Georgia Department of Audits and Accounts
Performance Audit Operations
Russell Hinton, State Auditor
Leslie McGuire, Director

Maintenance of State Prisons

Better performance information needed to evaluate GDC's maintenance efforts

Why we did this review

This special examination was conducted at the request of the House Appropriations Committee. The Committee requested that we review GDC's provision of maintenance services at its correctional facilities. The objectives of the examination were to:

- Determine if GDC has adopted policies and procedures that emphasize the completion of preventive work.
- Document the frequency and reasons that GDC uses contractors and inmates for maintenance activities.
- Determine whether GDC has adequate information to manage program operations.

Who we are

The Performance Audit Operations Division was established in 1971 to conduct in-depth reviews of state programs. The purpose of these reviews is to determine if programs are meeting their goals and objectives; provide measurements of program results and effectiveness; identify other means of meeting goals; evaluate the efficiency of resource allocation; and assess compliance with laws and regulations.

Website: www.audits.ga.gov
Phone: 404-657-5220
Fax: 404-656-7535

What we found

The Georgia Department of Corrections (GDC) should improve the data it collects to monitor the efficiency and effectiveness of its maintenance program. However, GDC does emphasize to facility personnel the importance of preventive maintenance and conducts quarterly and annual audits to check compliance with maintenance schedules.

Regarding performance measurement, GDC should provide additional guidance and training to facility staff who are responsible for counting and classifying maintenance activities, as well as staff responsible for classifying maintenance expenditures. Current differences in how state prisons track these items make the information unreliable for gauging performance. To better manage operations, GDC should also collect additional information, such as the frequency or cost of repairs to equipment, the extent to which maintenance is outsourced to contractors, maintenance expenditures per prison and per square foot, and the level and cost of deferred maintenance.

The importance of preventive maintenance, which is expected to reduce the need for repairs and prolong the life of assets, is emphasized in GDC policies. According to management reports, incomplete preventive maintenance comprised less than 1% of work orders for four of five prisons[1] reviewed. In addition, all six prisons in our sample scored at least an 80 (of 100) on their most recent audit, which measures whether preventive maintenance is completed.

Although GDC has taken steps to prioritize preventive maintenance, we found that it could better ensure that maintenance staff is aware of equipment service requirements. Three of the six sample prisons did not include detailed

[1] The sixth prison reviewed was unable to provide details of its activity.

maintenance instructions in the work order management system, on the work orders given to staff, or on the equipment itself. Additionally, none of the six prisons visited have a current inventory of parts and supplies but instead rely on maintenance staff to indicate when parts are needed. This increases the risk that parts are not readily available when maintenance is scheduled.

Our review of maintenance spending found that GDC paid a combined $41.6 million for routine maintenance in fiscal years 2010 and 2011. A majority of the 29 prisons' cost per square foot were near the median cost of $2.20, though five had costs at least 20% lower and four had costs at least 20% higher. The prisons' maintenance staffing level, security level, and unique responsibilities appeared to contribute to the cost variations. For example, some of the prisons with high costs are responsible for tasks other than typical facility upkeep that would affect maintenance expenditures (e.g., maintaining water treatment systems). It should be noted that high or low costs alone do not provide insight into a prison's long-term efficiency. Disregarding current maintenance needs can keep costs low in the short term but lead to higher overall costs in later years. Therefore, maintenance spending measures must be reviewed in concert with other measures of performance.

Finally, our review found that private contractors perform a small portion of prisons' routine maintenance and that inmates frequently assist maintenance staff. The precise distribution of maintenance between state maintenance staff, contractors, and inmates is unclear because prisons are not required to track or report the number of work orders completed with contractor and inmate assistance. GDC officials indicated that contractors generally perform the work that exceeds the skill level of a general craftsman and that inmates assist on most types of tasks, other than those that are security related. A review of accounting records found that in-house costs (e.g., personnel, supplies) made up at least 81% of routine maintenance costs, while contractor payments comprised about 19%.[2] (Contractors also were paid virtually all of the $10.2 million spent by GDC on major repairs and equipment replacement, which is consistent with GDC's description of contractor usage.) Furthermore, while the number of work orders completed with inmate assistance was unavailable, fiscal year 2011 prison activity data collected from all prisons indicated that inmates worked 62% of total maintenance hours (461,000) compared to 38% (282,000) worked by staff.

GDC's Response: "*The Department agrees with the basic findings in the draft report. The report generally reflects the current maintenance operations in the Department of Corrections.*" *Additional comments provided by GDC are included at the end of each relevant finding. These comments include an acknowledgement that maintenance data could be improved, but GDC added that it believes that it is the "only department to attempt this level of analysis" at an agency-level. GDC also noted that a Computerized Maintenance Management System is the best method for facility maintenance but that such a system is cost-prohibitive at this time.*

[2] We found payments of purchasing card invoices in expenditure accounts that should only include contractor payments. According to GDC, the cards should only be used for supplies and materials. We did not determine the extent to which the purchasing card payments were erroneously placed in the expenditure account, or if the cards were erroneously used to pay contractor invoices.

Table of Contents

Purpose of the Special Examination 1

Background 1

GDC Overview 1

Providers of Maintenance Services 1

Types of Maintenance Activity 2

Maintenance Process 3

Financial Information 4

Requested Information

Information currently available does not allow for a thorough assessment of the efficiency and effectiveness of state prison maintenance programs. 6

While GDC has made preventive maintenance a priority, certain elements of preventive maintenance planning could be improved. 10

Maintenance costs per square foot are most affected by prisons' maintenance staffing level, security level, and unique maintenance responsibilities. 12

Available information shows that contractors perform a small portion of the prisons' routine maintenance and that inmates frequently assist maintenance staff. 14

Appendices

Appendix A: Objectives, Scope, and Methodology 17

Appendix B: Sample Monthly Maintenance Report 20

Appendix C: State Prison Performance Data Detail 22

Purpose of the Special Examination

The purpose of this examination is to provide information requested by the House Appropriations Committee. The Committee requested that we review Georgia Department of Corrections' (GDC) provision of maintenance services at its correctional facilities. We reviewed the management controls that are in place to ensure that the program is operating in an efficient and effective manner, with a focus on routine maintenance and repairs. Our review focused on state prisons that were operating during fiscal years 2010 and 2011, except for the Georgia Diagnostic and Classification Prison whose maintenance was provided via a statewide contract. A description of the objectives, scope, and methodology used in this review is included in **Appendix A**.

The content of this report has been discussed with appropriate GDC staff, and a draft of the report was provided to them for review. GDC was given an opportunity to provide a written response, and responses have been included in this report as appropriate.

Background

GDC Overview

The Georgia Department of Corrections holds approximately 56,000 prisoners in a variety of facilities, including state, county, and privately-run prisons, pre-release centers, transitional centers, and probation detention centers. This review focuses on maintenance at GDC state prisons, which can house a range of 200 to 2,500 inmates. GDC maintains 10.2 million square feet of building space across all state prisons and 14 million square feet across all GDC state-owned facilities.

In addition to size, state prisons vary in security level, mission, function, and age. Most state prisons operate at the medium security level, which is designated to house minimum and medium custody level inmates. Other state prisons designated as close security level house all types of offenders, including those who require close monitoring and strict management of movement. Prisons may also have a special mission or purpose, such as the provision of mental health services. Additionally, state prisons range in age from 8 to 86 years old; according to GDC, the average age of all buildings is 25.7 years.

Providers of Maintenance Services

Prison facility maintenance is monitored by GDC's Engineering and Construction Services Division. The division provides technical expertise, project funding, and project management skills to the various GDC facilities. The division has divided the state into four regions, with each containing five to nine prisons and numerous smaller GDC facilities. Each region is headed by a regional engineer, who monitors each facility's maintenance activity and conducts routine maintenance audits. The regional engineer is also responsible for approving major purchases and managing an annual regional maintenance budget that supplements the smaller maintenance budgets provided directly to the prisons.

Facility maintenance is provided by GDC maintenance staff, external contractors, and inmates. At the facility level, GDC employs approximately 280 maintenance staff, including facility engineers, supervisors, craftsmen, and a limited number of mechanics. The number of staff employed at a facility depends on its size but can range from as few as one to as many as 19. Each prison has a facility engineer charged with monitoring the condition of equipment and buildings and managing craftsmen. The facility engineer also

determines if a maintenance activity will be performed by in-house staff or a contractor. Most facility engineers are assisted by a maintenance clerk, who is responsible for administrative tasks such as data entry, ordering parts, and completing the maintenance activity reports.

Routine maintenance is generally provided by in-house employees who, in some cases, are assisted by inmates. Most facility maintenance employees are craftsmen, who perform preventive maintenance and repairs that may require a moderate technical skill level. Craftsmen are general tradesmen who are not required to hold a certification or license, and they frequently work in multiple trades, such as plumbing; heating, ventilation, air-conditioning (HVAC); carpentry; and electrical.

Maintenance tasks that require less technical skill and security clearance may be conducted by inmates. Inmates perform custodial duties and grounds maintenance, but they also assist craftsmen with other maintenance activities. Inmates are not permitted to perform any tasks related to security, lock and control, electronics, or complex systems (e.g., fire protection, elevators).

Private contractors provide maintenance and repairs that require more technical skills or more specialized equipment. This may include routine, preventive maintenance on complex systems, such as elevators and boilers, which is provided through a Service Maintenance Agreement. In other cases, the contractors make more complex repairs to those systems or other systems and equipment. Additionally, they may be hired for major repairs, such as new wells or sewage system upgrades. In some cases, work performed by contractors must be performed by certified or licensed personnel.

It should also be noted that in 2009 GDC contracted with a private company, Carter, Goble, and Lee (CGL), to provide maintenance at Georgia Diagnostic and Classification Prison (GDCP) and Metro State Prison, which closed in April 2011. Initially, GDC outsourced preventive maintenance in these facilities because preventive maintenance was not being adequately conducted and GDC was having difficulty attracting and retaining staff. However, GDC discontinued the contract in late 2011, asserting that the cost exceeded estimates.

Types of Maintenance Activity

GDC policy outlines four categories of maintenance in the following priority order: emergency, preventive, corrective, and facility projects.

- *Emergency* – GDC policy defines emergency maintenance as "unanticipated repair and/or replacement, which requires immediate action to restore and/or maintain operation of the facility with respect to situations affecting life, health or safety." Emergency repairs must be completed within 24 hours of the event. The warden or his or her designee makes the final decision as to whether or not a situation constitutes an emergency. An emergency repair must be also approved by GDC central purchasing.

- *Preventive* – According to GDC, preventive maintenance is "routine, periodic inspection, cleaning, adjustment, service and testing of buildings, systems and equipment." Examples include changing HVAC filters and preemptively cleaning coils on a heating unit. The intervals in which preventive maintenance tasks should be completed vary depending on the equipment but may be required

monthly, quarterly, semi-annually, or annually. Each facility is required to develop and implement a preventive maintenance program. According to the Georgia State Construction Manual, breakdowns are substantially reduced or avoided altogether by the proper care of equipment and systems.

- *Corrective* – Corrective maintenance is defined as "timely and efficient repair of buildings, systems and equipment." Corrective repairs occur in response to a request submitted by a facility employee or to something found during a routine preventive maintenance inspection. Examples include repairing outlets and working on fan motors. Maintenance staff are typically required to complete the repair within 72 hours. These may be more complex than preventive maintenance and require the use of an outside vendor.

- *Facility Projects* – Facility projects include beautification, renovation, remodeling, new construction projects, and change of use projects (projects which change the use of existing square footage). These tasks are to be completed as scheduled by the maintenance staff.

In addition to these four categories, the maintenance staff are responsible for administrative and miscellaneous work. Among their administrative duties, maintenance employees complete paperwork, participate in training, and travel to other facilities. Additionally, they are often tasked with various maintenance assignments that are neither preventive nor corrective. Examples include moving furniture, cleaning the maintenance shop, and hanging pictures.

Maintenance Process

A large portion of the maintenance staff's workload falls into the preventive and corrective maintenance areas. While the exact processes for initiating work and recording activity varies among prisons, the following provides an overview of the processes generally used.

- *Preventive* – Each facility is required to maintain an equipment list that includes a schedule of the frequency of required preventive maintenance. Craftsmen, who are typically assigned to a building or group of buildings, are expected to complete any scheduled preventive maintenance for their area during the first week of each month. Before the end of the month, craftsmen inform the facility engineer or maintenance clerk of the status of the preventive maintenance work, and the information is recorded in a Monthly Maintenance Report.

- *Corrective* – The maintenance department creates corrective work orders in response to written or phoned requests for repairs made by prison employees (which include craftsmen). Usually via written order, the corrective work is assigned to a craftsmen assigned to the building where the repair is needed. Once completed, the facility engineer or maintenance clerk is notified, and the information is recorded in a Monthly Maintenance Report.

GDC does not currently have a centralized data management tool to track these work orders. Instead, it relies on each prison to track its activity locally and report it to regional and division management. There are several systems used by state prisons across the state to track activity data. The newest is the Preventive Maintenance Auditing Program (PMAP), which tracks both preventive and corrective work orders in an Excel

template. Before the implementation of PMAP, GDC facilities used other computer-based data collection systems. Some prisons are still using these older programs, but the programs are no longer supported by GDC information technology staff and are not compatible with the agency's current operating system.

Regardless of the medium used to collect activity data, all facilities complete a Monthly Maintenance Report (MMR) for GDC regional and central management. The MMR contains information such as an equipment count, amount of different types of maintenance performed and not performed, total maintenance hours, and limited expenditure information.

Financial Information

For fiscal year 2012, GDC was appropriated $1.1 billion, of which 96% was state funds. The GDC central office sets the operating budget for each facility, which includes funds for maintenance, and the warden decides how the operating funds will be spent in the facility. The regional engineer is given additional funding from bonds to spend on major equipment needs and repairs at prisons in the region. In recent years, the amounts have ranged from $250,000 to $500,000 annually per region.

GDC does not capture all maintenance spending in a single account within the state accounting system. Maintenance expenditures are part of facility operations, which includes other types of facility spending such as utilities and employee travel. To determine the amount GDC spent on maintenance and major repairs in fiscal year 2011, we reviewed PeopleSoft financial data and identified relevant expenditure accounts. **Appendix A** includes a complete list of accounts used to calculate the costs of maintenance and major repairs.

As shown in **Exhibit 1**, in fiscal year 2011 GDC expended approximately $39.1 million on the maintenance and major repairs of the facilities housing offenders and the perimeter security crew. The amount does not include expenditures associated with GDC's central offices or other offices, such as those used for probation. The largest expenditures were for 'Repairs and Maintenance,' which includes most of the payments to vendors, and 'Personal Services,' which includes salaries and benefits to GDC maintenance staff. 'Supplies and Materials' contains maintenance-related expenses for materials used by GDC staff. It should be noted that similar expenditures may be placed in different categories, depending on the practices of each facility's business office.

Approximately 90% of the maintenance and major repair expenditures were funded by state appropriations or bonds. Appropriations are used for typical maintenance operations, while bond funds can be used for larger repairs and projects. The $10.5 million in bond funds in the exhibit represent repairs and equipment replacement that do not meet the requirements to be capitalized. Capitalized projects are for new facilities, major renovations, or other activities that meet a capitalization threshold ($100,000 for buildings) or are expected to increase the life or value of the building by at least 25%.

Exhibit 1
GDC Maintenance and Major Repair Expenditures for Facilities Housing Offenders[1]
Fiscal Year 2011

Account	Federal	State Appropriations	State Bonds	Other (Except Bonds)	Grand Total	%
Repairs and Maintenance [2]	-	$4,370,697	$10,211,767	$283,576	**$14,866,040**	38.0%
Personal Services	$4,288,571	$10,560,485	-	-	**$14,849,056**	37.9%
Supplies and Materials	$1,795	$4,866,422	$233,056	$45,686	**$5,146,958**	13.2%
Contracts - Private Consultant [2]	-	$3,050,995	-	-	**$3,050,995**	7.8%
Motor Vehicles	-	$970,899	-	-	**$970,899**	2.5%
Equipment not Capitalized		$139,696	-	$4,764	**$144,460**	0.4%
Rents Other than Real Estate	-	$54,327	$15,016	$850	**$70,192**	0.2%
Other Operating Expenses - Testing and Certifications	-	$37,231	-	-	**$37,231**	0.1%
Total	$4,290,366	$24,050,753	$10,459,838	$334,875	**$39,135,832**	100.0%
Percent of Total	11.0%	61.5%	26.7%	0.9%	100.0%	

Source: PeopleSoft financial records

(1) Exhibit includes expenditures for state prisons, pre-release centers, transitional centers, and probation detention centers. It also includes expenditures for Engineering's perimeter security crew.

(2) CGL was paid a total of $4,028,714 in fiscal year 2011. In addition to the $3,050,955 in the 'Contracts-Private Consultant' account, CGL was paid $977,719 from a Repairs and Maintenance account ($23,607 in state funds and $954,112 in bond funds).

Note: Totals may not sum correctly due to rounding.

Requested Information

Information currently available does not allow for a thorough assessment of the efficiency and effectiveness of state prison maintenance programs.

A shortage of reliable information makes it difficult to assess the quality of GDC's maintenance program. Information currently collected is often inconsistent among prisons, and GDC does not collect all pertinent information useful for program management.

In studies of federal government facilities, the National Research Council (NRC) has noted the necessity of performance measures for the assessment of facility maintenance and repairs. According to the NRC, determining how well the maintenance function is being performed or how effectively maintenance funds are being spent requires well-defined measures. It points out that there is no single adequate measure of performance and that measures used to evaluate facility performance should be varied.

Information Currently Collected

Prisons collect and report activity and financial information to regional and central office management. Information collected includes the completed number of preventive and corrective equipment work orders, miscellaneous corrective work orders, facility projects, staff and inmate hours as well as maintenance costs. An example of a Monthly Maintenance Report (MMR) used by state prisons can be found in **Appendix B**. GDC management indicated that it may make decisions based on this data and explanations provided by the regional engineer. For example, if a prison reports an increase in corrective work orders, management may decide to redirect resources or rearrange staff.

We found significant data quality issues with the information reported by the six sample prisons reviewed, including the following:

- **Inconsistent Count of Work Orders** – The methods used to count work orders vary across prisons. For example, some prisons indicated that they count work completed on all 10 kitchen ovens as a single preventive maintenance work order while other prisons would count this as 10 separate preventive maintenance work orders. Also, some prisons count "training" or "filing paperwork" as a work order while other prisons do not.

- **Inconsistent Classification of Work Orders** – Prisons categorize work orders differently. For example, some prisons classify daily inspections of mechanical rooms as preventive maintenance while others consider these as miscellaneous corrective tasks.

- **Different Versions of MMR** – The MMRs used across regions capture different information. Prisons in three regions are required to quantify the number of incomplete preventive maintenance work orders while prisons in the remaining region do not. Instead, they report total incomplete work orders, combining preventive with other types of work.

- **Missing or Inconsistent Data in Reports** – Some prisons have data management issues such as information filed under the wrong month, missing documentation, and incomplete or inconsistent detailed reports. For instance, when electronic detail reports were available, they were often incomplete or did

not match the MMR submitted to management each month.

We also found that the MMRs include data fields for prisons to report maintenance costs; however, one prison often left these fields blank. When maintenance costs were reported by prisons, staff indicated that they typically only included the costs for supplies and materials. Other maintenance costs such as those for in-house labor and contactors were not included.

- **Inconsistent Maintenance Cost Accounting** – Prisons are not consistent in how they use PeopleSoft chart of accounts. As an example, we found purchases for supplies classified in Repair and Maintenance accounts even though PeopleSoft has designated accounts for supplies and materials.

The data quality issues are the result of inadequate guidance and training and a failure to enforce stated policy. Prisons have not been given sufficient direction regarding classifying and counting work orders. Also, administrative staff have not been adequately trained on the skills needed and importance of maintaining quality information. Finally, the use of different MMRs is the result of members of GDC management not reaching agreement on the information that should be collected.

Additional Information Needed

While the information currently collected is a starting point for assessing performance, there are additional performance measures that could be used to better manage maintenance operations. We reviewed the *Facility Management Handbook* (a collection of best practices recommended by facility management industry experts) and National Research Council publications, other facility management industry standards, and interviewed officials with the Georgia Building Authority, Georgia Department of Juvenile Justice, Georgia Perimeter College, and the University of Georgia to identify these additional measures. This information is summarized below.

- **Asset Measures** – Tracking the number of work orders and spending per asset allows management to monitor how resources are being allocated within the prison and whether equipment may be in need of replacement. For example, several maintenance staff may be assigned to work on the same HVAC unit each month but management may not know this without being able to summarize the types of maintenance being conducted. If equipped with this information, management could use it to decide whether to continue to fix or replace the HVAC unit.

- **Building and Trade Measures** – Monitoring the number of work orders and maintenance costs by building and trade allows management to determine if staff is properly allocated within or across facilities and if the maintenance department should acquire additional expertise in a particular trade. In addition, tracking this information by building also may signal to management if certain areas of the prison are experiencing an increase in maintenance needs.

- **Work Order Status/Timeliness Measures** – By reviewing the number of outstanding work orders each month, management can better measure productivity and assign work. Tracking the status of work orders would also allow management to determine timeliness of work order completion, which allows management to better assess staff performance and determine whether it is more efficient to have in-house staff or contractors complete certain jobs.

- **Use of Contractor Measures** – Tracking the number, hours, and trade of work orders completed by contractors, as well as the funds paid to them, allows management to compare worked completed by in-house staff to that of contractors to determine whether in-house staff is being fully utilized. This information also allows management to determine whether prisons have an appropriate skill mix of staff and whether it is more cost effective to hire a GDC employee with a particular skill instead of paying a contractor.

- **Preventive to Corrective Measures** – Comparing the amount of corrective work required to the amount of preventive maintenance performed allows managers to measure progress in the preventive maintenance program. Determining this ratio could help determine how effectively prisons are being maintained. For example, if the ratio improves, it may a signal a shift toward planned maintenance and away from crisis maintenance.

- **Maintenance Expenditure Measures** – Tracking the total maintenance costs, costs per inmate, and costs per square foot allows management to measure performance by comparing the current maintenance spending to historical averages.

- **Deferred Maintenance Measures** – Tracking the amount of deferred maintenance allows GDC management to provide budget decision-makers with important information about the condition of GDC facilities. Deferred maintenance is defined as the estimated cost of bringing a facility up to a minimum acceptable condition, and tracking deferred maintenance allows management to determine if the condition of assets is improving or deteriorating over time.

  While prisons do not maintain lists of deferred maintenance, they do complete annual capital outlay requests that can include major repair and maintenance and projects.[3] Our review of a sample of 199 such projects included in the 2010 requests found that 25 (13%) were still listed in 2013. According to GDC staff, the other 174 projects may not have been requested in fiscal year 2013 because they had been funded or because the prison had a shift in priorities. It should be noted that a capital outlay request may not include all needed maintenance and repairs, only those that the facility deems most pressing. In addition, unlike a deferred maintenance list, capital outlay requests do not relate project costs with the value of the building or indicate how the conditions of these facilities are changing over time.

Regarding new performance measures, management may not need to collect all of these additional measures but rather some combination. The additional benefit provided would need to be balanced with the cost of collecting this information. We found that the systems currently used could likely capture this additional activity data. For example, when recording a corrective work order task (e.g., unstopping a clogged sink), additional fields could note the trade (plumbing), whether a contractor was used, and, if so, the contractor costs. In some cases, the necessary information is already entered into prison data systems (e.g., work orders linked to a building or piece of equipment) but staff do not report to consistently track this level of detail for management purposes.

[3] Our designations of requests as repair and maintenance were impacted by limited information in the capital outlay requests. In addition to maintenance and repairs, requests may also include conversions of existing spaces.

As a result of data quality issues and failing to collect several important performance measures, GDC management is limiting its ability to evaluate the efficiency and effectiveness of prison maintenance programs. With more reliable and complete information, management can make better informed decisions regarding how to direct maintenance funds.

RECOMMENDATIONS

1. GDC should ensure that all prisons are uniformly reporting the same information by providing guidance and training related to counting and classifying work orders and on how to maintain quality information.

2. GDC should require all prisons to use the same Monthly Maintenance Report format.

3. GDC should provide additional guidance regarding classifying repair and maintenance expenditures.

4. GDC should consider requiring prisons to track additional measures needed to improve program management. For each potential measure, GDC should consider the added benefit in relation to the costs of obtaining the data, with an emphasis on amending existing tools to collect the needed information when possible.

GDC's Response: "*We believe the Department of Corrections is the only state agency (with multiple facility locations) to attempt to monitor and verify preventative and corrective maintenance operations at an agency-level. We do this through your yearly audit program, and through our monthly maintenance reports (MMR). As you correctly pointed out, our MMRs clearly have room for improvement in both accuracy and the types of maintenance data collected at the agency-level, but to our knowledge we are the only department to attempt this level of analysis.*"

GDC added that "best practices in modern facility maintenance include the use of a Computerized Maintenance Management System (CMMS) for work order management, asset management, inventory control, maintenance scheduling, maintenance reporting, equipment trending, and the allocation of maintenance resources (manpower and dollars). The only way to do all these tasks effectively at an agency level is with a web-based enterprise-wide CMMS." GDC noted that its facilities currently use a variety of dated CMMS programs but that this is not unique to GDC. GDC stated that the Georgia Department of Behavioral Health and Developmental Disabilities, the University System of Georgia, and the Technical College System of Georgia use various CMMS software at their campuses and do not plan to implement an enterprise-wide CMMS. GDC noted that "the cost of implementing an enterprise CMMS is prohibitive in the current budget environment."

Auditor's Response: While a CMMS may be a best practice for facility management, we believe that steps, such as written guidance or training, can be taken to improve the information already collected by facilities. In addition, existing tools such as the Preventive Maintenance Auditing Program (PMAP) can be used to capture several of the additional performance measures identified in the report. As noted in the recommendations, GDC should consider the added benefit of these additional measures in relation to the costs of obtaining the data, with an emphasis on amending existing tools to collect the needed information when possible.

While GDC has made preventive maintenance a priority, certain elements of preventive maintenance planning could be improved.

GDC's maintenance activity data, policies and procedures, preventive maintenance audits, and management directives all indicate a focus on preventive maintenance. However, the processes used to ensure adherence to manufacturer maintenance requirements and to track necessary parts and supplies could be improved. Deficiencies in the preventive maintenance program risk inadequate planning of future maintenance needs and possible equipment failure.

Emphasis on Completing Preventive Maintenance

While GDC's activity data is not ideal for assessing performance, the available information indicates that the facilities reviewed are conducting preventive maintenance. Monthly Maintenance Reports (MMRs) and preventive maintenance audits show that preventive maintenance is completed in most cases.

The MMRs for five prisons[4] visited by the audit team provide insight into the preventive maintenance program. At four prisons, less than 1% (70 of 20,909) of work orders for February-August 2011 were incomplete preventive maintenance. In the remaining prison, 22% (1,265 of 5,745) of work orders were incomplete preventive maintenance. In addition, all prisons reported significantly more preventive work orders on equipment compared to corrective work orders as seen in **Exhibit 2** below. (Only one prison was below 90% preventive.) This would indicate relatively few equipment repairs were needed on items subject to GDC's preventive maintenance plan.

Exhibit 2
Preventive and Corrective Work Orders Related to Equipment
February – August 2011

Facility	PM Work Orders	PM as % of Total	CM Work Orders	CM as % of Total
Hays	2,146	91%	216	9%
Coastal	4,424	99%	27	1%
Walker	1,126	97%	33	3%
Lee	4,802	97%	154	3%
Autry	1,824	93%	145	7%
Washington	1,625	84%	306	16%

Source: GDC Monthly Maintenance Reports

GDC also self-evaluates the rate of preventive maintenance completion in routine audits. An audit is conducted quarterly in which 10% of the equipment in the prison is checked for compliance to the preventive maintenance schedule. All of the prisons visited scored over 80 (out of 100) on their most recent 10% audit; meaning that at least 80% of the equipment checked had been serviced according to their schedule. Prisons are also subject to a comprehensive audit each year (or when there is a warden change at a facility) that evaluates prison functions such as security, medical, and preventive maintenance services. All six of the prisons visited scored a 90 or higher (out of 100) on their most recent comprehensive audit.

[4] Six prisons were visited during the review, but only five prisons were able to provide the details of their reported activity data.

Based on our review of policies and procedures and interviews with prison maintenance staff, we found that GDC management emphasizes the importance of preventive maintenance in several ways.

- GDC's Standard Operating Procedures for Plant Operations place preventive maintenance as the second highest priority for facility maintenance staff. Only emergencies take precedence over preventive work.

- GDC has implemented a preventive maintenance auditing system. This system includes the assignment of tags to each piece of equipment that requires preventive maintenance, as determined by the facility engineer[5]. Equipment tags are 'punched' each time a piece is serviced which allows facility engineers to periodically check whether maintenance is being completed.

- As previously mentioned, prisons are audited periodically to determine whether preventive maintenance is being performed. The 10% quarterly audits and annual comprehensive audits are intended to verify compliance with preventive maintenance schedules and ensure that equipment is being serviced appropriately.

Enhancing the Preventive Maintenance Program

Although GDC has taken some steps to prioritize preventive maintenance, there are other factors related to preventive maintenance that could be improved. Enhancements that are needed include ensuring staff have all of the information needed to maintain equipment and maintaining an accurate account of parts and supplies.

Detailing Equipment Service Requirements

According to the State of Georgia Construction Manual, all major equipment and system components requiring periodic inspection and service as recommended by the manufacturers should be recorded in the preventive maintenance system. This ensures that the information needed by the staff responsible for maintaining an asset is readily available and increases the likelihood that the maintenance will be performed correctly.

All six prisons visited use systems that capture a listing of all major assets; however, the three prisons that use the Preventive Maintenance Auditing Program (PMAP) do not consistently provide manufacturer- or management-required service instructions to maintenance staff. Instructions are not included on work orders or stored with the equipment. Maintenance staff indicated that they can consult the manufacturer's equipment manual and often use their personal knowledge of the equipment to determine how to maintain the equipment. In the remaining three prisons that use other systems, service instructions are included on the work orders mitigating the risk of improper maintenance.

Tracking Inventory of Supplies

According to the State of Georgia Construction Manual, an inventory system should be used to stock frequently required items for maintenance work orders, thereby eliminating delays due to acquiring materials, tools, and equipment. Maintenance departments in other agencies stated that they keep an electronic record of parts and supplies in stock, with supply removed from the stock room linked to a work order. Staff

[5] The Regional and Facility Engineer will consult the manufacturer's recommendation when determining the service needs of the facility's equipment.

indicated that the system averts delays in preventive maintenance completion and helps calculate a true cost of maintenance.

While GDC recognizes the need for an up-to-date inventory (as required by its Plant Operations Standard Operating Procedures), none of the six prisons visited maintain an up-to-date inventory of parts and supplies. Instead, they generally rely on maintenance staff to indicate when they are low on parts. If they do not receive proper advance notice, preventive work may be delayed as staff must order the needed part or supply or travel to a local store. Prison staff indicated that manually tracking inventory is very time-consuming, and officials at five prisons stated a need for a computerized inventory system.

RECOMMENDATIONS

1. GDC should require prisons to include manufacturer and management suggested maintenance schedules and tasks either on preventive maintenance work orders or on the equipment itself.

2. GDC should require prisons to maintain an accurate inventory of supplies and materials.

GDC's Response: *GDC noted that a Computerized Maintenance Management System (CMMS) could be used for functions such as inventory control, maintenance scheduling, and asset management. However, it is GDC's position that, "the only way to do all these tasks effectively at an agency-level is with a web-based enterprise-wide CMMS" and that "unfortunately, the cost of implementing an enterprise CMMS is prohibitive in the current budget environment."*

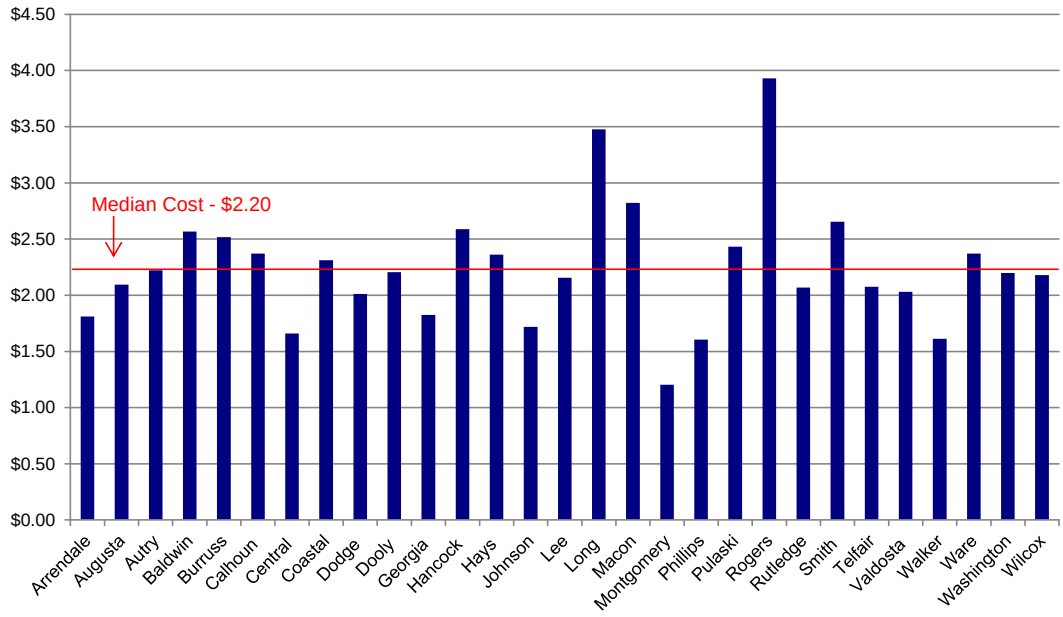
Maintenance costs per square foot are most affected by prisons' maintenance staffing level, security level, and unique maintenance responsibilities.

Maintenance costs per square foot are similar across most state prisons, but several have expenditures significantly higher or lower than the median. Higher cost prisons generally have more maintenance staff, but other factors outside the control of maintenance staff, such as responsibility for wastewater facility maintenance or other unique facilities and the prison's security designation, also affect maintenance spending.

Cost per square foot is a common measure of maintenance efficiency that recognizes that larger facilities have higher overall maintenance costs. **Exhibit 3** shows each of the 29 prisons' per square foot maintenance costs for fiscal years 2010 and 2011.[6] State prisons' median cost per square foot was $2.20, with 20 prisons within 20% of that amount. Four prisons had a cost per square foot at least 20% higher (above $2.64) than the median, and five prisons had a cost at least 20% lower (below $1.76) than the median. It should be noted that Long State Prison is exceptionally small and has only one maintenance employee. At 31,000 square feet, it is approximately 10% as large as the median size for a state prison (332,000 square feet).

[6] **Appendix A** lists the accounts used to identify maintenance expenditures. Unlike **Exhibit 1** on page 5, the analysis of maintenance costs in state prisons excluded the bond expenditures used for major repairs and equipment replacements. Prisons that were only open for a portion of the two-year period and Georgia Diagnostic and Classification Prison (GDCP) were also excluded.

Exhibit 3
Maintenance Cost per Square Foot
Fiscal Years 2010-2011



Source: PeopleSoft financial records

Three interrelated factors expected to impact a prison's maintenance costs are discussed below. However, other factors that we were unable to measure (e.g., age of equipment in the prison, employee turnover) are also likely to affect a prison's maintenance expenditures. (See **Appendix C** for details by prison.)

- **Number of Maintenance Staff** – Many prisons with the highest cost per square foot have lower ratios of square feet per staff. GDC has a system-wide ratio (prisons only) of one maintenance staff member per 36,000 square feet. However, maintenance staff at the four highest cost prisons are responsible for fewer square feet, ranging from 21,823 at Rogers State Prison to 34,130 at Macon State Prison. By contrast, maintenance staff at the five prisons with the lowest costs are responsible for more square footage. Maintenance staff at the lowest cost prison, Montgomery, are responsible for 82,335 square feet, and those at the other four lowest cost prisons are responsible for at least 41,000 square feet.

  In 2010, a GDC staffing analysis recommended that maintenance staff be reduced at several prisons, including Rogers, Macon, and Smith. GDC staff reported that the recommended changes did not take place.

- **Unique Maintenance Responsibilities** – Some state prisons are responsible for maintenance tasks that are outside of typical facility upkeep which could potentially affect maintenance expenditures. For example, maintenance staff at Rogers State Prison are responsible for maintaining farms, three water tanks, as well as sewer and drainage maintenance at both Georgia State Prison and Rogers. Smith staff maintain a Georgia Correctional Industries plant and warehouse, and staff explained that prisons such as Baldwin experienced major repairs during the review period due to inmate destruction.

- **Prison Security Level** – A prison's security level appeared to be related to maintenance costs, with a close security designation disproportionately represented in the higher cost facilities. Close security prisons generally have more complex security systems and more destructive inmates, thus potentially higher maintenance costs. While only a third of all prisons (10 of 29) are close security, two of the four costliest and five of the top 10 are close. Conversely, of the five lowest cost facilities, only one was close security.

One factor expected to contribute to higher maintenance costs is facility age. However, age did not equate to higher costs per square foot. While the median age of GDC's prisons is 23 years, only three of the 10 highest cost prisons exceeded the median. By contrast, three of four prisons with the lowest costs were at least 33 years old. The lack of a relationship between facility age and maintenance costs may be the result of facility age not necessarily equating to the age of its equipment. Additionally, the maintenance cost analysis does not include expenditures for major repairs paid with bond funds.

As discussed on page 6, no single measure should be used to evaluate a maintenance program. Facilities with higher spending in fiscal years 2010 and 2011 may be maintaining their facilities particularly well, which would result in lower costs in future years. While those facilities incurring lower costs now may not be adequately maintaining facilities, which would lead to higher costs in the future. For this reason, maintenance spending measures must be reviewed in concert with other measures of performance.

GDC's Response: *While the GDC response did not directly address maintenance costs, it did describe two projects in progress that are expected to "improve facility physical plant operations, or provide the agency the ability to better manage utility use" in state prisons. First, GDC is using $6 million in ARRA funds to retro-commission all of its prisons. The process includes identifying "low-cost operational and maintenance improvements," focusing on energy-using equipment and optimizing existing system performance rather than rely on major equipment replacement. Additionally, GDC is using $8.1 million in ARRA funds to sub-meter "electricity, natural gas, and water use in the major buildings in all GDC prisons." This allows "GDC headquarters to remotely monitor and compare real time energy use" within and across prisons.*

Available information shows that contractors perform a small portion of the prisons' routine maintenance and that inmates frequently assist maintenance staff.

The exact distribution of routine maintenance work among GDC staff, contractors, and inmates is not clear. However, financial data show that contractors represent a small portion of routine maintenance expenditures and a larger portion of major repairs and equipment replacements. Additionally, inmates provide a significant number of man hours to the facility maintenance program.

Contractor Use

GDC maintenance officials in the central office and state prisons visited stated that contractors are used when a maintenance or repair task requires skills beyond those possessed by the general craftsmen employed by the prison or when the task requires specialized equipment. While GDC does not have a written policy detailing those tasks that would typically be outsourced, we found no such policy at other agencies and institutions that we contacted.

Although we did not find written direction to be typical, we found that industry best practices and other agencies recommend monitoring the extent to which contractors are used. However, as noted in the first finding, GDC's MMRs do not capture the number of work orders or hours completed by contractors or the amount paid to contractors. Since this information was not readily available, we used PeopleSoft accounting records to estimate payments made to contractors.

As shown in **Exhibit 4**, state prisons[7] paid an estimated $41.6 million in routine maintenance costs during fiscal years 2010 and 2011. Due to inconsistencies in state prisons' methods to pay contractors and categorize expenditures, we are unable to provide a precise breakdown between in-house and contractor spending. In-house expenditures comprised at least 81% of the costs, though the portion could be higher. In each year, up to $3.9 million – a two-year total of $7.8 million (18.7%) – may have been paid to contractors.[8] The expenditure accounts expected to show only payments to contractors include $3.2 million in purchasing card transactions. According to GDC administrators, purchasing cards should not be used to pay for contractor services. We did not determine the extent to which the purchasing card payments were erroneously placed in the expenditure account, or if the cards were erroneously used to pay contractor invoices.

Exhibit 4
Estimated In-House and Contractor Expenditures for State Prisons(1)
Fiscal Years 2010-2011

	Fiscal Year 2010		Fiscal Year 2011		Total	
Routine Maintenance (No Bond Funds)						
In-House						
Personnel	$12,066,322	58.8%	$12,658,692	60.1%	$24,725,014	59.5%
Other	4,593,919	22.4%	4,484,377	21.3%	9,078,296	21.8%
In-House Total	16,660,241	81.2%	17,143,069	81.4%	33,803,310	81.3%
Contractor Total(2)	3,852,429	18.8%	3,924,420	18.6%	7,776,849	18.7%
Total	$20,512,670	100.0%	$21,067,489	100.0%	$41,580,159	100.0%
Major Repairs (Bond Funds)						
In-House	$1,527	0.0%	$67,770	1.4%	$69,297	0.7%
Contractor	5,264,659	100.0%	4,885,414	98.6%	10,109,692	99.3%
Total	$5,266,186	100.0%	$4,953,184	100.0%	$10,178,989	100.0%

Source: PeopleSoft financial records

(1) Prisons that were only open for a portion of the two-year period and GDCP were excluded.
(2) Contractor total includes purchasing card payments of $1.5 million in FY10 and $1.7 million in FY11. As stated on page 15, a portion of these payments may not be for contractor services.

We attempted to determine if a prison's contractor expenditures were related to the number of in-house staff, the experience level of in-house staff, or the level of assistance provided by inmates. However, the expenditure data could not be relied upon for these analyses. Many of the prisons that appeared to have a high proportion of maintenance expenditures paid to contractors also reported a high level of purchasing card payments within the contractor accounts. It is possible that these prisons had not paid a large

[7] Prisons that were only open for a portion of the year and Georgia Diagnostic and Classification Prison were excluded.
[8] Contractors are generally escorted by a GDC maintenance employee. The contractor expenditures do not include the cost of the GDC employee's time.

proportion of maintenance expenditures to contractors but had instead mistakenly classified other maintenance and repair expenditures.

Exhibit 4 also shows that contractors were paid nearly all of the $10.2 million in bond funds. As noted previously, the major repairs and equipment replacement funded by bonds are the types of activities that require additional expertise within a particular trade, and are the types GDC personnel stated were appropriate for contractor personnel. It should be noted that agencies are not permitted to use bond funds for routine maintenance or the salaries of maintenance employees.

Inmate Use

According to GDC policy, each inmate not enrolled in a full-time training or rehabilitative program shall be assigned work based on his or her physical and mental capacity and designated security level. According to state prison staff, upon an inmate's entry into a prison, counselors identify those who may be appropriate for a maintenance work detail. Craftsmen are often assigned two to four inmates each day to assist with maintenance and repairs (except locks). The exact type of assistance provided by an inmate is dependent on skill level. In addition to assistance provided to craftsmen, inmates also perform custodial and grounds maintenance.

The facility maintenance assistance provided by inmates appears substantial. While the number of work orders completed with inmate assistance was not available, prisons[9] reported that inmates provided 461,000 hours in support of facility maintenance. Combined with the 282,000 staff hours, inmates provided 62% of the total maintenance hours. The percentage of hours provided by inmates ranged from 47% to 76% across prisons. GDC staff stated that variations exist due to some prisons having more maintenance in areas off-limits to work detail inmates and the skill level of inmates in the prison.

[9] Staff and inmate hours were unavailable for Long State Prison, and GDCP was not included in the analysis.

Appendix A
Objectives, Scope, and Methodology

The three primary objectives of this special examination were to:

1. Determine if GDC has adopted policies and procedures that emphasize the completion of preventive work.
2. Document the frequency and reasons that GDC uses contractors and inmates for maintenance activities.
3. Determine whether GDC has adequate information to manage program operations.

To achieve these audit objectives, the audit team conducted six site visits to prisons across the state. Prisons visited were: Hays (North Region), Washington (Central Region), Coastal (Southeast Region), Autry (Southwest Region), Walker (North Region), and Lee (Southwest Region).

In most of the analysis included throughout this report, the audit team examined the 29 prisons open during all of fiscal year 2010 and 2011. Prisons that closed or were reclassified during the time period were excluded. These include Bostick, Men's, Metro, and Scott state prisons. The audit team also did not include Georgia Diagnostic and Classification Prison because its maintenance was provided by a private contractor. However, the following two analyses were conducted using information collected from the sample prisons visited by the audit team. The prisons selected for review are not a statistically valid sample of prisons. As a result, the data provided should be considered representative of the sample prisons alone and not extrapolated to all state prisons.

Distribution of Preventive to Corrective Maintenance
To determine the rate at which preventive work was completed at the six sample prisons, the team analyzed work orders and Monthly Maintenance Reports submitted in February through August 2011.[10] The team compared the number of reported incomplete preventive work orders to the number of completed work orders to calculate the percentage of work orders that involved incomplete preventive maintenance.

To evaluate the impact of preventive maintenance on the need for corrective repairs at the six sample prisons, we compared the number of preventive maintenance work orders to the number of corrective work orders completed on equipment.

To identify maintenance that has been deferred at state prisons, the capital outlay requests submitted by each prison were reviewed. The audit team identified maintenance related projects that were initially requested in fiscal year 2010 and still requested in fiscal year 2013. Of these projects, the team calculated the number, percentage, and estimated cost of maintenance projects that have remained unfunded.

Personnel Performing Maintenance
To document the frequency with which prisons use contractors and inmates to assist with maintenance, we intended to use a count of work orders for each type of personnel. However, the prisons do not track the number of work orders that are completed by

[10] Due to a change in the work order management system used to collect activity data, reliable information was not available prior to February 2011 from all sample prisons.

inmates and contractors. For inmates, we instead obtained the number of staff and inmates hours reported in the management reports for all prisons in fiscal year 2011 (data was unavailable for Long, and GDCP was not included in the analysis).

For contractors, we estimated the amount paid to contractors by obtaining financial data for fiscal years 2010 and 2011 from PeopleSoft's Combined Detail Report. GDC central office maintenance staff indicated they used four PeopleSoft accounts to determine maintenance spending (marked with an asterisk on the following page). After reviewing other accounts in PeopleSoft, it was apparent that facilities use more accounts when categorizing maintenance-related purchases. Therefore, the audit team conferred with GDC management and created a list of those accounts that are also considered maintenance-related in practice. All accounts considered in the individual facility analysis are listed on the following page.

The team categorized each maintenance account as either "in-house" or "contractor." Using these categories, the team calculated the amount of funds paid to contractors for repair and maintenance services in fiscal years 2010 and 2011. It should be noted that the amount paid to contractors may be overstated. We found purchasing card transactions in expenditure accounts that should only include contractor payments. According to GDC, the cards should only be used for supplies and materials. We did not determine the extent to which the purchasing card payments were erroneously placed in the expenditure account, or if the cards were erroneously used to pay contractor invoices.

When we calculated spending for routine maintenance, we excluded any bond funds. Bond funds are used for major repairs and the purchase of equipment. These expenditures, when not capitalized, are part of a facility's annual expenditures; however, these types of expenditures do not allow for a comparison of the use of contractors for routine maintenance. These bond expenditures are included in Exhibit 1 and are noted separately from other funding sources in Exhibit 4.

GDC Management Information

The PeopleSoft financial data was also used to calculate the total amount spent by GDC on repair and maintenance at all state prisons. The team calculated the total and average maintenance costs and used the physical capacity and gross square footage of each prison to calculate an average cost per inmate and average cost per square foot. These figures do not include the expenditure of bond funds.

To assess GDC management information related to maintenance, the analysts collected and reviewed several commonly used maintenance activity reports. In reviewing the information currently used by GDC management, the team determined there were data reliability issues preventing the use of much of the data. Efforts were made to rearrange the data in a usable format for analysis. In some cases, the information available was sufficient for our analysis; though generally, data issues were pervasive. In the review, reliability issues were noted and are discussed at length in the first finding.

Additionally, the audit team reviewed performance measures used by management in conjunction with their preventive maintenance program and identified additional measures recommended by industry best practices that are not currently tracked. The team researched the benefits this additional information could provide to GDC.

In addition to our review of maintenance activity and financial data, the audit team

reviewed legislation and regulations regarding facility maintenance and management, conducted in-depth interviews with regional and facility engineers, and studied best practices related to facility management. Also other state agencies' maintenance management practices were reviewed.

Maintenance and Major Repair Accounts

In-House Maintenance Accounts

Regular Salaries
Annual Leave Pay
Other Supplemental Pay
Overtime
FICA – Regular
FICA – Medicare
Retirement – ERS
Retirement – ERS GSEPS - Defined Contribution (401K)
Retirement - Unused Leave
Health Insurance
Motor Vehicle Expense – Oil, Grease and Fluids
Motor Vehicle Expense – Vehicle Repairs & Maintenance
Motor Vehicle Expense – Parts & Supplies
Supplies & Materials – Building/Maintenance Supplies*
Supplies & Materials – Other*
Supplies & Materials – Fertilizer, Seed, Animal Feed
Supplies & Materials – Fire Suppression/Protection
Supplies & Materials – Landscaping
Supplies & Materials – Perimeter Security
Supplies & Materials – Lock and Control
Supplies & Materials – Wastewater
Supplies & Materials – Floor Care
Supplies & Materials – Fire Station
Supplies & Materials – Employee Housing
Equipment on Inventory but not Capitalized
Equipment on Inventory but not Capitalized – Other
Equipment less than $5000
Equipment on Inventory but not Capitalized – FA
Numbered Equipment less than $5000
Rents Other Than Real Estate – Equipment
Rents Other Than Real Estate – Other
Other Operating Expenses – Testing and Certification

Contractor Maintenance Accounts

Repairs & Maintenance*
Repairs & Maintenance – Maintenance Agreements*
Repairs & Maintenance – Janitorial Services
Repairs & Maintenance – Other Radio Repairs
Repairs & Maintenance – GBA Services
Repairs & Maintenance – Pest Control
Repairs & Maintenance – Tractor Repairs
Repairs & Maintenance – Landscaping
Repairs & Maintenance – Perimeter Security
Repairs & Maintenance – Lock and Control
Repairs & Maintenance – Wastewater
Repairs & Maintenance – Floor Care
Repairs & Maintenance – Fire Station
Repairs & Maintenance – Laundry
Repairs & Maintenance – Employee Housing
Repairs & Maintenance – Recycling
Per Diem and Fees – Consultant
Per Diem and Fees – Engineers
Contracts – Private - Consultant

Note: Expenditures in these accounts were considered maintenance related when the fund source was anything other than bonds. Bond expenditures in these accounts were considered to be major repairs.

Appendix B
Sample Monthly Maintenance Report

DEPARTMENT OF CORRECTIONS
FACILITY MAINTENANCE
MONTHLY MAINTENANCE REPORT

WARDEN'S STARTING DATE:	WARDEN:	WARDEN'S ENDING DATE:

REPORT DATE: FACILITY CALL SIGN:

INSTITUTION: SECURITY LEVEL:

INMATE POPULATION: TOTAL SQ. FOOTAGE:

EQUIPMENT COUNT: TOTAL LOCK COUNT:

TOTAL MAINTENANCE STAFF: MAINTENANCE SECRETARY/CLERK:

MAINTENANCE CRAFTSMEN : MAINTENANCE SUPERVISOR

MAINTENANCE ENGINEER/SUPV. PHONE:

PREVENTIVE MAINTENANCE EQUIPMENT:

INCOMPLETE PREVENTIVE MAINTENANCE:

CORRECTIVE PRVENTIVE MAINTENANCE ON EQUIPMENT:

INCOMPLETE CORRECTIVE PREVENTIVE MAINTENANCE:

COST FOR EQUIPMENT PREVENTIVE/CORRECTIVE MAINTENANCE:

NOTE REASON FOR PM'S NOT COMPLETED:

	Staff	Inmate
MAN HOURS WORKED ON EQUIPMENT:		

CORRECTIVE MISCELLANEOUS WORK ORDERS:

INCOMPLETE MISCELLANEOUS WORK ORDERS AT END OF MONTH:

COST OF MISCELLANEOUS MAINTENANCE WORK ORDERS
MATERIALS AND CONTRACT LABOR ONLY:

	Staff	Inmate
MAN HOURS WORKED ON MISCELLANEOUS:		

Appendix B
Sample Monthly Maintenance Report (continued)

TOTAL NUMBER OF PROJECTS:		
COST FOR PROJECTS:		
MAN HOURS WORKED ON PROJECTS:	Staff	Inmate
PREVENTIVE MAINTENANCE LOCKS:		
CORRECTIVE MAINTENANCE LOCKS:		
COST FOR LOCKS PREVENTIVE/CORRECTIVE MAINTENANCE:		
MAN HOURS WORKED ON LOCKS (STAFF):	HOURS/MINUTES	
TOTAL MAN HOURS WORKED ON EQUIP./MISC./IOCKS (STAFF):	HOURS/MINUTES	
TOTAL MAN HOURS WORKED ON EQUIP./MISC. (INMATES):	HOURS/MINUTES	

AUDITS:

COMPREHENSIVE AUDIT SCORE:	
FIRST QUARTER 10% AUDIT SCORE:	
SECOND QUARTER 10% AUDIT SCORE:	
THIRD QUARTER 10% AUDIT SCORE:	
FOURTH QUARTER 10% AUDIT SCORE:	

EMERGENCY CALL BACK

Number:

DATE:	EQUIPMENT NO. #	REASON FOR CALL BACKS

Appendix C
State Prison Performance Data Detail

	Maintenance Expenditures						
Prison	FY10 Expenditures	FY11 Expenditures	2 Year Total	2 Year In-house Total	2 Year Contractor Total	% In-house	% Contractor
Arrendale SP	$1,158,571.67	$1,141,385.71	$2,299,957.38	$2,077,643.14	$222,314.24	90.3%	9.7%
Augusta SMP	$735,413.77	$739,902.04	$1,475,315.81	$1,294,566.66	$180,749.15	87.7%	12.3%
Autry SP	$760,920.01	$852,574.79	$1,613,494.80	$1,249,559.30	$363,935.50	77.4%	22.6%
Baldwin SP	$524,041.79	$588,454.59	$1,112,496.38	$993,678.06	$118,818.32	89.3%	10.7%
Burruss CTC	$441,060.64	$465,694.67	$906,755.31	$738,587.84	$168,167.47	81.5%	18.5%
Calhoun SP	$680,660.97	$707,266.28	$1,387,927.25	$995,523.26	$392,403.99	71.7%	28.3%
Central SP	$435,082.38	$476,247.99	$911,330.37	$715,858.54	$195,471.83	78.6%	21.4%
Coastal SP	$786,244.80	$792,766.80	$1,579,011.60	$1,248,631.36	$330,380.24	79.1%	20.9%
Dodge SP	$591,104.76	$646,360.02	$1,237,464.78	$961,172.45	$276,292.33	77.7%	22.3%
Dooly SP	$615,303.88	$731,470.95	$1,346,774.83	$1,069,665.12	$277,109.71	79.4%	20.6%
Georgia SP	$1,819,457.99	$1,564,042.73	$3,383,500.72	$2,676,571.88	$706,928.84	79.1%	20.9%
Hancock SP	$641,644.18	$845,372.02	$1,487,016.20	$1,184,197.81	$302,818.39	79.6%	20.4%
Hays SP	$881,596.22	$868,838.65	$1,750,434.87	$1,288,498.35	$461,936.52	73.6%	26.4%
Johnson SP	$691,195.22	$816,018.06	$1,507,213.28	$1,044,343.16	$462,870.12	69.3%	30.7%
Lee SP	$463,679.99	$476,692.13	$940,372.12	$746,360.17	$194,011.95	79.4%	20.6%
Long SP	$97,236.23	$119,789.53	$217,025.76	$144,199.88	$72,825.88	66.4%	33.6%
Macon SP	$975,373.33	$1,143,750.69	$2,119,124.02	$1,629,372.34	$489,751.68	76.9%	23.1%
Montgomery SP	$312,422.81	$282,390.08	$594,812.89	$454,041.66	$140,771.23	76.3%	23.7%
Phillips SP	$715,804.93	$602,484.54	$1,318,289.47	$1,167,286.78	$151,002.69	88.5%	11.5%
Pulaski SP	$804,449.71	$790,396.59	$1,594,846.30	$1,392,267.59	$202,578.71	87.3%	12.7%
Rogers SP	$956,536.33	$930,742.39	$1,887,278.72	$1,603,110.22	$284,168.50	84.9%	15.1%
Rutledge SP	$300,473.38	$318,777.20	$619,250.58	$555,556.85	$63,693.73	89.7%	10.3%
Smith SP	$965,850.89	$995,603.33	$1,961,454.22	$1,569,588.43	$391,865.79	80.0%	20.0%
Telfair SP	$624,599.92	$723,291.73	$1,347,891.65	$1,146,774.99	$201,116.66	85.1%	14.9%
Valdosta SP	$794,927.36	$821,744.78	$1,616,672.14	$1,278,105.99	$338,566.15	79.1%	20.9%
Walker SP	$368,931.49	$368,040.87	$736,972.36	$686,877.85	$50,094.51	93.2%	6.8%
Ware SP	$953,083.38	$780,348.61	$1,733,431.99	$1,481,153.33	$252,278.66	85.4%	14.6%
Washington SP	$736,957.62	$779,116.05	$1,516,073.67	$1,236,512.47	$279,561.20	81.6%	18.4%
Wilcox SP	$680,043.91	$697,925.70	$1,377,969.61	$1,173,604.65	$204,364.96	85.2%	14.8%
Totals	**$20,512,669.56**	**$21,067,489.52**	**$41,580,159.08**	**$33,803,310.13**	**$7,776,848.95**	**79.6%**	**20.4%**

Source: PeopleSoft financial records

Appendix C
State Prison Performance Data Detail (continued)

	Prison Characteristics						Calculated Performance Measures				
Prison	Gross Sq Ft	Physical Capacity	# Staff	Security Level	Age	Region	Cost/ Inmate	Cost/ Sq Ft	Sq Ft/ Inmate	# Inmates/ Staff	# Sq Ft/ Staff
Arrendale SP	635,138	1,476	12	Medium	85	North	$779.12	$1.81	430	123	52,928
Augusta SMP	352,163	1,322	11	Close	29	North	$557.99	$2.09	266	120	32,015
Autry SP	363,055	1,683	10	Medium	19	Southwest	$479.35	$2.22	216	168	36,306
Baldwin SP	216,658	957	6	Close	35	Central	$581.24	$2.57	226	160	36,110
Burruss CTC	180,035	706	6	Medium	25	Central	$642.18	$2.52	255	118	30,006
Calhoun SP	292,672	1,663	9	Medium	18	Southwest	$417.30	$2.37	176	185	32,519
Central SP	274,647	1,153	6	Medium	33	Central	$395.20	$1.66	238	192	45,775
Coastal SP	341,463	1,832	12	Medium	30	Southeast	$430.95	$2.31	186	153	28,455
Dodge SP	307,645	1,238	8	Medium	29	Central	$499.78	$2.01	249	155	38,456
Dooly SP	305,404	1,704	7	Medium	18	Southwest	$395.18	$2.20	179	243	43,629
Georgia SP	927,466	1,530	19	Medium	74	Southeast	$1,105.72	$1.82	606	81	48,814
Hancock SP	287,244	1,454	9	Close	21	Central	$511.35	$2.59	198	162	31,916
Hays SP	370,654	1,698	9	Close	22	North	$515.44	$2.36	218	189	41,184
Johnson SP	438,739	1,612	10	Medium	20	Central	$467.50	$1.72	272	161	43,874
Lee SP	218,085	778	8	Medium	33	Southwest	$604.35	$2.16	280	97	27,261
Long SP	31,207	232	1	Medium	7	Southeast	$467.73	$3.48	135	232	31,207
Macon SP	375,434	1,762	11	Close	18	Southwest	$601.34	$2.82	213	160	34,130
Montgomery SP	247,004	418	3	Medium	39	Southeast	$711.50	$1.20	591	139	82,335
Phillips SP	410,340	918	10	Close	23	North	$718.02	$1.61	447	92	41,034
Pulaski SP	327,794	1,223	11	Medium	17	Central	$652.02	$2.43	268	111	29,799
Rogers SP	240,057	1,487	11	Medium	28	Southeast	$634.59	$3.93	161	135	21,823
Rutledge SP	149,722	640	4	Medium	35	Central	$483.79	$2.07	234	160	37,431
Smith SP	369,473	1,615	12	Close	18	Southeast	$607.26	$2.65	229	135	30,789
Telfair SP	324,559	1,456	9	Close	20	Southeast	$462.87	$2.08	223	162	36,062
Valdosta SP	397,925	1,510	8	Close	23	Southwest	$535.32	$2.03	264	189	49,741
Walker SP	228,476	446	5	Medium	39	North	$826.20	$1.61	512	89	45,695
Ware SP	365,430	1,618	9	Close	22	Southeast	$535.67	$2.37	226	180	40,603
Washington SP	344,694	1,548	9	Medium	20	Central	$489.69	$2.20	223	172	38,299
Wilcox SP	316,180	1,862	9	Medium	18	Southwest	$370.02	$2.18	170	207	35,131
Median	**324,559**	**1,476**	**9**	**-**	**23**	**-**	**$535.32**	**$2.20**	**229**	**160**	**36,306**

Source: Files provided by GDC, GDC website, and PeopleSoft financial records

For additional information or for copies of this report call 404-657-5220.
Or see our website:
http://www.audits.ga.gov/rsaAudits/