



Richmond City Council

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OFFICE OF THE CITY AUDITOR

AUDIT REPORT # 2009-06
on the

Limited Review of Grounds Maintenance Functions

June 2009

OFFICIAL GOVERNMENT REPORT

Richmond City Council

OFFICE OF THE CITY AUDITOR

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*Committed to increasing government efficiency, effectiveness,
and accountability on behalf of the Citizens of Richmond.*

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City of Richmond
City Auditor

Executive Summary

June 2, 2009

The Honorable Members of Richmond City Council
The Honorable Members of Richmond School Board
The Richmond City Audit Committee
Christopher Beschler, Acting Chief Administrative Officer
Dr. Yvonne Brandon, Superintendent of Richmond Public Schools

Subject: Evaluation of Feasibility to Consolidate Grounds Maintenance

The City Auditor's Office has completed a feasibility study on consolidating the City and Richmond Public Schools' (RPS) grounds maintenance functions. The study was requested by the Richmond School Board and supported by the Richmond City Council and Administration. The auditors' review was conducted in accordance with Generally Accepted Government Auditing Standards.

The scope of the auditors' work included: 1) a review of strategic and operational plans, budget and resource allocations, and operating systems and procedures; 2) considered the economy and efficiencies of each operation; and 3) determined the adequacy of the monitoring and control of grounds maintenance activities.

The following City agencies and RPS perform grounds maintenance activities:

- Grounds Maintenance (DPW)
- Cemeteries (Recreation, Parks & Community Facilities)
- Floodwall Maintenance (DPU)
- Buildings and Grounds (DPU)
- Fire Training (Fire Department)
- Grounds Services Division (RPS)

Performing grounds maintenance is a seasonal activity that generally lasts for eight months of the year. During the remaining non-peak period, the staff is utilized for non-core activities. It is difficult to maintain staff productivity at an optimal level during this period as the non-core activities are not measurable, and therefore cannot be managed effectively. This situation offers an opportunity to improve efficiencies.

The worksites where grounds maintenance activities are performed by the various entities are located in close proximity to each other. Consolidation of services could reduce employee travel and transportation of equipment costs incurred by several agencies. In addition, maintenance of a larger area could be outsourced if found to improve the cost effectiveness of the operation.

Several benefits of consolidating these operations were identified as follows:

- Improvement in effectiveness of personnel management
- Additional cost effectiveness due to combined procurement
- Better planning and training opportunities
- Elimination of duplication
- Consistency in services provided

Auditors found that the Cemetery operation is unique and not suitable for consolidation with other grounds maintenance activities. Floodwall operations need assistance in complying with Army Corps of Engineers' requirements. DPW Grounds Operations staff has been providing them the needed assistance. In the Fire Department, professional staff is being used to provide limited grounds maintenance services, which is not desirable. Both Floodwall Operations and the Fire Department agreed to consolidate their grounds maintenance functions with the most suitable service provider agency.

The auditors found that DPU operations appear to be inefficient. However, part of the inefficiency can be attributed to higher regulatory maintenance requirements. Detailed analysis indicated opportunities for cost savings. Auditors observed that DPW staff has the highest productivity as they maintain the most acres per employee. DPU staff productivity significantly lags behind both RPS and DPW's staff productivity. DPU operations also agreed with the consolidation of their function with the most suitable service provider agency.

Audit analysis indicated that combining relevant operations with the DPW Grounds Operations will be more efficient. DPW possesses better equipment and has the largest grounds maintenance operation. To assist auditors in determining the feasibility of consolidation, DPW representatives visited all City and RPS grounds maintenance sites to assess the most appropriate service needs for those locations. According to the Operations Manager, the team assigned for this task has proposed service level requirements and the number of service visits for each location based on the conditions noted. They believe that the proposed changes will improve its operational efficiency and effectiveness. The plan proposed changing some full service areas to low-maintenance areas and to outsource some service locations to reduce the high costs associated with in-house performance. In addition, hiring seasonal employees to replace certain fixed salary and benefits costs could improve efficiencies and generate significant savings. Auditors reviewed the proposed plan and found it to be reasonable and practical. The report includes other considerations that need to be addressed before consolidating the operations.

The consolidation is expected to generate significant annual savings. In addition, this process will allow RPS to keep appropriate staffing for their other critical operational needs such as maintaining athletic fields. It should be noted that there will be initial costs of \$177,000 that will have to be incurred prior to consolidation. Based on analysis and discussion with DPW Grounds Operations staff, the auditor computed the following cumulative savings for three years:

<i>Description</i>	<i>First Year</i>	<i>Second Year</i>	<i>Third Year</i>
<i>Projected Savings</i>	\$0	\$411,500	\$411,500
<i>Additional Costs</i>	(\$177,000)		
<i>Cumulative</i>	(\$177,000)	\$234,500	\$646,000

The City Auditor's Office supports consolidating Grounds Maintenance functions under the leadership of DPW Grounds Operations. In return, DPW must assure each of the agencies currently performing their own grounds maintenance that adequate services will be provided.

The City Auditor's Office appreciates the cooperation of the City and RPS staff during this review. A written response to the report was received and is included in this report.

Umesh Dalal, CPA, CIA, CIG



City Auditor

REVIEW PROCESS

Introduction and Scope

In April 2007, the City Auditor's Office in agreement with the Richmond School Board initiated a plan to review several areas of Richmond Public Schools (RPS) operations to evaluate the possibility of consolidating their activities into a City agency that performs similar activities; grounds maintenance was one of those activities under consideration.

The City Auditor's Office has completed a limited review of the grounds maintenance operations of the City and Richmond Public Schools. A limited review is a service that is less exhaustive than a full scope audit and does not require an evaluation of the internal control structure. This review was conducted in accordance with Generally Accepted Government Auditing Standards as prescribed by the U.S. Government Accountability Office. Those standards require that the work be planned and performed to obtain sufficient, appropriate evidence to provide a reasonable basis for auditors' findings and conclusions based on review objectives. The auditors believe that the work performed provides a reasonable basis for the findings and conclusions presented.

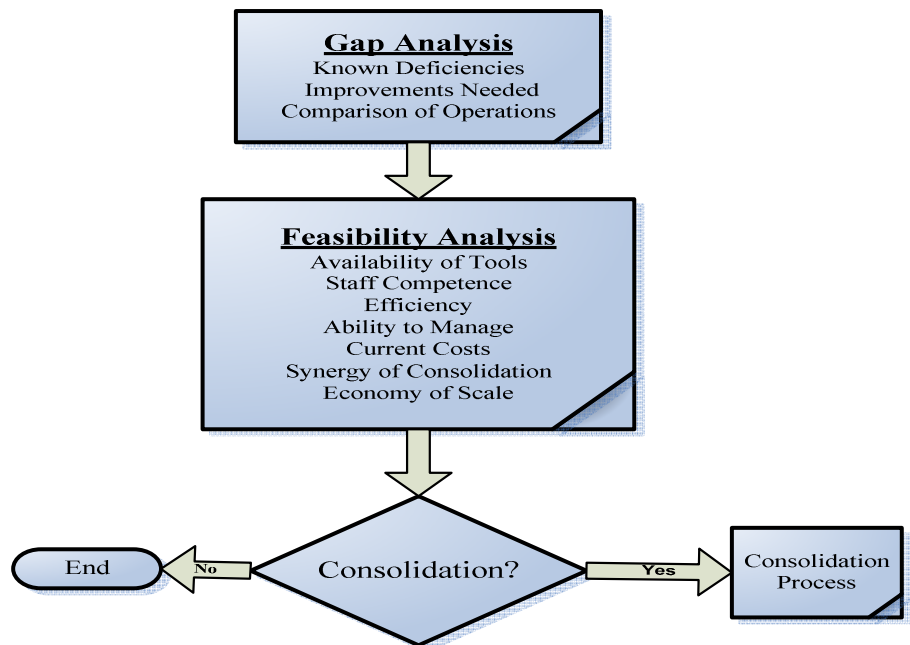
The scope of the auditors' work included: 1) a review of strategic and operational plans, budget and resource allocations, operating systems and procedures; 2) considered the economy and efficiencies of each operation and 3) determined the adequacy of the monitoring and control of grounds maintenance activities. The period examined was for the 12 months ended June 30, 2007.

Objective

The primary objective of this review was to examine the grounds maintenance operations carried out by Richmond Public Schools and City agencies to ascertain the feasibility of consolidating all similar activities into the City’s Department of Public Works – Grounds Maintenance Division.

Methodology

The City Auditor’s Office developed the following model for future analyses for the purpose of consolidation of operations. This model was used during this analysis to arrive at the conclusion related to consolidation.



Auditors performed the following procedures to complete this limited review:

- Interviewed key management personnel.
- Reviewed and evaluated relevant policies and procedures.
- Reviewed and analyzed financial data.
- Analyzed the relevance of data maintained.
- Reviewed and evaluated performance indicators.
- Benchmarked cost data with other localities.
- Compared operations with best practices.

Background

*Multiple agencies
are performing
grounds
maintenance
functions*

During the course of the auditors' review, it was determined that the majority of grounds maintenance activities are carried out by the Richmond Public Schools - Grounds Services Division and the City's Department of Public Works - Grounds Maintenance Division. However, certain other City divisions are performing limited grounds maintenance activities. These activities were also considered for the consolidation efforts.

The following narratives present brief descriptions of the activities conducted by each division:

	Primarily Responsible For:
City Agency	
<i>The Department of Public Works (DPW)</i>	<i>Landscape maintenance and vegetation control for all City parks, community centers, selected schools, vacant lots, roadside ditches, alleys, medians, irrigation systems, and citywide horticultural activities. Grounds services personnel conduct non-grounds related activities as well. These activities include graffiti removal, leaf removal, snow removal, voter machine delivery, etc.</i>
<i>Cemeteries</i>	<i>Landscape maintenance and vegetation control around grave plots in the City's cemeteries. This work requires dealing with families and precision in work details that is more time consuming. Jail facility inmates are also utilized to complement some of these operations.</i>
<i>Floodwall Maintenance</i>	<i>Landscape maintenance activities in accordance with the Army Corps of Engineer specifications. (This functional area was transferred to DPU during Fall 2008.)</i>
<i>Department of Public Utilities</i>	<i>Landscape maintenance activities and facilities maintenance. The division is responsible for grounds and facilities maintenance at its operations center, warehouse, water purification plant, wastewater treatment plant, propane plant, outlying water pumping stations and gas distribution centers. During the peak season, the grounds maintenance activities include grass cutting, weed control, and hedge trimming. During the fall and winter, the crews pick up leaves and assist with snow removal. In addition to direct grounds maintenance activities, the employees stock and clean restrooms in outlying facilities and maintain mowing equipment.</i>
<i>Fire Training</i>	<i>Landscape maintenance activities performed by Fire professional staff, which is an undesirable situation.</i>
Richmond Public Schools (RPS)	
<i>Grounds Services Division</i>	<i>Landscape maintenance and landscape construction for 62 school locations, RPS community centers and athletic fields. It is noted that RPS and DPW have a reciprocal agreement for shared work locations. Landscape construction includes all work required to move soil, grade, seed, plant shrubs, repair athletic fields/facilities, and upgrade lawns.</i> <i>Grounds services personnel conduct non-grounds related activities as well. These activities include moving furniture and equipment, the disposal of surplus property, and furnishing manpower and equipment for clean-up operations as the result of fire or natural disaster. The removal of snow from driveways and parking lots is also part of landscape construction. The grounds services personnel also act as back-up for facilities maintenance in times of emergencies.</i>

Note: Landscape maintenance activities include cutting grass, weeding borders, trimming trees and shrubs, and keeping the outside of buildings attractive.

*The Fire Department
and Floodwall
Maintenance were
willing to consolidate
their grounds
maintenance
operations*

For the purposes of this review, Cemetery operations will not be considered for consolidation based on the uniqueness of its operations and the significant time commitment needed for the specific grounds maintenance requirements. It was agreed by the Floodwall Maintenance Division and the representative from the Fire Department to consolidate their ground maintenance operations with the most suitable agency.

The analysis and conclusions included in this report were based on the information related to operational costs provided by the respective agencies. This information was subject to reasonableness tests. However, the City Auditor's office has not audited the information provided and, therefore, this report does not provide any assurance on the accuracy of the information.

The agencies listed in this report have agreed that consolidation will improve the use of public resources. However, to make consolidation possible the agencies must meet to further define and agree upon service levels and the related funding requirements needed for the combined effort.

COST REVIEW

The City and RPS have allocated significant resources to accomplish their grounds maintenance activities over the three years depicted in the following table:

***Expenditure
Trend
Analysis***

Service Unit	FY 2007	FY 2006	FY 2005
DPW	\$3,569,677	\$3,400,834	\$2,508,288 ¹
DPU	\$ 219,912	\$ 227,790	\$ 104,236 ²
RPS	\$ 782,693	\$ 798,732	\$ 769,659 ³

The estimates presented (including contracted services, if any) were based on information received from the respective service units.

¹DPW actual expenditure amounts were obtained from the City's financial records.

²DPU allocated its FY 2007 expenditures between grounds and building maintenance. The auditors utilized the base obtained to estimate FY 2006 and FY 2005 grounds maintenance costs.

³ RPS combined grounds and facilities maintenance operational costs; however, they provided an estimate for its FY 2007 grounds operations costs. The auditors used that allocation method to derive FY 2006 and FY 2005 grounds costs.

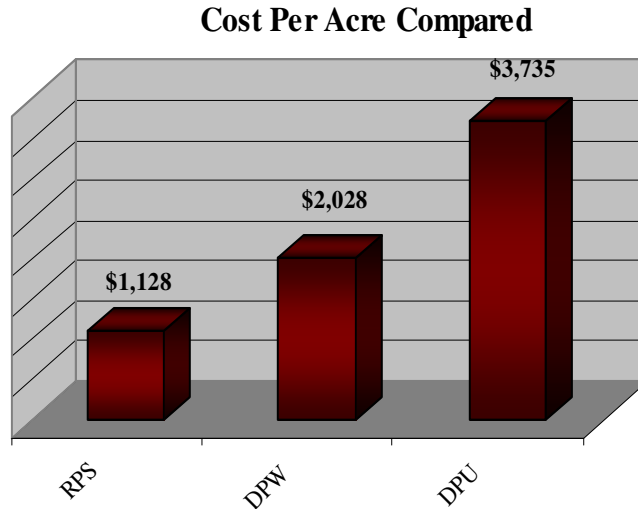
***Grounds
Maintenance
Costs excluding
Contracted
Service***

The grounds maintenance agencies performed the majority of their work activities in-house. Agency employees were scheduled and dispatched to conduct work at identified service locations. The table below depicts FY 2007 in-house cost factors and land mass acreage for each agency conducting major grounds maintenance activities.

Service Provider	FY 2007 Expenditures	Land Mass Acreage
RPS	\$ 782,693	694.00
DPU	\$ 188,618	50.50
DPW	\$ 3,284,842	1,619.45

Note: The expenditures noted above only highlight the costs excluding contract costs for in-house services performed by agency personnel and the service acreage maintained by them.

DPU has highest cost per acre compared to other entities



Based on the above information, RPS has the lowest cost per acre. It is noted, however, that RPS and DPU operations cost data was not separated from their facilities maintenance cost data. Both of these entities provided estimates of their ground maintenance costs in schedules prepared by them. It was difficult to confirm actual costs since grounds activity costs were combined with facilities activity costs. Therefore, these costs may not be accurate and cannot be verified. The above data is presented for comparison of data as represented by the entities.

Efficiency Analysis

The purpose of consolidation is to provide specific services more efficiently. Efficient operations are generally better managed and obviously result in a lower cost per unit. A comparison of each service area's number of acres maintained per employee revealed that DPW maintains the highest number of acres per employee, in the group under review, as depicted in the table below:

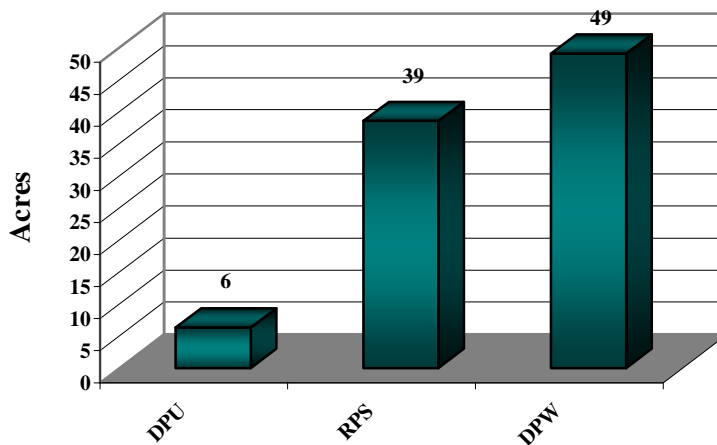
How efficient is each operation?

Service Provider	No. of Employees	Land Mass Acreage	Acre per employee
DPU	8	51	6
RPS	18	694	39
DPW	33	1,619	49

Source: Various Agencies

Comparison of Acres Maintained per Employee

DPU has lowest number of acres maintained per employee. Some of this performance may be attributed to higher regulatory requirements



Based on the above information, it is clearly evident that DPU maintains a significantly lower number of acres. Some of this may be related to regulatory compliance.

The above information indicates that DPU’s estimated costs per acre are the highest and it maintains a significantly lower number of acres per employee in the above group. The DPU management team indicated willingness to consider ideas on how to lower its maintenance costs.

***Analysis of
DPU Costs***

It appears that the efficiency and cost effectiveness of DPU's activity need to be improved. The cost per acre maintained by DPU operations is significantly high and the acres maintained per employee are significantly low.

DPU incurs approximately \$1.3 million annually for grounds and building maintenance. Upon request, the DPU Building and Grounds Division staff segregated its FY 2007 costs as follows:

Description of Cost	Amount
Grounds Maintenance	\$ 219,900
Building Maintenance	\$1,049,200

Source: DPU Grounds Maintenance Staff

The accuracy of the above allocation was not verified as proper supporting documentation was not available. Since this report only addresses grounds maintenance costs, the building maintenance function is analyzed in a separate report as agreed by the Deputy Director over this function at DPU.

***Contracted
Service Costs for
Grounds
Maintenance***

DPU Building and Grounds Division uses both in-house personnel and outside contractors. The contractor maintains 28 acres and was paid \$31,294 or \$1,118 per acre. However, DPU Building and Grounds Division's in-house crew is costing the City \$219,900 or about \$3,735 per acre for the 50.5 acres maintained by them. The amount incurred by the in-house staff represents 334% of the amount charged by the contract vendor.

Both in-house personnel and the contract vendor may perform work at the same service location. During the closing meeting for the review, DPU representatives stated that the dual attendance was necessary for security and access concerns.

***Level of Service
Reviewed***

The auditors visited several DPU sites to understand the reasonableness of the division's service levels. These visits revealed that some of the DPU grounds sites are either in industrial areas or hidden from public sight. Thus, those areas may not need the level of grounds maintenance service currently reported by the division. Scaling down these activities would be consistent with the areas surrounding these sites. Other DPU sites visited are in high public areas and may require a higher level of maintenance. The accompanying DPU professional staff agreed with the auditors' assessment. It appears that there is a potential for saving some grounds maintenance costs for the City. Any proposed service level change should be made within the flexibility offered by the framework of relevant regulatory requirements.

***Consolidation a
Viable Option***

DPU personnel agreed to consolidate their grounds maintenance activities into the citywide grounds maintenance efforts. They have proposed that five of the eight employees that were assigned to perform both grounds and facilities maintenance be transferred under the consolidated function.

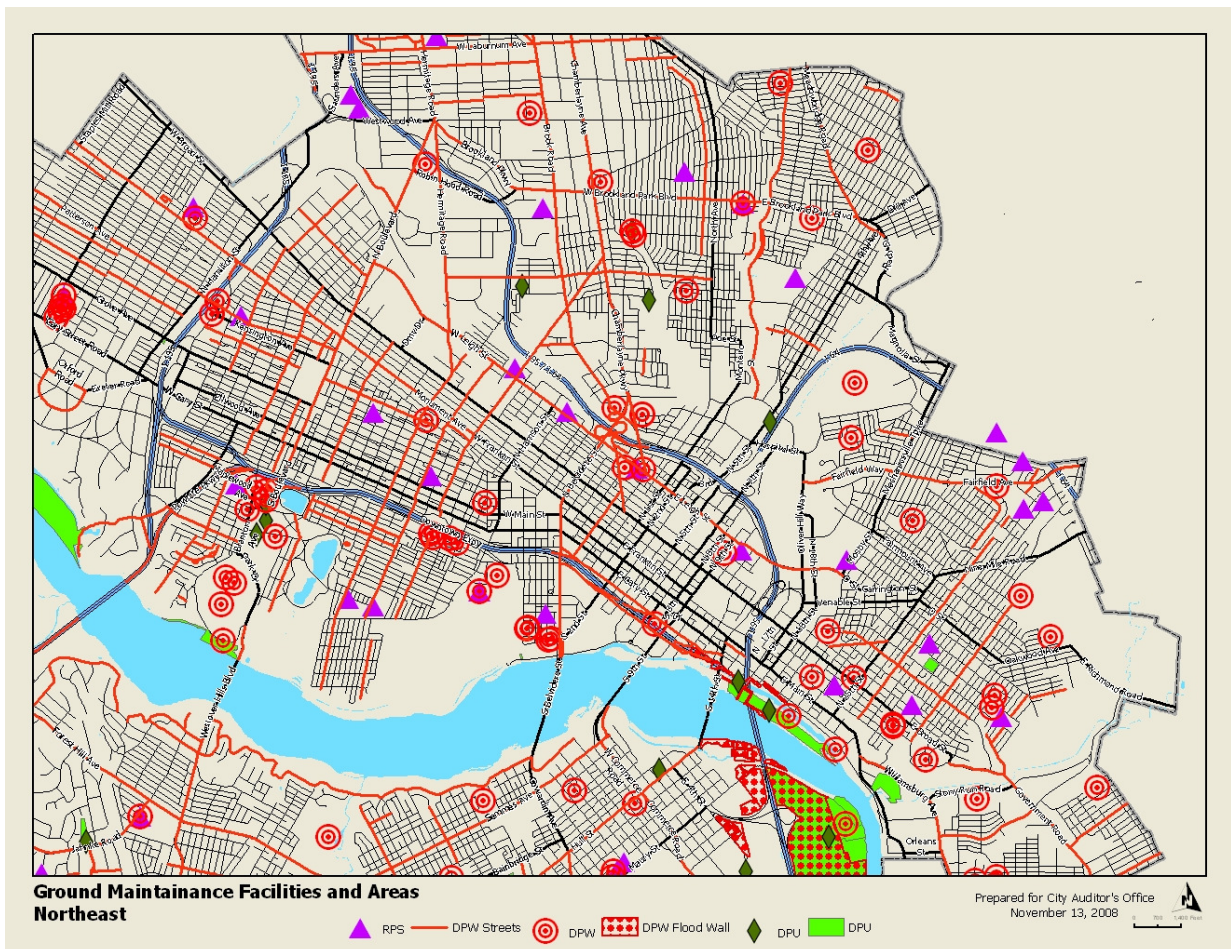
The only agency other than DPW engaged in substantial grounds maintenance activity is RPS. Combining RPS and DPW grounds maintenance units could result in economies of scale and increased efficiencies due to a more effective use of advanced equipment and

reduction in overall staffing. Both RPS and DPW grounds maintenance management staff have agreed that consolidation will result in a better use of resources.

CONSOLIDATION ANALYSIS

Rationale for Consolidation

The worksites where grounds maintenance activities are performed by various entities are located in close proximity to each other as depicted in the following map of the north-east quadrant of the City:



Note: Some DPU site locations are located outside the City limits.

Worksites maintained by various agencies are located in close proximity

The proximity of agencies as noted in the above point map for the north-east quadrant is consistent with other service unit location patterns throughout the City. Employee travel and transportation of equipment incurred by these service units presents an unnecessary overhead cost burden and a waste of City and RPS resources.

***Overall
Improvements
Potential Due to
Consolidation***

The following operational improvements may be realized by consolidation:

- **Personnel Services**

Hiring, processing, training, classification and promotion potential could improve. A larger pool of candidates may be available to be considered for a wider range of positions.

- **Purchasing**

Bulk purchases of standard products and services common to grounds maintenance activities can bring immediate savings due to economies of scale. Coordinating contracting activity may allow for better monitoring of contracts and assure cost effectiveness of services.

- **Planning**

The work can be effectively planned as more resources are utilized to service sites that are close geographically. A combination of contracted and in-house labor could bring overall costs down.

- **Training**

Consolidation may provide additional resources for employee training which may allow strategic creation of specialized positions.

There are significant advantages in consolidating all grounds maintenance operations

- **Elimination of duplication**

Separate functions need similar equipment, overhead and administration. Consolidation may eliminate service duplication by several agencies, which would result in cost savings. The number of grounds maintenance employees to provide the desired services and required equipment could be reduced. For example, DPW possesses state of the art mowing equipment that is better suited for handling the City's grounds maintenance function. The span of its mowers covers more ground in less time than the equipment capability noted for the other units. This equipment feature reduces the demand for full-time employees assigned to these activities.

- **Consistent services**

Services provided over a larger geographic area may be more uniform.

***Considerations
before
Consolidation***

There are some issues, however, that must be addressed before making the consolidation decision as follows:

- **Initial costs**

There will be some initial costs; however, these costs would be offset by future savings.

- **Transition**

Consolidation will combine workforces that may be used to different environments, policies and processes. This situation may present some personnel management challenges.

- **Productivity in Seasonal Operations**

In a seasonal operation, if staffing is based on peak period activities the result is significant idle capacity during the non-

Certain issues including initial investment must be dealt with prior to making a consolidation decision

peak period. Fixed expenses, such as payroll, continue to occur. The employee productivity during these periods could be significantly low. This situation causes management to assign additional activities that have no relevance with the core activities, which does not allow the total workload to be measured and managed properly. It is further noted that staffing and benefits costs do not vary with the changes in magnitude of activities. The City, therefore, incurs the same amount of costs during idle periods as it does during the most productive time. Obviously, this scenario does not represent the best use of public resources.

During the auditors' inquiry, both RPS and DPW representatives indicated that their peak season begins in March and ends in October. The result is a peak season that lasts for eight months when the staff is the most productive. During the non-peak period of four months, the staff is occupied in carrying out other responsibilities that may not be included in the core functions of these agencies. Managing and keeping staff productivity at an optimum level is challenging during the non-peak period.

Contrary to these agencies, a DPU representative indicated that their peak season lasts for nine months. Upon inquiry, the DPU representative indicated that eight employees are assigned grounds and building maintenance activities that are conducted nine months of the year while they perform only building maintenance activities for the remaining three months of the year.

In order to mitigate the impact of the above situation, there are practical options available. One such option is the use of vendor services.

DPW also had two contracts for grounds maintenance services within the City. DPW contract fees were based on the number of visits for various locations rather than a cost/acre because the contracted services for each visit included more than just mowing activity. However, it is noted that contracted services for DPU reflected the cost/visit for mowing activity only.

It appears that vendors are being used for only a limited amount of work. Under the consolidation plan, DPW grounds maintenance management proposes using additional outside contractors for closely located sites currently maintained by more than one agency. Such use would free employees from activities that consume a substantial number of hours and make them available for other in-house concerns. Contract costs are incurred for the amount of work accomplished. Therefore, during the non-peak period, the City would not incur expensive labor and overhead costs.

- **Automation**

A larger operation may justify the acquisition of an automated system and thereby improve efficiencies through proper scheduling and better management of work orders in an effective manner. Work crews can be effectively utilized and deployed with an appropriate work scheduling mechanism. An automated work order management system helps to register and

acknowledge work requests, assign tasks to staff, and confirm that work has been completed and costs are properly tracked. The accountability of department resources is greatly enhanced with the use of an effective work order system.

Common features of a work order system will:

- Acknowledge the receipt of a work order
- Facilitate establishing work priorities by supervisory personnel
- Enable service recipient to know status of work request and provide feedback
- Allow preventive maintenance work orders to be included
- Capture labor and parts costs on a per-task basis

Currently, DPW does not use a work order system to assign tasks to staff, keep records of work performed and track labor and material costs incurred. There is no other mechanism by which these types of details can be retrieved. Under these circumstances, proper accountability over the resources used cannot be verified.

- **Overall Grounds Maintenance Needs**

As observed at DPU sites, the level of grounds maintenance services may be higher than necessary for identified site location upkeep resulting in excessive cost to the City. Based on location, high maintenance lawns may be replaced with a less costly option such as gravel or low maintenance ground cover plants. This type of action will dramatically reduce the frequency and costs of maintenance at various sites.

To assist auditors in determining the feasibility of consolidation, DPW representatives visited all City and RPS grounds maintenance sites to assess the most appropriate service needs for those locations. According to the Operations Manager, the team assigned for this task has proposed service level requirements and the number of service visits for each location based on the conditions noted. They believe that the proposed changes will improve its operational efficiency and effectiveness.

The plan proposed changing some full service areas to low-maintenance areas and to outsource other service locations to reduce the high costs associated with in-house performance. Continuing inmate services for non-critical maintenance services and a seven-day work-week in order to improve the utilization of equipment and the management of crews more effectively is envisioned. Based on the auditor's discussion with DPW employees, the proposed changes will potentially have a significant positive impact on overall grounds maintenance efforts.

- **Best Practices**

The United States Department of Education has published best practices for grounds and building maintenance functions. These best practices may provide a framework for planning, monitoring, and evaluating tasks required for an efficient and effective grounds maintenance operations effort.

The following table presents the results of conformance tests with these best practices by DPW and RPS operations:

Proactive Best Practice	Conformance with Best Practices	
	DPW	RPS
Performs self audits.	No	No
Designs master plan of activities.	Yes	Yes
Develops a mission statement	Yes	Yes
Develops a vision statement.	Yes	Yes
Develops policies and procedures manual.	No	No
Utilizes a work order system.	No	Yes
Establishes performance measures.	No	No
Performs physical inspections.	No	No
Written job descriptions.	Yes	Yes
Benchmark operations with others.	No	No
Provides training to employees.	Yes	Yes
Maintenance program evaluations.	No	No
Mechanism for stakeholder feedback	Yes	Yes

Source: Best practices for facilities and grounds maintenance, US Department of Education

Although DPW Grounds Maintenance and RPS have adopted some of the best practices, there are opportunities for improvement.

- **Use of Seasonal Workers**

DPW Grounds Maintenance management envisions the use of seasonal workers rather than full staffing during the off-peak season. It is projected that substantial savings could be realized by using 23 seasonal workers during the peak season. It is anticipated that staffing reductions can be accomplished through attrition or transfers to other areas. These positions would then be replaced by a seasonal work.

Cost and Savings Analysis

The auditors analyzed the following factors to determine the need and feasibility of consolidating various operations:

- Cost of each operation
- Efficiencies achieved by each agency
- Scope of work and ability to absorb other agencies' work
- Possible improvement in internal controls and manageability
- Cost effectiveness of consolidated operation

Computation of Savings

A joint detailed analysis by the DPW Grounds Maintenance staff and the audit staff of current costs and proposed costs to carry out the work envisioned for each service unit indicated that there may be additional costs in the beginning. However, substantial, perpetual savings will result due to an improved operational approach.

The additional potential costs and savings are illustrated in the following chart:

First Year Operational Cost Implications

<i>Department Divisions</i>	<i>FY 2007 Actual Costs³</i>	<i>DPW Projections</i>		<i>Audit Calculation</i>	
		<i>Projected Personnel Costs³</i>	<i>Projected Non-Personnel Costs³</i>	<i>Total Projected Costs³</i>	<i>Net Savings³</i>
	(A)	(B)	(C)	(D) = (B) + (C)	(E) = (A) - (D)
RPS	\$ 553,400	\$551,300	\$156,900	\$708,200	(\$154,800)
DPU BLDG AND GROUNDS DIVISION	\$257,400	\$83,300	\$22,300	\$105,600	\$151,800
Floodwall¹	-	-	-	-	-
Fire Training²	-	\$ 4,800		\$4,800	(\$4,800)
	\$810,800	\$639,400	\$179,200	\$818,600	(\$7,800)

Source: Various Agencies

¹ *Cost of City did not change. DPU Building and Grounds Division may have to reimburse actual cost of grounds maintenance at Floodwall.*

² *Consolidation will not reduce Fire Department's costs.*

³ *Rounded to nearest '00*

Note: RPS and DPU Building and Grounds Division administrative costs were adjusted to reflect only the cost related to employees anticipated to be transferred. It is anticipated that no employees will be transferred from Floodwall and Fire Training. This scenario reflects an in-house service presentation.

As presented above, the overall additional operational costs are minimal. Upon discussion, the RPS Plant Services Director and DPW Grounds Operations Manager agreed that consolidating RPS and DPW grounds maintenance function will be overall beneficial. The Plant Services Director showed his willingness to let DPW assume ground maintenance duties currently performed by his department.

It should be noted that there will be some one-time costs that need to be incurred for the consolidation.

***Other
Anticipated
Costs of
Consolidation***

DPW Grounds Maintenance personnel identified the following needs for the consolidated operations:

1. A project management analyst position that will be responsible for reviewing consolidated grounds maintenance operations and performing data queries and analysis. The City Auditor's Office believes that an administrative staff member can be reassigned to this function from another operational area. This issue will be further addressed in the DPU building maintenance review currently in progress.
2. A computerized work order system is required to capture, schedule and assign grounds maintenance work requests from receipt through final completion. The estimated start-up cost for such a system during the first year totals approximately \$17,000. The implementation of such a system will promote reporting ease and provide accurate and reliable data for the management decision making processes.

The City may have to incur additional initial costs of up to \$177,000

DPW management envisions three sections: Southside District, Northeast District, and the West District under a consolidated operation. This change is expected to reduce transportation costs and staff travel time for the grounds maintenance operation. The savings due to reduced transportation could not be estimated and, therefore, not included in this report. To house the additional staff and equipment, they propose acquiring two prefabricated buildings to accommodate them. The estimated cost for those buildings and the ancillary costs to place them into full operation totals \$160,000. These additional costs need to be evaluated and approved by the Director of Public Works.

First Year's Additional Costs

Work Order System Costs	\$17,000
Fabricated Buildings	\$160,000
Total Projected Additional Costs	\$177,000

Source: DPW

***Seasonal
Work Plan
Projected
Savings***

The adoption of a seasonal work plan would provide significant personnel and benefit savings during both peak and non-peak seasons. The actual transfer in funding can then be used to acquire seasonal worker services that will result in reduced overall costs. DPW staff computed projected savings that could potentially be generated through the use of a seasonal work force. The auditors reviewed these projections for reasonableness and found them to be in line.

Future Year Projections (Rounded to nearest '00)	
Description	Costs
Fixed salaries and benefits costs targeted for reduction	\$606,900
Less: Eliminating fixed personnel costs by using:	
Seasonal personnel workers	\$141,000
Contracted services	\$54,400
	(\$195,400)
Net Savings from personnel changes	\$411,500

Source: Computed by DPW and verified by auditors

After DPW management has the opportunity to streamline costs and replace some of the permanent, full-time employees with temporary seasonal employees, a projected, recurring annual savings of approximately \$411,500 is expected to be realized.

Based on analysis and discussion with DPW Grounds Maintenance management, the auditor computed the following cumulative savings for three years:

***Summary of
Projected Costs
and Savings***

<i>Description</i>	<i>First Year</i>	<i>Second Year</i>	<i>Third Year</i>
<i>Projected Savings</i>	\$0	\$411,500	\$411,500
<i>Additional Costs</i>	(\$177,000)		
<i>Cumulative</i>	(\$177,000)	\$234,500	\$646,000

Source: Computed by Auditors

Substantial cumulative savings can result over multiple years

The savings may occur at the rate of approximately \$411,500 per year from the second year onwards after consolidating the operations. The combined operation is expected to be more efficient and cost effective. It should be noted that for the entire savings to be realized, it may take at least one budget year. The cost data presented above is based on projections and assumptions which appeared to be reasonable. However, in order to verify the actual savings, the City Auditor's Office will revisit DPW Grounds Maintenance in two years after the consolidation plan is approved and implemented.

RECOMMENDATIONS

- 1. Consolidate the City and RPS grounds maintenance activities under the City's Department of Public Works (DPW).*
- 2. Transfer the appropriate amount of grounds maintenance resources from DPU and RPS to DPW.*
- 3. Establish service level agreements between DPW and each of the agencies consolidating grounds maintenance activities.*
- 4. Monitor the activities of the combined operation to ensure increased efficiencies through the elimination of duplication, hiring seasonal labor and outsourcing appropriate tasks.*
- 5. Periodically review and adopt grounds maintenance best practices identified by the U. S. Department of Education including establishing performance measures.*
- 6. Prepare an annual work plan for the combined operations consisting of description and time required for performing various tasks and resources required. Include provisions to manage employee productivity during the periods of inclement weather and the off-peak season.*
- 7. Compare actual time with budgeted time to evaluate efficiencies of accomplishing grounds maintenance tasks.*
- 8. Implement an automated work order system to capture work completed and costs incurred for various tasks and ensure that core and non-core functions are segregated.*
- 9. Devise a comprehensive Policies and Procedures manual that provides guidance to employees and sets performance expectations.*

MANAGEMENT RESPONSE FORM

DEPARTMENT OF PUBLIC WORKS - REPORT #2009-06 - JUNE, 2009

#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
1	<i>Consolidate the City and RPS grounds maintenance activities under the City's Department of Public Works (DPW).</i>	Y	Based upon approval of funding for locations, all units will be phased into the operations of the Grounds Management Division.
	RESPONSIBLE PERSON/TITLE		TARGET DATE
	DPW - Operations Manager		Jan 2010
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
2	<i>Transfer the appropriate amount of grounds maintenance resources from DPU and RPS to DPW.</i>	Y	Each agency will establish its own transition team to ensure all appropriate transfers are performed accordingly.
	RESPONSIBLE PERSON/TITLE		TARGET DATE
	DPW-Director		Jan 2010
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
3	<i>Establish service level agreements between DPW and each of the agencies consolidating grounds maintenance activities.</i>	Y	DPW will develop all service agreements based on the location needs and tasks required for each agency prior to consolidating grounds maintenance activities.
	RESPONSIBLE PERSON/TITLE		TARGET DATE
	DPW - Facilities Maintenance Manager		November 2009
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
4	<i>Monitor the activities of the combined operation to ensure increased efficiencies through the elimination of duplication, hiring seasonal labor and outsourcing appropriate tasks.</i>	Y	Post consolidation, all activities/functions based on the service agreements for each agency will be monitored for one year. A comprehensive report will be submitted no later than March 2011 regarding the effectiveness of the operation. DPW will continue to monitor activities thereafter.
	RESPONSIBLE PERSON/TITLE		TARGET DATE
	DPW - Operations Manager		March 2011
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
5	<i>Periodically review and adopt grounds maintenance best practices identified by U. S. Department of Education including establishing performance measures.</i>	Y	Best practices for grounds maintenance will be used for the entire operation based on the City's beautification standards and other subject matter expert agencies.
	RESPONSIBLE PERSON/TITLE		TARGET DATE
	DPW - Operations Manager		Jan. 2011

#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
6	<i>Prepare an annual work plan for the combined operations consisting of description and time required for performing various tasks and resources required. Include provisions to manage employee productivity during the periods of inclement weather and the off-peak season.</i>	Y	A work plan for each function will be implemented as each agency is transferred to DPW. This work plan will outline the standard to which all tasks are to be successfully completed. During inclement weather: employees are engaged in general equipment maintenance functions, some locations will be mowed due to selected equipment is not adversely affected by inclement weather. Clearing CRS tickets & alley requests from Solid Waste. Off peak season functions include: leaf removal from all school sites, parks, medians, DPW sites. As well as pruning, stump removal operations & street tree care. A work order system will be used to identify/schedule activities year round (peak and non peak season).
	RESPONSIBLE PERSON/TITLE		TARGET DATE
	DPW - Operations Manager		Jan 2010
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
7	<i>Compare actual time with budgeted time to evaluate efficiencies of accomplishing grounds maintenance tasks.</i>	Y	Monitor actual operation time for performance of each task for a period of one year and provide a comprehensive report. Constant ongoing evaluation of the program to ensure best practices are being followed in the City's beautification efforts, operational effectiveness, and service to the citizens.
	RESPONSIBLE PERSON/TITLE		TARGET DATE
	DPW - Operations Manager		April 2011
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
8	<i>Implement an automated work order system to capture work completed and costs incurred for various tasks and ensure that core and non-core functions are segregated.</i>	Y	Software Management companies have been contacted and selected as well as various modules have been demonstrated in order to custom fit the program to address all of DPW requirements. This work order system will be used to evaluate and monitor all functions within the operation (man hours and equipment resources).
	RESPONSIBLE PERSON/TITLE		TARGET DATE
	DPW - Program Support Administrative Assistant		September 2009
#	RECOMMENDATION	CONCUR Y-N	ACTION STEPS
9	<i>Devise a comprehensive Policies and Procedures manual that provides guidance to employees and sets performance expectations.</i>	Y	DPW Directives manual is updated on a regular basis. Revisions to policies and procedures are distributed to each employee. Grounds Management will develop a standard policy and procedures manual for all functions and activities within the unit. This manual will depict expectations of the division as well as concur with the current guidelines of the City.
	RESPONSIBLE PERSON/TITLE		TARGET DATE
	DPW - Operations Manager		Jan 2010

Exhibit I

This table compares DPW and RPS seasonal work activities. The presentation highlights the similarities of work being performed.

Work Activity Comparison

Month	DPW-Grounds	Richmond Public Schools
January	Ditch and roadside vegetation, gateway improvement project.	Plant shrubbery, snow removal, and surplus.
February	Ditch and roadside vegetation, gateway improvement project. Prep flowerbeds, herbicide training, systematic alley sweep, ornamental tree limb.	Plant shrubbery, snow removal, and surplus.
March	Ditch and roadside vegetation, gateway improvement project. Prep flowerbeds, herbicide training, systematic alley sweep, ornamental tree limb. Equipment training.	Prune trees, cleaning of leaves and fallen debris from fence lines, work up baseball and track fields, trim hedges, and some snow removal.
April	Ditch and roadside vegetation, gateway improvement project. Prep flowerbeds, herbicide training, systematic alley sweep, ornamental tree limb. Vegetation, broadleaf weeds control, irrigation, and hillsides.	Chemical treatment around all buildings and fence lines, start mowing program, edging, mulching, and dragging baseball fields before games.
May	Broadleaf weed and heavy vegetation control, and heavy flowerbed planting.	Chemical treatment around all buildings and fence lines, start mowing program, edging, mulching, and dragging baseball fields before games.
June	Broadleaf weed and heavy vegetation control, and heavy flowerbed planting.	Chemical treatment around all buildings and fence lines, start mowing program, edging, mulching, and dragging baseball fields before games.
July	Broadleaf weed and heavy vegetation control, heavy flowerbed planting, and irrigation systems.	Chemical treatment around all buildings and fence lines, start mowing program, edging, mulching, and dragging baseball fields before games.

August	Broadleaf weed and heavy vegetation control, and irrigation systems.	Chemical treatment around all buildings and fence lines, start mowing program, edging, mulching, and dragging baseball fields before games.
September	Heavy vegetation control period, fall flowerbeds, hillsides, and irrigation systems.	Chemical treatment around all buildings and fence lines, start mowing program, edging, mulching, and dragging baseball fields before games.
October	Heavy vegetation control period, fall flowerbeds, hillsides, and irrigation systems.	Seed and fertilize all athletic fields and school grounds, cut hillsides at schools.
November	Hillside vegetation control, fall flowerbed clean-up, backlog citizen requests, ditches and roadside vegetation, gateway improvement, ornamental tree limb up and winterize irrigation system.	Leaf program, replenish ADA required mulch.
December	Ditch and roadside vegetation, gateway improvement project.	Plant shrubbery, snow removal, and surplus.

Source: RPS and DPW submitted data