



STREET PAVING:
City needs to demonstrate least cost

A REPORT FROM THE CITY AUDITOR
May 2006



Office of the City Auditor
Portland, Oregon



CITY OF
PORTLAND, OREGON

OFFICE OF THE CITY AUDITOR
Audit Services Division

Gary Blackmer, City Auditor
Drummond Kahn, Director of Audit Services
1221 S.W. 4th Avenue, Room 310
Portland, Oregon 97204

(503) 823-4005 FAX (503) 823-4459
www.portlandonline.com/auditor/auditservices

May 15, 2006

TO: Mayor Tom Potter
Commissioner Sam Adams
Commissioner Randy Leonard
Commissioner Dan Saltzman
Commissioner Erik Sten
Susan Keil, Director, Office of Transportation
Sam Irving, Director, Bureau of Maintenance

SUBJECT: Audit of Portland's Paving Program's Compliance with the State's Least Cost Statute (Report #324A)

Attached is Report #324A containing the results of our audit of Portland's street paving program's compliance with the State's least cost statute. Written responses from the Commissioner in Charge, and the Directors of the Office of Transportation and the Bureau of Maintenance are included at the back of the report. They are in agreement with the audit recommendations, and have indicated full support for implementing them.

As a follow-up to these recommendations, we ask the Director of the Office of Transportation to prepare a status report in one year detailing steps taken to address the recommendations contained in our report. The status report should be sent to me, and coordinated with the Commissioner in Charge.

We appreciate the cooperation and assistance we received from personnel in the Office of Transportation, and also the City Attorney's Office, in conducting this audit.


GARY BLACKMER
City Auditor

Audit Team: Drummond Kahn
Doug Norman
John Hutzler

Attachment

STREET PAVING:

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Summary The City of Portland's Bureau of Maintenance (BOM) in the Office of Transportation is performing street paving work that appears to fall within the definition of "public improvement" in Oregon Revised Statutes (ORS) 279C.305. According to the statute, planned public improvements must be reported by the City to the State Bureau of Labor and Industries (BOLI), along with the estimated total cost of each project. In addition, if the City intends to complete a public improvement estimated to cost more than \$125,000 with City equipment and personnel, it must prepare adequate plans, specifications and unit cost estimates for the work, and show that its decision to perform the work internally is consistent with the State of Oregon's least-cost policy for public improvements.

We found, however, that the City has considered work done on City streets by BOM crews, including many projects that appear to be public improvements, as maintenance work not subject to these requirements. As a result, BOM has not developed plans, specifications or cost estimates for the work, and the City has not reported the projects to the State. Our review of BOM reports indicates that 22 percent of BOM's in-house paving projects, representing \$3.6 million (58 percent) of BOM's total expenditures for the 2005 paving projects we reviewed, should have been reported as planned public improvements. We recommend that BOM take steps necessary to comply with the requirements of state law.

Background The Bureau of Maintenance is located within the City of Portland's Office of Transportation (PDOT). BOM is charged with the responsibility of preserving the public investment of over \$5.8 billion

in transportation facilities and \$4.5 billion in sewer and stormwater infrastructure. BOM's FY 2005-06 adopted budget of \$50.5 million represents about 29 percent of PDOT's total budget. Street Preservation is the largest of nine programs within BOM, with over 90 employee positions and a budget of \$15.2 million. This program is responsible for maintaining over 1,800 miles of City local and arterial streets. The program employs techniques ranging from sealing cracks and patching holes to base repair and pavement overlay. Resurfacing accounts for approximately \$7 million of Street Preservation expenditures annually.

Oregon public contracting law for public improvements is set forth in Oregon Revised Statutes (ORS), Chapter 279C. Section 305(1) of that chapter contains the least-cost policy for public improvements:

It is the policy of the State of Oregon that contracting agencies shall make every effort to construct public improvements at the least cost to the contracting agency.

ORS 279C.305(2) requires a contracting agency, such as the City of Portland, to file with the Commissioner of the Bureau of Labor and Industries (BOLI), not less than 30 days prior to the adoption of the agency's budget, a list of every public improvement known to the agency that it plans to fund in the budget period. Under the law, the City must indicate in its report whether it intends to perform the construction through a private contractor. If the City intends to perform the construction of a public improvement estimated to cost more than \$125,000 with its own personnel and equipment, it must show that its decision to do so conforms to the least-cost policy of subsection (1).

BOM projects for resurfacing arterial streets often involve preparation work composed of grinding, plugging and profiling during the winter months, followed by a pavement overlay during the spring/summer paving season. The elements of such a project include:

- Grinding or milling - removing old pavement, often to a depth of three to four inches in the travel lanes of a street.
- Plugging or inlay - paving the travel lanes to a depth of two to three inches.

- Profiling - grinding the curb lanes (parking lanes, bike lanes, bus turnouts) from the grade of the repaved travel lanes to a curb exposure of seven inches.
- Overlay - application of a new asphalt concrete layer to a depth of 1.5 to 2 inches over the full width of the street.

Figure 1 Bureau of Maintenance paving crew applying a pavement overlay



Source: Audit Services Division photo

BOM has traditionally considered such work to be “ordinary repair or maintenance necessary to preserve a public improvement,”¹ which does not fall within the general definition of public improvement and does not trigger the filing requirements of the least-cost provision. However, in 1987 the Oregon Legislature amended ORS 279C.305 specifically to include certain resurfacing projects in the definition

¹ ORS 279A.010(1)(aa)(B)

of public improvement for purposes of that section only. The law now provides: "For purposes of this section, resurfacing of highways, roads or streets at a depth of two or more inches and at an estimated cost that exceeds \$125,000 is a public improvement."² For purposes of the least-cost policy and the filing requirements of the law, resurfacing of Portland streets at a depth of two or more inches and at an estimated cost that exceeds \$125,000 is a public improvement.

Audit Scope, Objectives and Methodology

The objective of this audit was to review City Bureau of Maintenance paving operations for compliance with the requirements of Oregon Revised Statutes 279C.305, the State's Least Cost Policy for Public Improvements. This objective is one component of a larger body of audit work on street paving that will be reported during 2006 in additional reports. An audit of the Bureau of Maintenance was included in the Audit Services Division's FY 2005-06 audit schedule.

In conducting our review, we interviewed PDOT and BOM management and staff, a Senior Deputy City Attorney, the City Engineer, and a financial analyst in the City Office of Management and Finance (OMF) who files the City's report with BOLI. We also interviewed a maintenance manager in the Oregon Department of Transportation. We reviewed our 1988 Bureau of Maintenance audit report and the Bureau's response, the legislative history of ORS 279C.305, BOM's analysis of 2005 project costs, and the Planned Public Contracts reports filed with BOLI by the City of Portland over the last three years.

We conducted our work in accordance with generally accepted government auditing standards.

Results

To date, the language of ORS 279C.305(5) has not been interpreted by the courts. However, based on our interviews of the City Engineer and staff from the City Attorney's Office, we believe that BOM is treating some projects as maintenance that could be considered

² Subsection 5.

public improvements. Specifically, a project that includes removing old pavement to a depth of three to four inches, paving the traffic lanes to a depth of two to three inches, followed by paving the entire street to a depth of 1.5 to 2 inches, could be considered “street resurfacing at a depth of two or more inches.” When the estimated cost of such a project, including both the winter preparation and summer overlay costs, exceeds \$125,000, the project could be considered a public improvement for purposes of ORS 279C.305, triggering the reporting requirements of that section.

Our review of BOM’s 2005 in-house paving projects found that 13 (22 percent) of a total of 58 paving projects completed between June 1 and October 19 could be considered public improvements as defined by ORS 279C.305(5). These projects represent \$3.6 million (58 percent) of the total cost (\$6.3 million) of the projects completed in this period. BOM considered all of these projects to be maintenance, rather than public improvements.

BOM management stated that projects completed with BOM personnel and equipment have never been reported to BOLI. Our review of the City’s BOLI reports for the past three years confirms that no projects completed with BOM personnel and equipment were reported in that period.

BOM’s cost analysis of most of the paving projects which it completed in FY 2004-05 reveals that many of those projects should have been reported to BOLI. The City’s report to BOLI for the same year included none of these BOM projects. Because it did not consider these projects to be public improvements, the City also did not show that its decisions to perform this work in-house satisfy the State’s least-cost policy.

We also found that the City’s FY 2005-06 report to BOLI was filed late – it was submitted by the City’s Office of Management and Finance (OMF) 30 days after adoption of the City budget, rather than at least 30 days before adoption of the budget as required. The statute provides that the list of projects reported to BOLI may be periodically revised, but no revision has been filed by the City.

The law also requires that, before constructing a public improvement with its own equipment or personnel, the City must prepare plans and specifications sufficient to control the performance of the work and ensure satisfactory quality of construction. The City must also estimate the unit cost of each classification of work, including a reasonable allowance for the cost of any equipment used. However, neither the City Engineer nor BOM prepares plans and specifications for work performed by BOM personnel, and BOM does not develop unit cost estimates for each project.

While it remains unclear exactly what street work represents “ordinary repair or maintenance necessary to preserve a public improvement” under ORS 279.010(1)(aa)(B), we believe that street resurfacing at the level of the projects described above should be reported as a public improvement (see Figure 2).

Figure 2 Comparison of street preservation activities and Oregon law

Work performed with BOM personnel and equipment	Current BOM action	Action required by ORS 279C.305
Patching, crack sealing, slurry seal	No BOLI reporting No plans or specifications No cost estimates No showing of least cost	No BOLI reporting No plans or specifications No cost estimates No showing of least cost
Street resurfacing at a depth of less than two inches OR at a total cost not exceeding \$125,000	No BOLI reporting No plans or specifications No cost estimates No showing of least cost	Depends. Could be a public improvement under ORS 279A.010(1)(aa)
Street resurfacing at a depth greater than two inches AND at a total cost exceeding \$125,000	No BOLI reporting No plans or specifications No cost estimates No showing of least cost	Report to BOLI Adequate plans and specifications Unit cost estimates Show least cost

Source: Auditor analysis

Recommendations

To ensure compliance with the law and to further the City's interest in completing major street resurfacing projects at the least cost, we recommend that BOM consider all paving projects that involve plugging and/or overlaying most of the street surface to a total depth of more than two inches at a total cost exceeding \$125,000 to be public improvements for purposes of ORS 279C.305. In turn, BOM needs to comply with the requirements of that section.

1. BOM should develop cost estimating procedures needed to determine when a planned paving project represents a public improvement, as defined by ORS 279C.305(5).
2. BOM should ensure that its public improvement projects are reported to OMF for inclusion in the City's annual report to BOLI.
3. BOM, if it intends to perform such projects in-house, should prepare adequate plans and specifications, estimate the unit cost of each classification of work, show that its decision conforms to the least-cost policy, and keep a full, true and accurate record of actual project costs.
4. OMF should develop a process for timely and complete reporting of all public improvements to BOLI, as required by state law.

RESPONSES TO THE AUDIT



CITY OF

PORTLAND, OREGON

OFFICE OF PUBLIC UTILITIES

Sam Adams, Commissioner
1221 S.W. Fourth Avenue, Rm. 220
Portland, Oregon 97204-1994
(503) 823-3008
FAX: (503) 823-3017
E: samadams@ci.portland.or.us
www.commissionersam.com

May 9, 2006

RE: Auditor's Report on Bureau of Maintenance Paving Practices

To Whom It Concerns:

As Commissioner-in-Charge of the Portland Office of Transportation, I am responsible for overseeing the Bureau of Maintenance (BOM) and the Bureau's continual work on Portland's transportation infrastructure.

Ten months ago, immediately after I was given the responsibility of overseeing PDOT and the BOM by the Mayor, I began taking a hard look at the entirety of PDOT's operations to ensure that the bureau was performing at optimum efficiency. I initiated a review of all of PDOT and BOM's operational practices. In executing this review, I brought in outside experts in lifecycle asset management to make sure that PDOT is doing the appropriate type of work at the appropriate time, is focusing on the appropriate assets and is performing work in a manner that maximizes all of Portland's transportation resources at the least possible cost.

Although this close evaluation of PDOT has been underway for months, I welcome the further analysis and evaluation provided here by the City Auditor's Office. While paving is only one aspect of the Bureau of Maintenance's overall asset repair and preservation practices, it is one of the most fundamental and visible jobs performed by the agency. It is important that we get paving right.

I look forward to working with the City Auditor and his staff to bring BOM into full compliance with all applicable state and federal laws while simultaneously ensuring that PDOT provides the citizens of Portland with the best and most cost-effective transportation services possible.

Best,

Commissioner Sam Adams



CITY OF
PORTLAND
OFFICE OF
TRANSPORTATION



Sam
Adams
Commissioner

May 10, 2006

Susan D.
Keil
Director

To: Gary Blackmer, City Auditor

Eileen
Argentina
System
Management

From: Susan Keil, Director *Susan D. Keil*
Portland Office of Transportation

Don
Gardner
Engineering &
Development

Sam Irving, Director *Samuel Irving Jr.*
Bureau of Maintenance

Sam M.
Irving, Jr.
Maintenance

Subject: Response to Final Draft Audit of Portland's Paving Program's
Compliance with State's Least Cost Statute

John
Rist
Business
Services

We have reviewed the draft report and appreciate the clarifications which are a result of this audit. We also appreciate the collaborative manner in which the audit has been conducted.

Paul
Smith
Planning

A number of areas for improvement have been identified in this analysis, and I am pleased to report that we are already making progress on some of those initiatives. Specifically, we will be developing more adequate plans and specifications for paving work as well as completing cost estimating procedures for the varied types of work required to maintain streets in Portland. We will further refine our record keeping for work completed by Maintenance Bureau employees.

We are submitting the Bureau of Labor and Industries report required by ORS 279 to the City's Office of Management and Finance on time, later this week and will be updating the list provided to BOLI, as needed, later in the year.

The Bureau of Maintenance is comprised of committed employees who have a great deal of pride in their work and the service they provide to the public. The clarification provided by this audit will assist us in improving the way in which we do our work for our customers.

CC: Commissioner Sam Adams
Drummond Kahn

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Street Paving: City needs to demonstrate least cost

Report #324A, May 2006

Audit Team Members:

Doug Norman

John Hutzler

Gary Blackmer, City Auditor
Drummond Kahn, Director of Audit Services

Other recent audit reports:

Partial Day Leave for exempt employees: Clarification would improve policy (#327, May 2006)

City of Portland Service Efforts and Accomplishments: Fifteenth Annual Report on City Government Performance (#320, November 2005)

Office of Government Relations: Expense documentation and approval process can be improved (#325, September 2005)

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