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Review of the Automated Traffic Enforcement Unit's Oversight of Speed Camera Functionality

Montgomery County Department of Police

OIG Publication # OIG-25-07

JANUARY 8, 2025

EXECUTIVE SUMMARY

We initiated this review to examine the Montgomery County Police Department's (MCPD) oversight of billing activity associated with speed cameras operated as part of MCPD's automated speed enforcement program. The review was predicated on our findings from a FY2024 OIG audit of MCPD's oversight and processing of billings associated with the deployment of red-light cameras. In that audit, we found that MCPD was not confirming the accuracy of invoices prior to payment. In this review, we again found that MCPD did not consistently confirm receipt of the number of cameras for which they were billed, and did not monitor performance metrics outlined in the contract. Additionally, we noted that the ATEU does not have written procedures governing required daily tests of speed cameras.

OBJECTIVES

Through this review, we attempted to (1) evaluate ATEU's design and implementation of controls over the review and approval of speed camera invoices and oversight of related discounts for speed camera functionality (i.e., days per month of speed camera operation); and (2) assess ATEU's oversight of the contractor's compliance with contract terms related to functionality requirements for speed cameras.

SCOPE & STANDARDS

Our review covered speed camera invoices, applicable contractor reports generated by the contractor's tracking system, speed camera expense transactions entered in Oracle, and internal ATEU reconciliations and tracking sheets notating related discounts on invoices for calendar year (CY) 2023. Our review was conducted in accordance with the generally accepted government auditing standards (GAGAS).

RESULTS

- MCPD did not consistently confirm they received the number of cameras for which they were billed prior to paying invoices.
- MCPD does not have written policies and procedures governing daily required tests of speed cameras.
- MCPD did not monitor performance metrics outlined in the contract resulting in the County potentially overpaying for speed cameras.

RECOMMENDATIONS

We made three recommendations intended to improve MCPD's processes for the oversight of speed camera invoices and the monitoring of related speed camera performance metrics.

We recommend ATEU develop and implement policies and procedures documenting the process for confirming the number of speed cameras in operation for a given month. Additionally, we recommend MCPD develop and implement policies and procedures to confirm the number of speed cameras billed on monthly invoices and to ensure daily self-tests of speed cameras are completed. Further, we recommend that MCPD monitor and enforce performance metrics outlined in the automated traffic enforcement contract.

TABLE OF CONTENTS

EXECUTIVE SUMMARY
Table of Contents
BACKGROUND1
OIG Approach1
FINDINGS AND RECOMMENDATIONS
FINDING 1: MCPD DID NOT CONSISTENTLY CONFIRM THAT THE NUMBER OF CAMERAS BILLED TO THE COUNTY WAS ACCURATE PRIOR TO PAYING INVOICES
FINDING 2: MCPD DOES NOT HAVE WRITTEN POLICIES AND PROCEDURES GOVERNING DAILY REQUIRED TESTS OF SPEED CAMERAS
FINDING 3: MCPD DID NOT MONITOR PERFORMANCE METRICS OUTLINED IN THE CONTRACTS RESULTING IN THE COUNTY POTENTIALLY OVERPAYING FOR SPEED CAMERAS
OIG COMMENTS TO THE CAO'S RESPONSE
APPENDIX A: OBJECTIVES, SCOPE, AND METHODOLOGY
APPENDIX B: THE CAO'S RESPONSE
APPENDIX C: RECOMMENDATION STATUS AND FOLLOW UP12

OIG PUBLICATION #25-07 PAGE | ii

BACKGROUND

The Montgomery County Department of Police's (MCPD) Traffic Division manages the County's traffic safety programs. The Traffic Division's Automated Traffic Enforcement Unit (ATEU) manages MCPD's automated speed enforcement program, which aims to decrease speeding violations and crashes, prevent injuries, and save lives.

On March 29, 2022, Montgomery County (the "County") executed a contract valued at \$100 million with a vendor to manage the automated traffic enforcement program. The contract includes the installation of digital camera systems capable of capturing and validating redlight and speed violations. The contractor is responsible for the collection of all fines, waiving penalties at the County's direction, tracking payments from violators, and providing MCPD with the functionality to query and download reports from the contractor's system, CiteWeb5 (CW5).

In CY2023, the County paid the contractor \$5,832,170 for operating costs related to over 90 speed cameras placed throughout the County. Under the contract terms, each month the contractor is entitled to \$5,995 for every speed camera in operation. The contractor is responsible for monitoring all camera sites daily to ensure proper camera operations; notifying the county of any camera malfunctions; and all aspects of the installation, maintenance, and repair of all its camera equipment. The contractor is also required to provide the County with the ability to generate reports on camera performance, maintenance, and deployments from the contractor's system. Under the terms of the contract, the County can assess liquidated damages if cameras are not functioning as delineated in the contract.

On January 27, 2023, the County executed an amendment to the contract to revise dates for the delivery and installation of portable speed cameras; revise the schedule for implementation of technology migration; and add invoice credits and liquidated damages associated with the revised schedules. According to the contract administrator, these revisions were necessary as the contractor was not meeting the terms of the original contract.

In FY2024, while conducting an audit related to MCPD's oversight and processing of revenues associated with red-light camera citations, the Office of Inspector General noted that MCPD was not confirming the accuracy of invoices prior to payment. We therefore initiated this review to examine MCPD's oversight of billings relative to speed cameras.

OIG Approach

Our review covered all speed camera invoices for CY23 as well as corresponding speed camera functionality based on camera location per CW5. In conducting our review, we obtained necessary supporting documentation and conducted interviews with ATEU personnel and the automated traffic enforcement contractor.

We sought to evaluate MCPD's review and approval process for speed camera invoices and related credits for speed camera functionality. We also attempted to assess the extent of ATEU's oversight of the contractor's compliance with speed camera functionality requirements per the contract.

We conducted this review in accordance with generally accepted government auditing standards (GAGAS). Appendix A contains additional information on this review's objectives, scope, and methodology.

FINDINGS AND RECOMMENDATIONS

We found that ATEU provided lax oversight of the contractor hired to deliver speed cameras for MCPD's automated speed enforcement program. Similar to the findings in a previous audit, we observed that MCPD did not consistently comply with the County's Accounts Payable Policies, and did not monitor performance metrics outlined in the contract. We also noted that the ATEU does not have policies and procedures governing daily required tests of speed cameras.

Finding 1: MCPD did not consistently confirm they received the number of cameras for which they were billed prior to paying invoices.

In CY2023, the County paid the contractor \$5,832,170 for invoices related to speed cameras placed throughout the County. The County's Accounts Payable Policies¹ require that employees who order goods or services confirm that all items are in good condition or delivered services are satisfactory, and that the goods/services meet expectations before paying an invoice. During discussions with an ATEU manager, we learned that MCPD does not have written procedures governing how this process is being done with respect to speed camera related invoices.

As part of our testing, we reviewed invoices and associated support used by MCPD to confirm speed camera totals prior to payment for invoices in CY23. All the invoices exhibited some indication that MCPD's Management and Budget Division (M&B Division) verified the fees stated on invoices, but 6 of 12 invoices did not indicate confirmation of the number of cameras.

We also noted that invoices from January through June of 2023 consistently showed that the contractor provided 91 cameras from month to month while those received from July to December 2023 displayed varying numbers of cameras provided. Based on the terms of the contract, we would have expected to also see some variability in the number of speed cameras for which the County was billed in the first half of the year. We discussed this observation with the contractor and the ATEU manager and determined that the number of cameras appearing on invoices generated from January to June may not have reflected the actual number of cameras in operation.

In July of 2023 the contractor initiated the use of a report that could be used to track the number of cameras in operation throughout the month and help with efforts to ensure the accuracy of invoices. MCPD appears to have incorporated this report into a process used to confirm the accuracy of invoices prior to paying them. The implementation of written

¹ Accounts Payable Policies, Financial Governing Principles and Standards, Effective: October 1, 2022, Section 5 states that "When goods or services are received, the employee who ordered the goods or services – or his or her designee – should confirm the following:...3) the items are in good condition or services are satisfactory; and 4) the goods/services meet expectations and items/services are the ones listed in the contract or agreement, if applicable."

procedures governing this process should result in more consistent oversight and accurate payments.

Recommendation 1

We recommend ATEU develop and implement written procedures documenting the process for confirming the number of speed cameras in operation for a given month prior to MCPD paying for related invoices.

Finding 2: MCPD does not have written policies and procedures governing daily required tests of speed cameras.

Title 21 of Maryland Transportation Code §21-809 requires the following:

A speed monitoring system operator shall fill out and sign a daily set—up log for a speed monitoring system that:

- States that the speed monitoring system operator successfully performed or reviewed and evaluated the manufacturer–specified daily self–test of the speed monitoring system prior to producing a recorded image;
- ii. Shall be kept on file; and
- iii. Shall be admitted as evidence in any court proceeding for a violation of this section.

MCPD has no written policies and procedures governing how they performed the required tests or otherwise complied with the law. The ATEU manager stated that they use CW5 to document daily tests, except on Thanksgiving and Christmas Day, of speed cameras prior to placing them into operation. They also maintain handwritten paper logs as back-up in the event that CW5 is not working properly. Through our review, we determined that the required documentation was not available in CW5 for 17% of the expected camera tests in CY23. We discussed this observation with the ATEU manager and were told that the deficiency was most likely caused by issues with CW5.

We evaluated a sample of the paper logs associated with the missing tests and found sufficient documentation to support that the daily tests were completed manually despite not being available in CW5. However, we observed inconsistencies with the paper logs, such as erroneous dates, missing initials/signatures, and incomplete quality control reviews. We also noted that the paper logs lacked details that were present in tests documented in CW5, including the results of individual manufacturer-specified checks.

MCPD's lack of policies and procedures surrounding the process of testing cameras before they are put into operation appears to be a contributing factor to the deficiencies we observed.

² Title 21 of Maryland Transportation Code §21-809 does not exempt these days from testing.

FINDINGS AND RECOMMENDATIONS

Because Maryland law requires that these records be admitted as evidence in court proceedings it is in the County's interest that they be accurate, consistent, and fully compliant with law. Inconsistent documentation and a lack of detail could also lead to diminished program effectiveness and negatively affect the integrity of the program.

Recommendation 2

We recommend MCPD develop and implement written policies and procedures to ensure daily self-tests are completed and documented consistently.

Finding 3: MCPD did not monitor performance metrics outlined in the contract resulting in the County potentially overpaying for speed cameras.

The automated traffic enforcement contract provides that the County can assess liquidated damages when cameras are not functioning in accordance with the terms of the contract. The contract allows for assessments related to camera operability (monthly operability uptime average) and citation issuance (monthly prosecutable issuance rate).

The "monthly prosecutable issuance rate" (MPIR) measures the percentage of valid citations generated by all cameras. The contract stipulates that 90% of all activity captured (less uncontrollable factors, non-violations, or false triggers) must result in citations that can be pursued for prosecution; i.e. the citations must actually be useful to law enforcement. The County may withhold payment to the contractor for an amount equal to the difference between the required MPIR and actual calculated MPIR. For example, if the actual MPIR for a given month is 85%, the county may reduce the contractor's compensation for the month by 5%. We were told that the ATEU did not monitor the MPIR and could not provide evidence that it was considered during our scope period.

Independently, we observed that the MPIR for each camera location was included in a report generated from CW5 and appeared to indicate a lower than required MPIR for our scope period. Using the information available to us, we calculated the MPIR for each month and estimated that cameras issued prosecutable citations in approximately 44% of captured activity. This would have translated to a reduction on invoices of approximately \$2.5 million if ATEU was tracking the MPIR and enforcing the terms of the contract. Table 2 represents the estimated discount that should have been applied to invoices based on actual MPIR.

Table 1: Estimated MPIR Related Discounts by Month

Month	Expected	Actual MPIR	Monthly Invoice	Estimated Liquidated
	MPIR		Total	Damages
January	90%	22%	\$479,394	\$325,988
February	90%	25%	\$479,718	\$311,817
March	90%	40%	\$251,921	\$123,254
April	90%	27%	\$407,492	\$256,720
May	90%	26%	\$408,305	\$261,315
June	90%	29%	\$409,255	\$249,646
July	90%	46%	\$518,771	\$228,259
August	90%	54%	\$565,493	\$203,577
September	90%	66%	\$564,931	\$135,583
October	90%	68%	\$578,680	\$127,310
November	90%	63%	\$577,914	\$156,037
December	90%	61%	\$590,296	\$171,186
Total			\$5,832,170	\$2,550,692

Additionally, the contract also allows for assessments related to camera operability. The "monthly operability uptime average" (MOUA) refers to the amount of time a camera is operational. The contract specifies that all cameras should be in working order on average for 95% of the time they are in operation. The contractor is allotted a certain amount of time to repair and replace cameras as needed without incurring fees; however, once the allotted time is exceeded, the contractor may incur fees by the hour. The ATEU manager stated that the contractor maintains a quick turnaround time for camera repairs or replacements and that the contractor does not generally exceed the allotted time. However, when we requested documentation to support those claims, we were told that none existed. Since MCPD is not tracking the MOUA the County is potentially missing an opportunity to assess damages for inoperable cameras which would help ensure the contractor is brought into compliance.

By not monitoring contractor performance relative to camera operability and functionality, the County paid at least \$2.5 million more than they should have for camera services in CY23 and potentially jeopardized the effectiveness of the automated speed enforcement program.

Recommendation 3

We recommend MCPD monitor and enforce performance metrics outlined in the contract to avoid overpayment of invoices.

OIG COMMENTS TO THE CAO'S RESPONSE

The County Chief Administrative Officer's (CAO) response to our report is included in its entirety in Appendix B. The response indicates concurrence with the OIG's recommendations. Appendix C summarizes the CAO's responses to individual recommendations and the OIG's assessment of the County's progress towards fully implementing the stated actions.

APPENDIX A: OBJECTIVES, SCOPE, AND METHODOLOGY

Objectives

The objectives of this review were to:

- 1) Evaluate ATEU's design and implementation of controls over the review and approval of speed camera invoices and oversight of related discounts for speed camera functionality (i.e., days per month of speed camera operation).
- 2) Assess ATEU's oversight of the contractor's compliance with contract terms related to functionality requirements for speed cameras.

Scope and Methodology

The scope of our review covered various subject areas during CY23 as outlined below:

- All speed camera invoices (including those that have been reviewed and those that have not) during the scope period.
- All applicable contractor reports or contractor reports generated by CW₅ (i.e., "Client Summary Report by Location" – monthly excel reports from the contractor for each speed camera/speed camera location within the county detailing how many days/hours the camera was functional for all months in the scope period).
- All expense transactions entered in Oracle/the general ledger related to payments for speed camera invoices.
- All ATEU reconciliations/tracking sheets noting discounts received on speed camera invoices for cameras functioning inadequately during a given month during the scope period.

From June 2024 to October 2024, we conducted fieldwork to achieve our objectives. We interviewed and conducted walkthroughs with personnel from the ATEU and the automated traffic enforcement contractor. We also reviewed county/departmental policies and procedures and sampled transactions to test against criteria.

We obtained and reviewed the following criteria for our review:

- 1) Applicable automated traffic enforcement contract and related amendments entered into by the county, effective: March 29, 2022, and January 27, 2023, respectively.
- 2) MCPD's standard operating procedures, policies and other related documentation associated with accounts payable (expenses).
- 3) Accounts Payable Policies Financial Governing Principles and Standards, effective: October 1, 2022.
- 4) Accounts Payable Section Policies, Authorized Payment, Effective: April 1, 2018.
- 5) Accounts Payable Invoice Guidelines, effective: December 29, 2021.

Objective 1 – Review and Approval of Speed Camera Invoices and Discounts

To evaluate MCPD's design and implementation of controls over the review and approval of speed camera invoices and oversight of related discounts, we obtained all speed camera invoices issued to the county for CY23 and reviewed related payments to the contractor. We interviewed relevant MCPD personnel to inquire about existing processes for invoice review and approval and to obtain information related to discounts and credits observed on the invoices. We also obtained supporting documentation from Oracle and MCPD personnel to test for compliance against criteria, such as county/departmental policies and procedures and contract terms.

We reviewed various applicable attributes related to monthly invoices and recorded expense transactions including the number of approver signoffs appearing on the invoices, if transactions were supported by itemized receipts or other acceptable support, if the expense transactions were classified to the correct general ledger accounts, and if costs were consistent with contract terms. Additionally, we observed that the contractor was an approved vendor within the County's Central Vendor Registration System (CVRS).

Our review of invoices also included a calculation of the monthly prosecutable issuance rate (MPIR) and an analysis of how the MPIR would affect the amount of liquidated damages assessed to the contractor by the County. Using a performance report generated in CW5 that contains the number of violation events, uncontrollable rejects, non-violations, false triggers, and total violations presented to MCPD for review, we were able to calculate the MPIR for each month. Once we calculated the MPIR for each month, we subtracted it from 90% (the required MPIR per the contract) to arrive at the difference between required and actual MPIR. Finally, for each month, we multiplied the total dollar value of the invoice by the difference in MPIR to determine the liquidated damages that the County could have imposed on the contractor.

Objective 2 – Oversight of Speed Camera Functionality

To assess MCPD's oversight of the contractor's compliance with contract requirements for speed camera functionality, we obtained the automated traffic enforcement contract and related amendments. We also conducted walkthroughs/interviews with MCPD personnel and the automated traffic enforcement contractor. After gaining an understanding of the ATEU's existing monitoring procedures and contract terms, we sought to test whether the functionality of speed cameras was verified daily using reports in CW5, as required by state law. Once we obtained access to view reports in CW5, we elected to test the full population of speed cameras by determining if self-tests were completed for each day in CY23 for all speed cameras.

Although we received access to view reports in CW₅, the limited reporting capabilities of the system only allowed us to view deployment activity by speed camera location. Additionally, contractor provided reports did not use the same method to track cameras as CW₅. This

presented an issue because one speed camera device may move between multiple camera locations and cannot be easily traced to the invoice. In turn, we tested for the existence of signed daily self-test logs in aggregate for each month. We first put together a list of camera locations for each month, then tested whether or not a daily self-test log existed and was completed for that location each day. Then, we totaled the number of daily self-test logs completed each month and compared that to the required number of daily self-tests we would expect to see based on our calculations.

Internal Controls

We evaluated ATEU's internal controls and compliance with policies and procedures related to the review and approval of speed camera invoices. However, we did not assess ATEU's internal control structure to provide assurance on its effectiveness. We conducted walkthroughs, interviews, and documentation reviews to assess whether internal controls related to the design of appropriate types of control activities, separation of duties, and documentation of responsibilities through policies are properly designed and implemented. It is important to note that our review was limited in scope and may not have identified all internal control deficiencies that may have existed at the time of this review.

<u>Standards</u>

We conducted this review in accordance with generally accepted government auditing standards (GAGAS). Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

APPENDIX B: THE CAO'S RESPONSE

The Chief Administrative Officer provided the following response to our report:



Marc Elrich
County Executive

Richard S. Madaleno Chief Administrative Officer

MEMORANDUM

January 7, 2025

TO: Megan Davey Limarzi, Esq., Inspector General

FROM: Richard S. Madaleno, Chief Administrative Officer

SUBJECT: Response to Confidential OIG Draft Report - Review of the Automated Traffic

Enforcement Unit's Oversight of Speed Camera Functionality - Montgomery

County Police Department (OIG Publication #OIG-25-07)

Thank you for the opportunity to respond to the issues identified in the report. The County's automated speed enforcement program plays a critical role in advancing the County's Vision Zero Initiative. As noted in the most recent annual report for this Initiative, serious and fatal crashes dropped 11 percent compared to the pre-COVID-19 years. This reduction was driven by a 28 percent decline in serious and fatal crashes on high-injury network corridors, which are prioritized for safety interventions under the Vision Zero Action Plan. The multi-pronged Initiative, to include transit and safety projects, outreach and education, and focused law enforcement efforts — such as the speed and red-light camera enforcement — will continue to make the County a safer place for our residents and businesses. We are proud of the accomplishments and progress the automated speed enforcement program has made as part of this Initiative.

We acknowledge that there are opportunities to improve contract and program administration processes within the Police Department's Automated Traffic Enforcement Unit (ATEU), including improved documentation of processes and oversight of program and contract performance. Such efforts can be impacted by staffing and resources. Your report's findings and recommendations will be useful as we continue to improve processes in the future. We are committed to taking appropriate steps to address the report's findings and recommendations, as noted below.

Recommendations 1: We recommend ATEU develop and implement written procedures documenting the process for confirming the number of speed cameras in operation for a given month prior to MCPD paying for related invoices.

101 Monroe Street • Rockville, Maryland 20850 240-777-2550 • MD Relay 711 TTY • 240-777-2517 FAX www.monigomerycountymd.gov Response to Confidential OIG Draft Report – Review of the Automated Traffic Enforcement Unit's Oversight of Speed Camera Functionality – Montgomery County Police Department (OIG Publication #OIG-25-07)

January 7, 2025 Page 2 of 2

CAO Response. We concur with this recommendation. MCPD will develop written procedures for its ATEU staff to follow confirming the number of speed cameras in operation for a given month for which the County was billed prior to authorizing payment of invoices. MCPD plans to develop and implement these procedures by June 30, 2025.

Recommendation 2: We recommend MCPD develop and implement written policies and procedures to ensure daily self-tests are completed and documented consistently.

CAO Response. We concur with this recommendation. MCPD will develop written policies and procedure for its ATEU staff to follow to ensure daily self-tests are completed and documented consistently. MCPD plans to develop and implement these procedures by June 30, 2025.

Recommendations 3: We recommend MCPD monitor and enforce performance metrics outlined in the contract to avoid overpayment of invoices.

CAO Response. We concur with this recommendation. As part of the contract administration procedures it will develop to address Recommendation #1 above, MCPD will develop written procedures for its ATEU staff concerning monitoring and enforcement of performance metrics contained in the contract to avoid overpayment of invoices. As stated above, MCPD plans to develop and implement these procedures by June 30, 2025.

Thank you for bringing these matters to our attention.

 cc: Fariba Kassiri, Deputy Chief Administrative Officer, Office of the County Executive Marc Yamada, Chief, Montgomery County Police Department Maxene Bardwell, Internal Audit Manager, Office of the County Executive

Page 2 of 2

APPENDIX C: RECOMMENDATION STATUS AND FOLLOW-UP

This Appendix provides a summary of the findings and recommendations presented in this report along with the OIG's assessment of the County's progress towards addressing the recommendations. The OIG categorizes progress towards implementation into the following 4 status groups:

- Open Unresolved: No management response, inadequate response, or no agreement on corrective action plan.
- Open In Progress: Agreed on planned action, auditee is in the process of implementing stated actions, but no evidence of implementation has yet been provided to the OIG.
- Open Resolved: Auditee provided support to the OIG indicating implementation was complete, OIG testing to ensure implementation.
- Closed: Recommendation has been implemented.

Finding	# Finding	Recommendation	CAO Response	Status
1	MCPD did not consistently confirm they received the number of cameras for which they were billed prior to paying invoices.	We recommend ATEU develop and implement written procedures documenting the process for confirming the number of speed cameras in operation for a given month prior to MCPD paying for related invoices.	Concur: MCPD will develop written procedures for its ATEU staff to follow confirming the number of speed cameras in operation for a given month for which the County was billed prior to authorizing payment of invoices. MCPD plans to develop and implement these procedures by June 30, 2025.	Open In Progress

Finding #	Finding	Recommendation	CAO Response	Status
2	MCPD does not have written policies and procedures governing daily required tests of speed cameras.	We recommend MCPD develop and implement written policies and procedures to ensure daily self-tests are completed and documented consistently.	Concur: MCPD will develop written policies and procedure for its ATEU staff to follow to ensure daily self-tests are completed and documented consistently. MCPD plans to develop and implement these procedures by June 30, 2025.	Open In Progress
3	MCPD did not monitor performance metrics outlined in the contract resulting in the County potentially overpaying for speed cameras.	We recommend MCPD monitor and enforce performance metrics outlined in the contract to avoid overpayment of invoices.	Concur: As part of the contract administration procedures it will develop to address Recommendation #1 above, MCPD will develop written procedures for its ATEU staff concerning monitoring and enforcement of performance metrics contained in the contract to avoid overpayment of invoices. As stated above, MCPD plans to develop and implement these procedures by June 30, 2025.	Open In Progress

OIG Publication #25-07