method to track changes to project cost reduces transparency to the Board of County Commissioners and the public.

Recommendation

1. The project manager should request that design changes and resulting credits should be included on the Board of County

Commissioners consent agenda.

**Tally Sheet Missing on
Paradise Pave Project**

Construction quantities are verified by the means of a tally sheet in which the contractor and project owner agree to the amount of work performed for the month. Each application for payment should have tally sheets that were signed by the contractor and project owner. The application for payment number five included in our sample had listed quantities; however, a tally sheet was not available for examination that supported final quantities paid.

**Documentation Missing on
Paradise Pave and Spring
Valley Project**

The Public Works project files should include the inspector's memos and reports that support quantities noted on the tally sheets and application for payment. Clark County Administrative Guideline 14, Attachment A states that project files should include inspector memos and reports and they should be retained permanently. For this project, the inspector documentation was not available for examination for all five of the application for payments on this project.

Recommendation

1. The Assistant Manager of Off-Site Construction should develop and implement a record retention policy and procedure for all project documentation, including tally sheets and inspector documentation in accordance with Clark County Administrative Guideline 14.



Department of Public Works

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Denis Cederburg, P.E., Director • E-Mail: dlc@ClarkCountyNV.gov



August 19, 2013

Angela M. Darragh, Director
Clark County Department of Audit
500 South Grand Central Parkway, 5th Floor
Las Vegas, Nevada 89155-1120

LAS VEGAS PAVING EXPENDITURES AUDIT – CORRECTIVE ACTIONS TAKEN

Dear Ms. Darragh:

In response to the audit findings, the following are planned corrective actions concerning the Las Vegas Paving Expenditures:

Reference 1

Finding:

The application for payment used by the Construction Management Division to process construction payments is done using a spreadsheet. The application uses a series of sheets, formulas, and macros to calculate the monthly construction payment that is paid to the contractor. Construction projects can last for several months or years and so year-to-date amounts are carried forward from month to month. Initial quantities based on the original bid document are entered into the spreadsheet by a Senior Engineering Technician and then cells are password protected to prevent changes of quantities or changes to the formulas and macros. The use of a spreadsheet to track and calculate payments on a \$116 million dollar Beltway or a \$3 million dollar Paradise project increases the risk that payments may not be correct, since it is very easy to change unprotected cell information, such as formulas or year-to-date information in a spreadsheet.

Recommendation(s)

The Assistant Manager of Off-Site Construction should verify that all cells are protected prior to the application for payment being released to the project manager.

Management Response & Action Plan

Recently implemented a policy of verification for each Pay Estimate to check that the cells are locked and that the items listed match the contract. Three (3) Pay Estimates have already gone through this review process (Bid Numbers 602904, 603039, and 603009).

Management Action Due Date

NOW

Reference 2

Finding:

Due to litigation delay on the Northern 215 Beltway project, there were design changes resulting in some additions and a large number of deletions to the project. As a result, there was a \$2.1 million credit to the County documented on a construction change authorization form. After this credit, the "Construction Conflicts and Additional Work" was \$3.1 million (the credit of \$2.1 plus the original \$1 million). Subsequent to the credit, a decision was made to add a piece to the beltway to make the roadway fit together at a cost of \$2.3 million. The added roadway was paid by a contract change order for \$1.3 million (approved by the Board of County Commissioners) plus \$1 million from the Construction Conflicts and Additional Work account, leaving a balance of \$2.1 million in this account. However, the credit balance is not tracked anywhere in the contract, meaning that the overall contract price is not reduced, nor were contract quantities changed. It is only tracked by the project manager and the project consultant.

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Angela M. Darragh, Audit Director
**LAS VEGAS PAVING EXPENDITURES:
CORRECTIVE ACTIONS TAKEN**
August 19, 2013
Page 2

Reference 2 (Continued)

Recommendation(s)

The project manager should request that design changes and resulting credits are included on the Board of County Commissioners consent agenda.

Management Response & Action Plan

Any contract changes that have a cumulative resulting credit of \$1,000,000 or greater will be placed on a Board of County Commissioners agenda.

Management Action Due Date

NOW

Reference 3

Finding:

The Public Works project files should include the inspector's memos and reports that support quantities noted on the tally sheets and application for payment. Clark County Administrative Guideline 14, Attachment A states that project files should include inspector memos and reports and they should be retained permanently. For this project, the inspector documentation was not available for examination for all five of the application for payments on the project.

Recommendation(s)

The Assistant Manager of Off-Site Construction should develop and implement a record retention policy and procedure for all project documentation, including tally sheets and inspector documentation in accordance with Administrative Guideline 14.

Management Response & Action Plan

Policy is already in place requiring all documentation to be placed in the files, including the tally sheets, daily reports, and any other documents regarding payments such as calculations or worksheets. In this case, I believe the inspector had already been moved to his/her next project and no reports were available.

Management Action Due Date

NOW

If you have any questions, please call me at 455-6020.

Sincerely,



Denis Cederburg
Director of Public Works

DC:gms