

TO: HONORABLE MAYOR AND
CITY COUNCIL

FROM: Joe Rois
City Auditor

SUBJECT: Information Technology: Improved Governance **DATE:** January 7, 2022
Would Strengthen the City's Cybersecurity

The purpose of this memorandum is to inform the City Council that, in accordance with our approved Fiscal Year 2021-22 work plan, we have completed an audit of controls around the City's information and technology assets.

BACKGROUND

In recent years, the cybersecurity threat to government agencies has increased significantly. Government agencies have been victims of ransomware attacks resulting in significant disruption of governmental functions and operations. According to the National Institute of Standards and Technology's (NIST)'s Cybersecurity Framework:

Cybersecurity threats exploit the increased complexity and connectivity of critical infrastructure systems, placing the Nation's [sic] security, economy, and public safety and health at risk. Similar to financial and reputational risks, cybersecurity risk affects a company's bottom line. It can drive up costs and affect revenue. It can harm an organization's ability to innovate and to gain and maintain customers. Cybersecurity can be an important and amplifying component of an organization's overall risk management.

The City has widespread information systems and networks to support City services, including thousands of computers, hundreds of servers, and myriad software systems. These systems and assets are critical to City operations across the wide range of services provided by more than twenty different departments. This includes large industrial operations such as the San José-Santa Clara Regional Wastewater Facility; the Norman Y. Mineta San José International Airport; public safety operations; community services such as library and recreation services dispersed across the city, and support functions related to financial management, payroll, and others.

The Information Technology Department (ITD) is charged with Citywide cybersecurity management through the City's Chief Information Officer and the City Information Security Officer. In 2020, ITD procured professional services with two consulting firms for information systems security assessments. The agreements were designed as master agreements, with individual assessments to be defined through service orders. Potential tasks identified in the master agreements included, but were not limited to, compromise assessments, compliance assessments, and penetration testing.

AUDIT SCOPE

The objective of this audit was to review the security assessment provided by ITD's security consultant, Spirent Communications, and assess gaps in the City's information technology environment as they relate to that assessment.

We conducted this audit in accordance with generally accepted government auditing standards. 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.

KEY AUDIT FINDINGS

The City's first assessment of cybersecurity vulnerabilities using a security consultant showed some critical areas of risk. Having a longer-term plan to address these organization-wide cybersecurity risks in a strategic manner is important. This report has two findings and five recommendations.

In accordance with Government Auditing Standards published by the Comptroller General of the United States,¹ we have omitted certain information from public disclosure. Our report relates to findings related to cybersecurity vulnerabilities and disclosure of these could expose the City to cybersecurity risks. As a result, we have omitted publicly disclosing the overall findings and recommendations due to the sensitive nature of the results. These were communicated to ITD and the City Manager's Office in a separate confidential report. The Administration has reviewed the report and has provided a formal response, which is included in the confidential report. We will present the report and the findings to the City Council at the January 11 closed session meeting of the City Council.

We reviewed this report with the City Manager's Office, ITD, and the Budget Office and incorporated their views and feedback. The City Auditor's Office thanks the management and staff for their time, information, insight, and cooperation during the preparation of this report.



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¹ <https://www.gao.gov/yellowbook>