

TRAFFIC SIGN & PAVEMENT MARKING SERVICES

OPERATIONS AUDIT

Exit Conference Date: September 9, 2020

Release Date: October 8, 2020

Report No. 21-01

City of Orlando
Office of Audit Services and Management Support

George J. McGowan, CPA
Director

Perez Goree, CPA
Audit Program Manager



TABLE OF CONTENTS



MEMORANDUM OF TRANSMITTAL..... 3

ISSUES, RECOMMENDATIONS AND MANAGEMENT ACTIONS 7

ISSUES AND RECOMMENDATIONS.....9

Create a policy for validating and retaining completed traffic sign work orders 9

Continue pursuing digital technology for traffic sign technicians..... 11

MEMORANDUM OF TRANSMITTAL



To: Francis J Flynn, Deputy Chief Administrative Officer

From: George J. McGowan, CPA
Director, Office of Audit Services and Management Support

Dates: Exit Conference: September 9, 2020
Release: October 8, 2020

Subject: Traffic Sign Shop Operations Audit (Report No. 21-01)



The Office of Audit Services and Management Support performed an audit of the processes and controls of the Traffic Sign and Pavement Marking Service Operations. The audit objectives were to determine the economy and efficiency of the program by assessing if the internal controls were functioning to ensure an efficient flow from start to finish of the traffic sign shop work orders.

We conducted this performance audit in accordance with the International Standards for the Professional Practice of Internal Auditing. 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.

The following report contains the issues identified during the audit, recommendations for improvement and management's replies regarding actions taken/planned to be taken with respect to the identified issue.

We appreciate the cooperation and courtesies extended by the staff of Sign and Pavement Marking Services during the course of this audit. This audit was performed by Perez Goree, Audit Program Manager.

GJM/PG

c: The Honorable Buddy Dyer, Mayor
Chris Cairns, Transportation Engineering Division Manager
Timothy Davis, Deputy Chief Information Officer
Jody Litchford, Deputy City Attorney
Cade Braud, Transportation Systems Manager
Richard Kamaka, Sign & Pavement Markings Supervisor

SUMMARY OF RECOMMENDATIONS, MANAGEMENT RESPONSES AND ACTION PLAN



#	RECOMMENDATIONS	MANAGEMENT RESPONSE & ACTION PLAN			ACTION PLAN	TARGET DATE
		CONCUR	PARTIALLY CONCUR	DO NOT CONCUR		
1.	Create a policy for validating completed traffic sign work orders. This approval process should document the flow of work orders from their genesis to completion and final document storage.	X			All work orders issued by the Traffic Studies Group will be date stamped, scanned and logged received by the Production Coordinator, then issued to the Sign designers for sign fabrication, Traffic Control supervisors for locate marks, Traffic Technicians for installation, Traffic Control Supervisors for final inspection then back to the Production Coordinator for reporting and final document storage.	1/1/2021

		MANAGEMENT RESPONSE & ACTION PLAN				
#	RECOMMENDATIONS	CONCUR	PARTIALLY CONCUR	DO NOT CONCUR	ACTION PLAN	TARGET DATE
2.	Maintain a validated copy of completed work orders at the Sign Shop Office in addition to Traffic Studies.		X		In keeping with the Mayors Green Initiative, the city is transitioning from a heavy dependence on paper to one of electronic filing. A copy of the validated work orders will be maintained on TE N/Drive Sign Shop folder. Our goal is to be paperless with the addition of digital technology equipment.	1/1/2021
3.	Continue the process of pursuing digital technology for the sign shop technicians to increase efficiency and effectiveness.	X			The Traffic Control Supervisor and Production Coordinator will continuously follow up and remind the Traffic Ops Engineer, Division Manager and IT of this requirement.	3/1/2021

The background is a dark blue color with several overlapping, semi-transparent geometric shapes in various shades of blue, creating a layered, abstract effect. The shapes are primarily triangles and quadrilaterals, some pointing towards the corners of the page.

**ISSUES, RECOMMENDATIONS
AND MANAGEMENT ACTIONS**



BACKGROUND

The Office of Audit Services and Management Support has performed an audit of the processes and controls over the Traffic Sign Shop Operations. The audit objectives were to determine the economy and efficiency of the program by assessing if the internal controls were functioning to ensure an efficient flow from start to finish of the traffic sign shop work orders.

The Orlando Traffic Sign and Pavement Marking Services group consists of three sign fabrication staff members (Production Coordinator, Sign Designer and Assistant Sign Designer). These staff members report administratively to the Traffic Operations Engineer and operationally to the Traffic Control Supervisor. This group processes requests for traffic and non-traffic related signs. The most typical requests for this group are the creation of the traffic signs (but not traffic signals) seen throughout the City. This group also coordinates the hanging of banners installed by the Signal Maintenance group.

A key function of the Production Coordinator is the maintenance of work orders that are processed by the Traffic Maintenance Technicians. There are seven (7) Traffic Maintenance Technicians and one (1) Traffic Control Assistant Supervisor. These eight (8) positions report to the Traffic Control Supervisor who is also the Operational Manager of the Sign Shop staff. The Traffic Maintenance Technicians complete work order requests on a daily basis. The work orders are requests to install new signs or repair/replace damaged or faded traffic signs and/or install/refurbish pavement or curb markings. The Traffic Maintenance Technicians completed 586 work orders for 2018; 447 for 2019, and 133 through May 22, 2020.

OBJECTIVES AND SCOPE

The Office of Audit Services and Management Support performed an audit of the processes and controls over the Traffic Sign and Pavement Marking Services Operations. The audit objectives were to determine the economy and efficiency of the program by assessing if the internal controls were functioning to ensure an efficient flow from start to finish of the traffic sign shop work orders.

The scope of this audit focused on work orders processed in 2019. We observed that the Sign Shop and Pavement Marking Services does have varying ways of identifying if a work order has been completed. However, those methods may not be the most efficient and opportunities exist to improve validation of completed work orders.

METHODOLOGY

Traffic studies produces work orders for approval by the Traffic Operations Engineer. Work orders approved by the Traffic Operations Engineer are then routed to the sign shop. We interviewed sign shop staff members to gain an understanding of the procedures used to manage work orders. We conducted “ride-alongs” with the traffic maintenance technicians to observe work orders being executed in addition to witnessing the documentation processes for those work orders. We sampled and tested work orders that were completed during 2019, part of this sample was work orders completed during our ride-along. We also interviewed the Orange County Signs Foreman to learn about their experiences of having their traffic sign technicians use mobile devices.

As result of these activities, we have identified opportunities to improve Traffic Sign and Pavement Markings operations.

ISSUES AND RECOMMENDATIONS

**Create a policy for
validating and retaining
completed traffic sign
work orders**

The sign shop does not have a formal policy for completed work order validation. The shop has an established practice of validation whereby at the end of each shift, the sign shop traffic maintenance technicians submit all daily completed work orders to the Production Coordinator. These completed work orders are then scanned to the City's shared network drive. Subsequently, either the Traffic Control Supervisor or Traffic Control Assistant Supervisor visits each location to validate if the work was done and signs the completed work orders if work was satisfactorily completed. After management validation, the work orders are returned to the Production Coordinator, who then stores the hard copies in an office file cabinet until they are sent to the Traffic Studies section for final retention and storage. We found that the validated copy of the completed work orders was not scanned to the shared network drive.

As part of our testing, we were granted access to the Transportation Engineering Completed Work Orders on the network drive and selected thirty (30) of four-hundred forty-seven (447) work orders completed in 2019 with the goal of verifying if all thirty completed work orders were validated by management. We were not able to obtain evidence of management validation on any of the selected samples. We were told that the validated work orders were sent to Traffic Studies and staff members at that office may not have scanned the hard copies in yet and may still be in their office. To defend itself in legal cases and being able to respond to inquiries in

general, management should have controls in place to quickly retrieve completed, and validated work orders that offers documented evidence that the work orders were in fact completed and signed by management.

Recommendation 1

We recommend that management create a policy for validating completed traffic sign work orders. This validation process should document the flow of work orders from their genesis to completion and storage at Traffic Studies.

Management Response

All work orders issued by the Traffic Studies Group will be date stamped, scanned and logged received by the Production Coordinator, then issued to the Sign designers for sign fabrication, Traffic Control supervisors for locate marks, Traffic Technicians for installation, Traffic Control Supervisors for final inspection then back to the Production Coordinator for reporting and final document storage.

Recommendation 2

We recommend that the Sign Shop scan the validated copy of the completed work orders to the City's shared network drive prior to sending to City Hall Traffic Studies for final retention. This validated copy affords the office a quicker verification process if questions arise.

Management Response

The Production Coordinator will scan the completed and validated copy of the work orders to the TE N/Drive Sign Shop folder before sending the original to the Traffic Studies Group for final retention and storage.

Continue pursuing digital technology for traffic sign technicians.

In 2017 the Traffic Sign Shop consulted with the Orange County Signs division to learn about their use of mobile tablets with their sign field technicians. In March 2018 the Sign Shop purchased three mobile tablets with the goal of improving their manual process of managing work orders. At the time of purchase, the tablets did not meet Technology Management specifications and the project to digitize the process was put on hold. As of January 2020, the Sign Shop request for digital technology was being considered as part of a City-wide initiative of developing a Customer Relationship Management (CRM) system where data can be shared amongst varying departments. As of August 20, 2020, this is still the current status.

Recommendation 3

We recommend that the Traffic Signs Group continue its pursuit of implementing digital technology into its operations.

Management Response

The Traffic Control Supervisor and Production Coordinator will continuously follow up and remind the Traffic Ops Engineer, Division Manager and IT of this requirement.