



AUDIT HIGHLIGHTS

Intelligent Transportation Systems

May 9, 2018

Audit Report No. 1803

WHY WE DID THIS AUDIT

An audit of *Intelligent Transportation Systems* was included on the City Council-approved fiscal year (FY) 2017/18 Audit Plan as a contracted information technology (IT) audit. We contracted with Grant Thornton, LLP, to perform an evaluation of Intelligent Transportation Systems' general and application controls.

BACKGROUND

Scottsdale's Traffic Management Center (TMC), within the Street Operations department of the Public Works division, manages the Intelligent Transportation Systems (ITS).

According to the U.S. Department of Transportation, these systems include a variety of technologies applied to monitor, evaluate, operate, and manage transportation systems to enhance efficiency, reliability, and safety.

The TMC indicated approximately 77% of the City's 305 signalized intersections are currently connected to the ITS through 175 miles of fiber optic cables and 90 ethernet radios. The ITS Traffic Engineer periodically evaluates and adjusts signal timing using a transportation management software.

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WHAT WE FOUND

Risks surrounding ITS have not been adequately identified, evaluated and managed.

The TMC does not have a documented risk management process, and it is not otherwise apparent that potential risks have been adequately assessed.

Specifically, we found:

- The TMC should take a more proactive role in managing security risks, including working with the City's central IT department to better define roles and responsibilities over security management.
- Stronger access controls are needed to protect TMC computers, servers, and applications from unauthorized access.
- Business continuity and disaster recovery plans have not been established.

Several areas in IT governance and management could be improved.

We found:

- Few policies and procedures have been formalized, making knowledge transfer among staff more difficult and potentially inconsistent.
- Vendor service agreements have not been properly maintained and managed. In two instances, no written agreements exist.
- Strategic planning and additional performance data may help ITS more effectively plan for future improvements.

WHAT WE RECOMMEND

We recommend the Traffic Management Center:

- Work with the IT department to review roles and responsibilities for technology management activities.
- Formalize policies and procedures for TMC operations and establish stronger access controls over the TMC systems.
- Ensure written agreements are established and software acquisitions follow the procurement review process.
- Identify and assess potential risks and develop business continuity and disaster recovery plans.
- Develop a strategic plan to guide TMC operations and ITS objectives.

MANAGEMENT RESPONSE

The Department agreed with the recommendations.