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Office of Internal Audit

Louisville Metro Government

Contract Change Order
Administration



Audit Report

Office of Internal Audit

Louisville Metro Government

Contract Change Order Administration



December 2006

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Transmittal Letter

December 18, 2006

The Honorable Jerry E. Abramson
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Re: Audit of Contract Change Order Administration

Introduction

An audit of Louisville Metro's contract change order administration was performed. While this was an enterprise review, it focused primarily on General Services Administration, Metro Parks, and Public Works. These are the primary Louisville Metro departments that manage construction contracts and change orders. The primary focus of the audit was the operational and fiscal administration of the change order activity.

The examination was conducted in accordance with Government Auditing Standards issued by the Comptroller General of the United States and with the International Standards for the Professional Practice of Internal Auditing issued by the Institute of Internal Auditors.

As a part of the review, the internal control structure was evaluated. The objective of internal control is to provide reasonable, but not absolute, assurance regarding the achievement of objectives in the following categories:

- Achievement of business objectives and goals
- Effectiveness and efficiency of operations
- Reliability of financial reporting
- Compliance with applicable laws and regulations
- Safeguarding of assets

There are inherent limitations in any system of internal control. Errors may result from misunderstanding of instructions, mistakes of judgment, carelessness, or other personnel

factors. Some controls may be circumvented by collusion. Similarly, management may circumvent control procedures by administrative oversight.

Scope

The operating procedures for General Services Administration, Metro Parks, and Public Works contract change order activity were reviewed through interviews with key personnel. The focus of the review was the operational and fiscal administration of the activity. Tests of sample data were performed for contracts active during the period July 1, 2005 through June 30, 2006. Activity reviewed included bid specifications, bid submissions, contracts, purchase orders, and change orders.

The review included assessing whether activity was processed, recorded, and monitored accurately and appropriately. The validity or accuracy of the contract services or change order activity was not determined. The details of the scope and methodology of the review will be addressed in the Observations and Recommendations section of this report. The examination would not identify all weaknesses because it was based on selective review of data.

Opinion

It is our opinion that the administration of contract change order activity is weak. The internal control rating is on page 5 of this report. This rating quantifies our opinion regarding the internal controls, and identifies areas requiring corrective action.

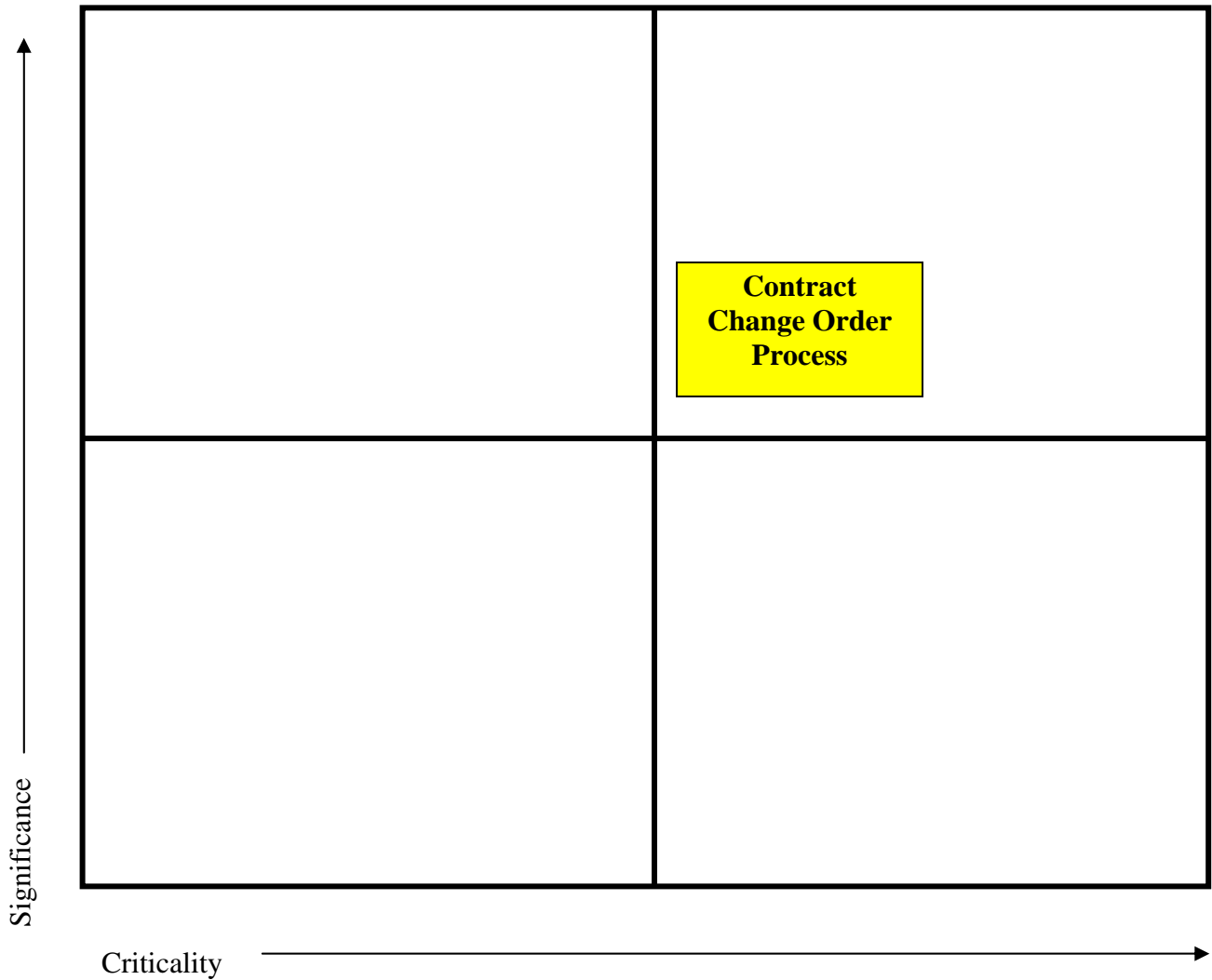
Opportunities for improving the administration of Louisville Metro contract change order activity were noted. These opportunities focus on strengthening the internal control structure. Examples include the following.

- **Policy.** Louisville Metro does not have an enterprise policy regarding the usage of contract change orders. The lack of comprehensive, documented policies and procedures increases the risk that activity is not managed as intended and / or not in the best interest of Louisville Metro.

In addition, Departments that routinely manage contracts do not have change order policies and procedures for their employees. This may lead to inconsistencies and inefficiencies with processing, and increases the risk of inadequate monitoring.

- **Project Documentation.** Department contract files did not have complete documentation and explanations in order to determine the necessity and reasonableness of change orders.
- **Usage.** Based on the sample reviewed, it appears that change orders are often used for adding work to a contract without changing the type of work to be performed. This is justified in the interest of saving time and mobilization costs. However, when the competitive bidding process is bypassed, Louisville Metro may not receive the

Internal Control Rating



<u>Legend</u>			
<u>Criteria Issues</u>	<u>Satisfactory</u>	<u>Weak</u>	<u>Inadequate</u>
	Not likely to impact operations.	Impact on operations likely contained.	Impact on operations likely widespread or compounding.
<i>Controls</i>	Effective.	Opportunity exists to improve effectiveness.	Do not exist or are not reliable.
<i>Policy Compliance</i>	Non-compliance issues are minor.	Non-compliance issues may be systemic.	Non-compliance issues are pervasive, significant, or have severe consequences.
<i>Image</i>	No, or low, level of risk.	Potential for damage.	Severe risk of damage.
<i>Corrective Action</i>	May be necessary.	Prompt.	Immediate.

Background

Contract change orders are written amendments to an original contract between the Louisville Metro Government and the project contractor. Change orders add to, delete from, or alter the scope of work specified in the original contract. They document changes to the scope of work agreed to by all parties involved – the Metro department, contractor, architect, and consultant. The execution of a change order indicates agreement upon all the terms of the change, including changes to the contract sum or contract time.

The following are examples of common reasons for change orders.

- **Change in scope:** Metro department has requested a design change.
- **Unforeseen conditions:** site conditions differ from the expected; requested by contractor or Metro department.
- **Professional errors:** the design plans and specifications were incorrectly drawn.
- **Professional omissions:** an item or element of the project was inadvertently omitted from the plans and specifications.

General Services Administration (GSA), Metro Parks, and Public Works routinely manage contracts for the Metro Government. Contracts are bid through the Purchasing division of GSA according to Metro procurement policies. As changes are agreed upon between a Metro department and project contractor, change orders and applicable purchase requisitions are processed.

This was a scheduled audit.

Summary of Audit Results

I. Current Audit Results

See Observations and Recommendations section of this report.

II. Prior Audit Issues

The Office of Internal Audit has not previously conducted reviews of Louisville Metro's contract change order administration.

III. Statement of Auditing Standards

The audit was performed in accordance with Government Auditing Standards issued by the Comptroller General of the United States and with the International

Standards for the Professional Practice of Internal Auditing issued by the Institute of Internal Auditors.

IV. Statement of Internal Control

A formal study of the internal control structure was conducted in order to obtain a sufficient understanding to support the final opinion.

V. Statement of Irregularities, Illegal Acts, and Other Noncompliance

The examination did not disclose any instances of irregularities, any indications of illegal acts, and nothing was detected during the examination that would indicate evidence of such. Any significant instances of noncompliance with laws and regulations are reported in the Observations and Recommendations section of this report.

VI. Views of Responsible Officials / Action Plan

A draft report was issued to General Services Administration (GSA), Metro Parks and Public Works on November 2, 2006. Additional information was sent to GSA on November 8, 2006. An exit conference was held at the Office of Internal Audit on December 7, 2006. Attending were Susan Neumayer, Craig Bowen, Ted Pullen, Bob Cromis, and Betty Younis representing General Services Administration; Michael Norman, Mary Ann Wheatley, and Jenni Schelling representing Internal Audit. Final audit results were discussed.

The views of GSA officials were received on December 15, 2006 and are included as corrective action plans in the Observations and Recommendations section of the report. The plans indicate a commitment to addressing the issues noted.

LMCO §30.36(B) requires Louisville Metro Agencies to respond to draft audit reports in a timely manner. It specifically states that

“The response must be forwarded to the Office of Internal Audit within 15 days of the exit conference, or no longer than 30 days of receipt of the draft report.”

GSA’s response was provided within this required timeframe.

Observations and Recommendations

General Administration

Scope

General Services Administration, Metro Parks, and Public Works procedures for administering contract change orders were reviewed. The focus of the review was the operational and fiscal administration of the activity. This included how activity is processed, recorded, and monitored. Applicable personnel were interviewed in order to gain a thorough understanding of the processes.

A sample of change order activity was judgmentally selected from contracts active during the period July 1, 2005 through June 30, 2006. Louisville Metro's financial system does not have a specific reporting mechanism to identify change orders. Therefore, identification was manually performed and was dependent on the accuracy and consistency of the information entered in the system. The sample was selected from the change orders identified through this manual process.

The activity reviewed included department contract files, bid specifications, bid submissions, contracts, purchase orders, and change orders. The validity or accuracy of the contract services or change order activity was not determined. The review would not reveal all weaknesses because it was based on selective review of data. The results are as follows.

There were issues noted with the general administration of Metro contract change order activity. As a result, the internal control structure is weakened and its effectiveness impaired. The main issues noted are as follows.

- **Policies and Procedures.** Louisville Metro Government does not have an enterprise policy for change orders. The lack of comprehensive, documented policies and procedures increases the risk that activity is not managed as intended and / or not in the best interest of Louisville Metro.

In addition, Departments that routinely manage contracts do not have change order policies and procedures for their employees. This may lead to inconsistencies and inefficiencies with processing, and increases the risk of inadequate monitoring.

- **Departmental Files.** Detailed explanations for contract change orders are not documented in department contract files. While some memorandums, email correspondence, etc. were located in the contract files, it is not common practice to include documented explanations.

- Project managers maintain files and electronic spreadsheets independent from the department contract files. Additional support documentation for change orders, including project status notes and correspondence, may be retained in these files. However, this is not the official department file, and increases the risk that explanations and documentation are not properly retained.
- **Usage.** According to the American Institute of Architects, the purpose of a change order is for implementing changes in the work agreed to by the owner, contractor and architect. Based on the sample reviewed, it appears that Metro departments often use change orders for adding work to a contract without changing the type of work to be performed. These additions appear to have been made in the interest of saving time and mobilization costs. However, when the competitive bidding process is bypassed, Louisville Metro may not receive the best price available and potential contractors are denied the opportunity to submit bids. Examples are illustrated in the following.
 - General Services Administration
 - Phase III of the City Hall renovation was added to the Phase II contract. This addition was over \$122,000, or 42% of the original contract.
 - The facilities assessment contract included two change orders for additional locations, with a cumulative total of 19% of the original contract.
 - Several additional HVAC systems (heating, ventilation, and air conditioning) were added to the City Hall renovation – Phase II. HVAC installations and upgrades were included in the original contract. The additional HVAC systems totaled 17% of the original contract amount.
 - Metro Parks
 - Two change orders were added for sidewalk and basketball court alterations at Lake Dreamland Park. These additions totaled \$34,300, which is 117% of the original contract amount for the park.
 - Additional paving, parking, and drainage work was added to the Hounz Lane Park improvements contract. These additions totaled over \$94,000, or 105% of the original contract amount.
 - Two walking paths were constructed at Highview Park. The original contract included one walking path, and the additional path was added with a change order. The addition totaled 100% of the original contract amount.
 - A septic system and electrical work was added to the construction of three cabins at Otter Creek Park. The original contract specifications included bathroom facilities, plumbing, and electrical work. The change order was an additional 28% of the original contract amount.

- Approximately \$123,000 was added to Shelby Park renovation – Phase I to include new tennis and basketball courts. This addition totaled 16% of the original contract.

➤ Public Works

- Three change orders were added to the road resurfacing contract to include additional streets. The additions totaled \$1,145,000, or 52% of the contract amount.

- **Activity.** As illustrated in Table 1, several contracts from the sample reviewed were identified as having significant cumulative change order totals in relation to the original contract amount. While Louisville Metro does not have a policy on change order usage, best practices require that a pre-determined threshold be included. This threshold requires additional authorizations and approvals in order to ensure the entity’s best interests are served in the use of a change order.

Table 1 – Change Order Activity				
Department	Project	Original Contract	Total Change Orders	Change Orders % of Original Contract
Metro Parks	Hounz Lane Park Improvements	\$90,000	\$145,185	161.32%
Metro Parks	Highview Park Walking Path	\$54,332	\$53,783	98.99%
GSA	City Hall Renovation – Phase II	\$288,028	\$173,792	60.34%
Metro Parks	Otter Creek Park Cabins	\$71,850	\$41,106	57.21%
Public Works	Road Resurfacing	\$2,200,000	\$1,141,100	51.87%
Metro Parks	Baxter Square Sports Court Upgrades	\$78,500	\$34,300	43.69%
Metro Parks	Shelby Park Renovation – Phase I	\$783,287	\$174,418	22.27%
GSA	Facilities Assessments	\$96,662	\$18,628	19.27%

- **Monitoring.** The Metro financial system does not have a mechanism to identify change orders and to extract details for the associated purchase orders. Currently, this

can only be accomplished through manual review of data. Even this is not totally reliable, as it is dependent on the accuracy and consistency of the information recorded in the system. The inability to effectively provide change order information greatly impairs Metro's ability to monitor the activity.

Recommendations

Appropriate personnel should take corrective action to address the concerns noted. Specific recommendations include the following.

- ✓ Metro GSA - Purchasing should develop an enterprise policy for contract and change order management. This should be developed with the involvement of end users such as General Services Administration, Metro Parks, and Public Works. Due to the varying circumstances of projects, it may not be possible to include criteria for determining when a change order can, or should be used. However, the policy could include documentation requirements, thresholds for additional authorizations, and instructions for processing.
- ✓ The following should be considered in formulating the enterprise policy.
 - Amounts of additional funding that are allowable per contract
 - Based on the cumulative amount of change orders or on an individual basis
 - Defined amount limitations or percentage of original contract
 - Level(s) of approval required based on the amount of each contract amendment
 - Whether it is acceptable to forgo bidding additional work when only one bid was received on the original contract
 - Whether it is acceptable to use change orders for the purpose of adding work to a contract based on the availability of funds
 - When the work was bid as an alternate in the original contract
 - When the work was not bid under the original contract
 - Consistent documentation via standardized forms, for the reason for the change as well as the actual change order processed
 - Minimum requirements for department contract file documentation
 - Guidelines for documenting minor or non-financial amendments that do not require a change order form
 - Local, state, and federal procurement policies and requirements in regards to change orders
- ✓ The enterprise policy should include guidance to help project managers identify and resolve problems that arise in the course of a project. The documentation could require project managers to note whether a change order is caused by an error,

omission, an unforeseen circumstance, or a change in the scope of work. This would require project managers to address errors in planning and discuss the issue with management. This would also allow departments to monitor project costs and the causes for contract amendments.

- ✓ Legal counsel should be asked to review the proposed enterprise policy to ensure it complies with local and state procurement requirements.
- ✓ Each department that manages contracts and change orders should have a written internal policy and procedure. The departmental policy should include sufficient detail for project managers and support staff to administer change orders, including copies of forms used and the policies followed for processing activity. It should be distributed to all applicable staff. The internal policy and procedures should be updated as needed. This will help ensure adherence to applicable guidelines, along with promoting efficiency and effectiveness of contract administration.
- ✓ The American Institute of Architects recommends the use of form G709-2001, Work Changes Proposal Request, to document the reasons for change orders. This form is a request to the contractor for information related to the proposed change in the contract. Louisville Metro should consider using this type of form to provide documentation for change requests.
- ✓ Detailed explanations that support the necessity of additional work should be noted in department contract files. Without complete documentation, it is difficult to determine the necessity and reasonableness of contract amendments.
- ✓ Department project files should be the primary file containing all pertinent project documentation. This includes explanations for change orders, as well as documentation to support all other aspects of the project such as planning, the bidding process, project funding, minor changes, payments, site inspections, etc. Relying on the project managers' files increases the risk that required project documentation is not properly retained. Issues regarding document retention should be addressed by Metro Archives.
- ✓ Departments should consider implementing a checklist system for project files. This would help ensure that all the necessary documentation is in the file.
- ✓ GSA - Purchasing should consult with Metro Technology regarding the feasibility of creating financial system reports (or modifying existing reports) that includes change order activity. This type of tool is needed in order to effectively monitor change order activity. Monitoring of activity provides assurance that change orders are being used as intended, and not to bypass procurement policies. Activity monitoring should be performed by GSA – Purchasing as well as the departments responsible for administering contracts.

- ✓ Training of key personnel will help ensure consistent adherence to the policies (both enterprise and departmental).

General Services Administration – Corrective Action Plan

We are in agreement that a Metro wide policy for change orders should be implemented. Purchasing will take the lead in developing that policy with input from various Metro departments that will be affected by the policy i.e. Works, Parks, MDA.

The policy will include the following:

1. A delineation of change orders versus contract amendments.
2. A standardization of required forms. Such forms will require:
 - A. An explanation of the change order or contract amendment.
 - B. Varying levels of approval depending on the type of change, or contract amendment, and the dollar amount (as a % of total project dollars) of the change.
3. A Standard Operating Procedure for Change Orders and Contract Amendments. The guidelines in the SOP will result from process mapping involving Purchasing and construction units Metro-wide.

Concomitant with the development of that enterprise policy, the following changes will be instituted:

1. Construction coordination meetings will be held on a regular basis with all construction units Metro-wide to ensure consistency in approach and understanding.
2. Further development of the Sharepoint site as a central repository and clearinghouse for the Metro construction community. Development of the site will include:
 - A. Electronic archival record of construction bids/rfps.
 - B. All forms and templates for bids, rfps, change orders and contract amendments.
 - C. Change Order and contract amendments spreadsheet, by project and by department (expressed as %s).
3. Development of an educational presentation (PowerPoint or other suitable format) for both Purchasing personnel and project managers.

We believe that the development of the Sharepoint site, coupled with universal forms and a written Standard Operating Procedure, will facilitate standardization.