

**ANNE ARUNDEL COUNTY**  
**Annapolis, Maryland**  
**Auditor's Office**

**INTER-OFFICE CORRESPONDENCE**

To: Members of the County Council  
County Executive John R. Leopold  
Richard Drain, Controller  
Ronald Bowen, Director of Public Works

From: Teresa Sutherland, County Auditor *T. Sutherland*

Date: June 2, 2010

Subject: Executive Summary - Review of Front Foot Assessments

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We recently reviewed nine projects to extend public water or sewer initiated by property owners petitioning the County for service. The purpose of our review was to determine whether management complied with the provisions of Article 13, Title 5 of the County Code.

We determined that management did not have procedures and internal controls in place to ensure they accurately calculate front foot assessments in accordance with the provisions of the Code. The amounts assessed by management were insufficient to recover the amounts required to be recouped via front foot assessments costs for three projects, and in excess of the amounts required for one project. Further, management erred in crediting revenue from user connection charges to the Utility Operating Fund instead of the Utility Debt Service Fund for four projects. The cumulative effect of these errors on the Utility Debt Service Fund is a shortage of \$731,153.

Our findings and recommendations, along with management's response, are detailed in the attached report dated June 2, 2010. Please call if you have any questions.



**ANNE ARUNDEL COUNTY  
OFFICE OF THE COUNTY AUDITOR**

June 2, 2010

The Honorable Members of the County Council  
The Honorable County Executive John R. Leopold  
Mr. Richard Drain, Controller  
Mr. Ronald Bowen, Director, Department of Public Works  
Anne Arundel County  
44 Calvert Street  
Annapolis, Maryland 21401

Dear Members, Mr. Leopold, Mr. Drain, and Mr. Bowen:

We recently reviewed nine projects to extend public water or sewer initiated by the property owners petitioning the County for service. The purpose of our review was to determine whether management complied with the provisions of Article 13, Title 5 of the County Code. Specifically, we reviewed documents and performed test work to determine whether:

- a majority of the real property owners in a defined area petitioned the Department of Public Works (DPW) to establish water or wastewater facilities or to abandon a petition project before construction has begun, and the boundaries of the area were specified in the petition.
- the area actually served by the water or wastewater extension matched the area defined in the petition.
- DPW accurately calculated the amount required to be recouped via front foot assessments.
- DPW accurately calculated the front footage for each affected property owner and the total front footage.
- DPW accurately calculated the rate per front foot to be assessed.
- DPW and the Office of Finance assessed each property owner the amounts determined by DPW.

We determined that management did not have procedures and internal controls in place to ensure they accurately calculate front foot assessments in accordance with the provisions of the County Code. As a result of many errors, the amounts assessed by management were insufficient to recover the amounts required to be recouped via front foot assessments for three projects and in excess of the amount required for one project. Further, management erred in crediting revenue from user connection charges to the Utility Operating Fund instead of the Utility Debt Service Fund for four projects. The cumulative effect of the errors on the Utility Debt Service Fund is a shortage of \$731,153. The attachment to this report summarizes our findings, which are discussed below in detail.

Our evaluation was not made in accordance with generally accepted auditing standards or standards issued by the American Institute of Certified Public Accountants and was more limited than would be necessary to express an opinion. Accordingly, we do not express an opinion or any other form of assurance on the establishment of petition projects, and the calculation and assessment of front foot fees.

In accordance with Section 311 of the County Charter, I am calling to your attention and taking exception to the irregularities and improper procedures noted in this report. This memorandum communicating the results of this

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evaluation is intended solely for the use of the County Council and management of Anne Arundel County. Our recommendations and findings address controls in place as of the completion of our fieldwork on March 15, 2010.

This report is public information that may be obtained from the Office of the County Auditor.

## BACKGROUND

Article 13, Title 5 sets forth the requirements to extend public water and sewer when a majority of the property owners in a defined area petition the County for service. The County is required to assess each property owner who abuts the water or sewer main in an amount sufficient to cover the costs incurred by the County based on the relative front footage of each property.

Property owners within a defined area may file a petition to abandon a project if the County has not yet awarded a construction contract for the project. If the project is abandoned, the County is required to assess the property owners an amount sufficient to reimburse the County for the costs incurred, including estimated interest expenses.

The County completed 12 projects in calendar years 2004 to 2008, and one project was abandoned. We reviewed the following nine projects:

- Gibson Island water extension
- White Road (Severna Park) water extension
- Steamboat Road (Shady Side) sewer extension
- Bennanzar (Severn Road) water extension
- Oakdale Circle (Arnold) water extension
- Annapolis Road (Odenton) water extension
- Skidmore Drive (St. Margarets) sewer extension
- Sabrina Park (Severna Park) sewer extension
- Highview on the Bay (Tracey's Landing) sewer extension, a project that was abandoned by petition of a majority of the property owners.

## FINDINGS

We determined that management does not have procedures and internal controls in place to ensure they accurately calculate front foot assessments in accordance with the provisions of the County Code.

### *Petition Process*

Section 13-5-303(a) of the County Code provides that "the majority of the owners of real property in a defined area . . . may petition the Department (of Public Works) for the establishment of water or wastewater facilities within the area, the boundaries of which shall be specifically described in the petition."

For all the projects we reviewed, we determined a majority of the property owners in a defined area submitted petitions to extend water or wastewater services. In the case of Highview, a majority petitioned the County to abandon the project before the County awarded a construction contract. We also determined that petitioners described the areas to be served in their petitions. However, we noted that the final boundaries for the White Road, Annapolis Road, Skidmore Drive, and Sabrina Park projects differed from the boundaries described in the petitions, and DPW did not require the petitioners to resubmit their petitions with the proper boundaries.

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In our opinion, DPW should not have approved these projects without requiring a majority of the property owners to submit new petitions that accurately define the proposed service area. We do not believe the Administration can or should speculate or assume the property owners who signed a petition in favor of extending public water or sewer within specific boundaries would be in favor of extending water and sewer to a proposed service area that differs from boundaries specified in the petition.

#### *Amounts to be Recouped via Front Foot Assessments*

To determine the amounts to be recouped via front foot assessments, DPW must determine (1) the cost of construction, including engineering, right-of-way acquisitions, etc.; (2) any revenue in aid of construction from the petitioners or others, such as user connection fee revenue; and (3) estimated interest expense. We determined DPW erred in determining the amounts to be recouped for four of the nine projects we reviewed.

- For Gibson Island, DPW's calculation of the amount required to be recouped was overstated by \$43,204.
- For Annapolis Road, DPW's calculation of the amount required to be recouped was understated by \$30,322.
- For Skidmore Lane, DPW's calculation of the amount required to be recouped was understated by \$144,292.
- For Sabrina Park, DPW's calculation of the amount required to be recouped was understated by \$539,443.

These amounts are the cumulative effects of the errors discussed below.

#### *Cost of Construction*

We determined that DPW did not accurately determine the cost of construction for the Gibson Island and Annapolis Road projects. The project cost for the Gibson Island project was overstated by \$19,338 because DPW included "administrative costs" for which there was no supporting documentation. The project cost for the Annapolis Road project was understated by \$9,150 because DPW failed to include all of the project's expenditures.

#### *User Connection Fee Revenue*

We determined that DPW accurately calculated the user connection fee revenue that reduces the project costs to be recouped via front foot assessments. However, for the White Road, Steamboat Road, Bennanzar, and Oakdale Circle projects, management credited the user connection fee revenue to the Utility Operating Fund. The revenue should have been credited to the Utility Debt Service Fund because the project expenses were funded with bond proceeds. The total of the amounts that should have been credited to the Utility Debt Service Fund were \$60,300.

#### *Interest Expense*

Section 13-5-303(l) requires management to include an amount sufficient to compensate the County for the estimated interest expense of the money invested in the project as determined by factors furnished by the Controller to the Director of Public Works. Management estimates an interest rate and converts it to a future value factor to determine the total estimated interest expense.

We found that management has no consistent methodology to determine the interest rate used to estimate

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interest expense. For the Steamboat Road, Bennanzar, and Oakdale Circle projects, management used the *lesser* of the Treasury bond rate or the average interest rate on the County's three most recent bond issues. For the Steamboat Road and Bennanzar projects, management compared the 15-year Treasury bond rate, but for the Oakdale Circle project, management compared the 20-year Treasury bond rate. Neither DPW nor the Office of Finance could tell us why using the lesser of the Treasury bond rate or the County's average interest rate would result in a reasonable estimate of the interest expenses or when they would use the 15-year rate versus the 20-year rate. DPW's explanation was that the Office of Finance provides the interest rate, and Finance's response was that they did not know the origin of this policy that had been used for many years.

In reviewing DPW's determinations of the estimated interest expense, we also found:

- For the Gibson Island project, the Office of Finance made an error in calculating the average interest rate on the County's three most recent bond issues. DPW used the incorrect rate in their calculations, resulting in an understatement of the assumed interest rate and estimated interest expense.
- For the White Road and Annapolis Road projects, management could not document how they derived the interest rate used.
- For the Skidmore Drive and Sabrina Park projects, management assumed interest rates applicable to a low-interest loan from the State. However, both projects were funded with County bonds, not State loans, at significantly higher rates of interest.

#### ***Calculation of Front Footage for Affected Property Owners and Calculation of Total Front Footage***

Section 13-5-604(c) of the County Code requires DPW to determine the front footage for single-family residential properties based on the number of feet that abut the water or sewer main. The sum of the front footage on the individual properties should equal the total front footage for the project.

During our review, we found errors in DPW's determinations of the front footage for the Gibson Island, White Road, Annapolis Road, and Sabrina Park projects. Specifically:

- For Gibson Island, DPW included the front footage for a property that did not abut the water main. DPW told us they included the property because it was owned by an adjacent property owner who could merge the two lots. However, the lots were not and have not been merged. In our opinion, DPW should not have included this lot because it was not merged with the adjacent lot, and it did not abut the water main. The effect of this error is an overstatement of the total front footage, resulting in an understatement of the rate per front foot. The property owner of the lot that should not have been included was assessed more than his respective share, and the remaining property owners were assessed less than their respective shares.
- For White Road, DPW calculated each property owner's front footage correctly, but the sum of the individual front footages did not equal the total front footage DPW used in its calculations. However, in this case, overstating the total front footage did not affect DPW's determination of the rate per front foot because the calculated rate was less than the minimum rate in the County Code.
- For Annapolis Road, DPW correctly determined the front footage for each property owner, but they incorrectly included two properties in the total front footage that did not benefit from the wastewater extension. Consequently, the total front footage was overstated, resulting in an understatement of the rate per front foot, and each property was assessed less than the amount necessary to recoup the County's costs.
- For Sabrina Park, DPW correctly determined the front footage for each property owner, but the

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sum of the individual front footages did not equal the total front footage DPW used in its calculation. Consequently, the total front footage was overstated, resulting in an understatement of the rate per front foot, and each property was assessed less than the amount necessary to recoup the County's costs.

### ***Calculation of the Front Foot Rate***

As a result of the errors identified above, we determined that DPW did not calculate the correct front foot rate for four of the nine projects we reviewed. The rate per front foot was overstated for Gibson Island, and the rate per front foot was understated for Annapolis Road, Skidmore Drive, and Sabrina Park.

We could not determine whether the front foot rate for White Road was correct. The rate calculated using the total project cost less user connection fee revenue plus estimate interest expense is less than the minimum rate specified in the County Code; therefore, DPW assessed the minimum rate of \$2.00 per front foot that was in effect when DPW held the public meeting on the project prior to commencing with the project. However, the minimum rate in effect when the project was released for service was \$2.07 per front foot. Section 13-5-602(a) specifies a minimum rate as of June 30, 2004, to be adjusted annually each July 1 based on the change in the Consumer Price Index. However, the Code does not specify whether the minimum rate is determined as of the date of the public meeting or when the project is later constructed and released for service.

### ***Amounts Assessed***

For each project, we determined that management assessed the front foot fee amounts determined by DPW for each property, with the exception of one property in Sabrina Park that management failed to assess. The property owner subsequently installed a septic system, so DPW decided they would not assess the property owner until his septic system failed and he was required to connect to the system.

Section 13-5-601 of the County Code requires the owners of real property who connect to the County's water or wastewater facilities "or whose property is benefitted by the . . . facilities to pay the applicable front foot assessments." Likewise, the County Code requires property owners to connect to the system, unless DPW elects not to connect otherwise eligible improved properties for reasons of "practical and efficient engineering, excessive cost, or other cause" under § 13-5-305(b).

In our opinion, under § 13-5-601, DPW should have assessed the front foot assessment on the property owner who installed the septic system once the project was released for service because the property owner clearly benefitted from the wastewater extension. However, we concur that under § 13-5-305 allows DPW to elect not to connect a property of "other cause," and that DPW can defer the property owner's connection and payment of user connection charges until such time as the property owner actually connects to the system.

## **RECOMMENDATIONS**

### ***Improper Assessments***

We recommend that DPW work with the Office of Law to determine what corrective action, if any, can be taken to:

- Correct the over-assessment of \$43,204 for the Gibson Island project.
- Correct the under-assessment of \$30,322 for the Annapolis Road project.

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- Correct the under-assessment of \$144,292 for the Skidmore Drive project.
- Correct the under-assessment of \$539,443 for Sabrina Park project.

#### ***Revenue Improperly Credited to the Utility Operating Fund***

We recommend that DPW transfer the \$60,300 of user connection fees improperly credited to the Utility Operating Fund to the Utility Debt Service Fund as follows:

- White Road: \$ 27,300
- Steamboat Road: \$ 20,400
- Bennanzar: \$ 4,200
- Oakdale Circle: \$ 8,400

#### ***Petition Boundaries***

Under the provisions of § 13-5-303(a) of the County Code, the boundaries of the proposed service area clearly are a material part of the petition. Accordingly, if DPW determines the boundaries of a project differ from those in the petition submitted, DPW should require the property owners to submit new petitions that accurately describe the boundaries of the proposed service area and ensure a majority are in favor of that area.

#### ***Determination of Front Foot Assessments***

DPW should implement procedures to ensure it complies with the provisions of Article 13, Title 5. We recommend that DPW develop a checklist to ensure the staff properly determines and documents the six items described below. The staff should complete the checklist and attach supporting documentation for each item. A supervisor should review the staff's work and ensure the documentation is complete and accurate to support the front foot assessment calculations. The supervisor's review should be documented.

##### ***(1) Cost of Construction***

We recommend that management include in its file documentation copies of reports generated by the County's financial system showing the cost of construction. While project expenses are typically incurred in the Utility Capital Projects Fund, DPW should include a procedure to ensure it includes any expenses incurred in the Utility Operating Fund as well.

##### ***(2) Revenue in Aid of Construction***

We recommend that management implement procedures to ensure all revenues that offset the project expenses are posted to the Utility Debt Service Fund. These include user connection fees that may be deferred for years until an undeveloped lot is developed and connects to the system.

##### ***(3) Estimated Interest Expense***

We recommend that management adopt and consistently apply a methodology to estimate interest. We see no value to using the Treasury bond rate. We recommend that management begin with the rate of interest on the most recent bond issue and use professional judgment to determine whether it should be increased or decreased based on current or anticipated market conditions. The reason for any adjustments should be documented. Management should use the rate of interest on State loans only when a loan has been approved by the State and the

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interest rate is fixed.

***(4) Calculation of Front Footage for Affected Property Owners and Calculation of Total Front Footage***

We recommend that management implement procedures to ensure that all properties that abut the water or sewer main, and only properties that abut the water or sewer main, are included in their determinations of the individual and total front footage. We also recommend that management ensure the sum of the front footage for the individual properties equals the total front footage used to calculate the rate. The project files should clearly document the path of the water or sewer mains, the adjacent properties, DPW's determination of each property's front footage, and the total front footage.

***(5) Calculation of the Front Foot Rate***

Once DPW is certain it has accurately determined the total construction costs, the offsetting revenues, the estimated interest expense, and the total front footage, DPW should calculate the rate per front foot. This amount should then be applied to the individual front footages to determine the assessments. A supervisor should review the staff's determinations and ensure the sum of the assessments is sufficient to cover the amount required to be recouped via front foot assessments. The supervisor's review should be documented.

We also recommend that DPW consult with the Office of Law to determine how to apply the minimum rate and maximum rate provisions found in Section 13-5-601 of the County Code; i.e., are the minimum and maximum rates determined as of the date the public hearing is held, the date the project is released for service, etc.

***(6) Amounts Assessed***

DPW should implement procedures to ensure it accurately enters each property's assessment data into the Consolidated Property File. We also recommend that DPW work with the Office of Law to determine what corrective action, if any, should be taken with respect to the Sabrina Park property owner that DPW did not assess a front foot assessment because the owner subsequently installed a septic system.

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Please call if you have any questions regarding our findings or recommendations. We thank the Department of Public Works and Office of Finance for their courteous cooperation, particularly Leslie Campbell, Glenn Shipley, and Gail Rash.

Sincerely,



Teresa Sutherland, CPA  
County Auditor

## Management's Interim Response to Audit of Petition Process

We wish to thank the Auditor's Office for their review of the petition process and their recommendations. The following recommendations will be implemented immediately:

- DPW will work with the Office of Law to determine solutions to improper assessments.
- DPW will transfer the user connection fees to the proper account and will make sure that this transfer occurs annually at year end.
- DPW will develop a checklist to ensure that staff properly determines and documents the cost of construction, any revenue in aid of construction, the estimated interest expense, the calculation of the front footage by property and in total, the calculation of the front foot rate, and the total amount assessed.
- DPW and the Office of Finance have developed a methodology for interest expense. The Office of Finance will either select the average of the last three bond issue interest rates or the Comptroller will use his judgment and document the rate to use. The Office of Finance will supply this documentation to DPW Financial Services soon after the County issues bonds.

There are a few recommendations for which Management will seek legislative solutions.

- We plan to introduce legislation to modify the definition of a petition area. Due to engineering design requirements, it may be necessary to modify a petition area and require new properties to be notified of the petition project and have the opportunity to sign the petition. As long as there remains a majority of petitioners in favor of the requested extension, full re-petitioning will not be required.
- We plan to introduce legislation to change the way petition project cost recovery and property assessments are determined.