The California State University
OFFICE OF THE CHANCELLOR

Larry Mandel
Vice Chancellor and
Chief Audit Officer

Audit and Advisory Services
401 Golden Shore
Long Beach, CA 90802-4210

562-951-4430
562-951-4955 (Fax)
lmandel@calstate.edu

March 25, 2020

Dr. Mary A. Papazian, President
San José State University
One Washington Square
San José, CA 95192

Dear Dr. Papazian:

Subject: Audit Report 19-11, *Facilities Management*, San José State University

We have completed an audit of *Facilities Management* as part of our 2019 Audit Plan, and the final report is attached for your reference. The audit was conducted in accordance with the Institute of Internal Auditors' *International Standards for the Professional Practice of Internal Auditing*.

I have reviewed the management response and have concluded that it appropriately addresses our recommendations. The management response has been incorporated into the final audit report, which has been posted to Audit and Advisory Services' website. We will follow-up on the implementation of corrective actions outlined in the response and determine whether additional action is required.

Any observations not included in this report were discussed with your staff at the informal exit conference and may be subject to follow-up.

I wish to express my appreciation for the cooperation extended by the campus personnel over the course of this review.

Sincerely,

Larry Mandel
Vice Chancellor and Chief Audit Officer

c: Timothy P. White, Chancellor

CSU Campuses

Bakersfield • Channel Islands • Chico • Dominguez Hills • East Bay • Fresno • Fullerton • Humboldt • Long Beach • Los Angeles • Maritime Academy • Monterey Bay
Northridge • Pomona • Sacramento • San Bernardino • San Diego • San Francisco • San José • San Luis Obispo • San Marcos • Sonoma • Stanislaus

The California State University
Audit and Advisory Services

FACILITIES MANAGEMENT

San José State University

Audit Report 19-11
February 12, 2020

EXECUTIVE SUMMARY

OBJECTIVE

The objectives of the audit were to ascertain the effectiveness of operational, administrative and financial controls related to facilities operations and to ensure compliance with relevant governmental regulations; Trustee policy; Office of the Chancellor (CO) directives; and campus procedures.

CONCLUSION

Based upon the results of the work performed within the scope of the audit, except for the weaknesses described below, the operational, administrative, and financial controls for facilities management as of November 1, 2019, taken as a whole, provided reasonable assurance that risks were being managed and objectives were met.

Our review indicated that administration of preventive maintenance (PM) needed improvement. We found that some scheduled PM tasks were cancelled without explanation or work orders lacked sufficient documentation to determine whether the PM was completed as required. Additionally, overall work order administration needed improvement to ensure that all work orders were prepared to include required information, were updated as status changed, and were reviewed by management. We also found that the campus had not documented a formal process for granting, reviewing, and removing user access to the computerized maintenance management system (CMMS) and electronic facility access systems and did not consistently document system access approvals. In addition, we found that records for the management of the physical key inventory were inconsistent and were not periodically reviewed by management. Further, the campus did not have documented service-level memoranda of understanding (MOU) with parking services and the Student Wellness Center (SWC) for facilities services, and the MOU with housing services needed to be updated. Also, comprehensive work order procedures were not documented and PM procedures needed updating.

Specific observations, recommendations, and management responses are detailed in the remainder of this report.

OBSERVATIONS, RECOMMENDATIONS, AND RESPONSES

1. PREVENTIVE MAINTENANCE

OBSERVATION

Administration of PM needed improvement.

We found that although facilities development and operations (FD&O) had established a PM administration procedure that scheduled recurring maintenance tasks for each asset in WebTMA, the campus CMMS, the campus was not complying with the procedure.

Specifically, PM data obtained from WebTMA indicated that there were more than 9,000 PM work orders created and scheduled for completion during the audit scope period. However, we found that more than 500 annual and/or semiannual PM work orders were cancelled prior to completion because of timing and staffing constraints. We were informed that the practice was to ensure that the task was completed in the next cycle or carried to a separate work order, but we were unable to determine that this occurred due to the volume of PM tasks noted above.

Additionally, we selected ten completed PM work orders for detailed review and found that:

- Four work orders did not include sufficient documentation to determine whether the task was performed as required by the PM task sheet.

- One work order had a status of complete; however, there was no documentation to show that any work had been completed and there was no PM task sheet describing the PM to be performed.

- One work order was not completed timely based on the required PM cycle.

Consistent completion of PM provides greater assurance that assets and equipment will perform at peak efficiency and decreases the risk of deterioration.

RECOMMENDATION

We recommend that the campus establish a process to monitor compliance with established PM intervals and reinforce training to ensure that work order documentation is consistently completed.

MANAGEMENT RESPONSE

We concur. The campus will establish a process to monitor compliance with established PM intervals and reinforce training to ensure that work order documentation is consistently completed. This will be completed by April 30, 2020.

2. WORK ORDER ADMINISTRATION

OBSERVATION

Administration, maintenance, and review of aged and closed work orders lacked consistency and needed improvement.

The campus used WebTMA as its CMMS to capture, assign, monitor, and analyze the status and completion of work and maintenance requests. We reviewed the 15 most aged work orders in the backlog as of September 13, 2019, and found that:

- Five aged work orders had no evidence of periodic management review or documentation of the progress made toward completing the work order.

- Four aged work orders lacked documentation or did not include an estimated time of completion.

- One aged work order was determined to have been completed; however, the appropriate status had not been updated in WebTMA.

Additionally, we reviewed 30 work orders completed and closed during the audit scope period and found that:

- Two work orders did not have any labor hours recorded and did not have technician comments or documentation indicating completion.

- Two work orders indicated that work had been completed by technicians; however, management review and completion of the work order was not timely.

- One work order reflected excessive labor hours recorded by numerous technicians that seemed unreasonable based on the requested task.

- One work order was not scheduled and assigned timely after the work order was created.

Proper administration of the work-order process enhances service levels, provides greater assurance that assets will be adequately maintained, and allows management to accurately report on state facilities and the resources necessary to maintain them.

RECOMMENDATION

We recommend that the campus:

a. Evaluate the current work-order backlog review process and implement improvements to ensure that management consistently reviews aged work orders.

b. Revise the current work order review procedures to enhance management oversight and ensure that all elements of completion, including labor hours and task details, are completed.

c. Communicate the updated procedures and provide training to key personnel.

MANAGEMENT RESPONSE

We concur. The campus will:

a. Evaluate the current work-order backlog review process and implement improvements to ensure that management consistently reviews aged work orders.

b. Revise the current work order review procedures to enhance management oversight and ensure that all elements of completion, including labor hours and task details, are completed.

c. Communicate the updated procedures and provide training to key personnel.

This will be completed by May 30, 2020.

3. LOGICAL AND PHYSICAL ACCESS

OBSERVATION

Administration of system and physical access needed improvement.

FD&O managed user access to WebTMA and to the S2 security system for exterior building doors, which controls access to all of the exterior doors and 25 percent of the interior doors on campus. We found that there was no documented process for provisioning approved additions, changes, and terminations of user-access rights and reviewing access for existing account holders for both systems, as required by systemwide policy. In addition, we found that:

- There was no annual review of user-access rights for either WebTMA or the S2 system during the audit scope period, as required by systemwide policy.

- We reviewed 16 active users in the S2 security system and found that seven did not have documented management approval granting them user access to the system.

In addition to the S2 system, FD&O also maintained electronic key books for the 5,000 physical keys currently in circulation, as well as key-holder logs to document keys issued to the campus community. However, we found that management did not periodically review these key books and key-holder logs for accuracy. Further, we reviewed the records for 11 keys listed as active and in circulation and found that:

- For all 11 keys, data fields in the key books were not consistently or completely filled out, and the key books did not always agree with the key-holder log.

- For all 11 keys, records indicated that keys were still issued to individuals who were no longer employed on the campus.

- For three keys, the key books indicated that there were duplicate sequence numbers in circulation.

Effective administration of user accounts decreases the risk of unauthorized access and data manipulation, and adequate administration of physical access lowers the risk that keys will be unaccounted for or misused.

RECOMMENDATION

We recommend that the campus:

a. Establish formal policies and procedures for authorizing, revising, and terminating access to WebTMA and the S2 security system.

b. Develop procedures for reviewing system access and physical key issuance records on a periodic basis, at least annually.

MANAGEMENT RESPONSE

We concur. The campus will:

a. Establish formal policies and procedures for authorizing, revising, and terminating access to WebTMA and the S2 security system.

b. Develop procedures for reviewing system access and physical key issuance records on a periodic basis, at least annually.

This will be completed by May 30, 2020.

4. **AGREEMENTS WITH SELF-SUPPORT UNITS**

   OBSERVATION

   The campus had not established MOUs between FD&O and parking services and SWC, and the MOU between FD&O and housing services had not been updated.

   We found that FD&O received an annual cost recovery allocation from parking services for regular maintenance of the campus parking garages and had a process to charge back use of specialized facilities services. Although detailed calculations for the annual allocation amount were documented for fiscal year 2013/14, this arrangement for services was not documented in an agreement or MOU, and calculations had not been updated.

   In addition, we found that FD&O provided full-time custodial services to the SWC and had a process to charge back for any additional maintenance services, such as use of specialized trades. Although the SWC reimbursed FD&O for all services provided, this arrangement for services was not documented in an agreement or MOU.

Also, we found that FD&O had an MOU with housing services that detailed the regular maintenance and specialized trades services to be covered with an annual allocation from housing services. However, this MOU had not been updated since it was executed in July 2015, and the annual allocation from housing services had gradually increased from $2.8 million to $5.8 million.

Written agreements decrease the risk of misunderstandings and miscommunications regarding rights, responsibilities, and payment terms.

RECOMMENDATION

We recommend that the campus:

a. Develop and implement MOUs with parking services and the SWC to document the responsibilities, scope, and cost of billable maintenance services provided by FD&O.

b. Review and update the MOU with housing services to reflect the current allocation and service levels.

MANAGEMENT RESPONSE

We concur. The campus will:

a. Develop and implement MOUs with parking services and the SWC to document the responsibilities, scope, and cost of billable maintenance services provided by FD&O.

b. Review and update the MOU with housing services to reflect the current allocation and service levels.

This will be completed by May 30, 2020.

5. **STANDARD OPERATING PROCEDURES**

OBSERVATION

Comprehensive work-order procedures were not formally documented, and PM procedures were outdated.

We found that FD&O had numerous standard operating procedures (SOP) and desk procedures for various maintenance and administrative functions. However, we also found that:

- A comprehensive work-order SOP that addressed review of requests, acceptance and creation of work orders, scheduling and assignment, technician notes and completion, review and approval by supervisors or managers, and timing of status changes was not formally documented.

- The *Preventative Maintenance (PM) Work Orders* SOP was outdated, as it did not reflect current PM scheduling procedures or use of the current WebTMA and was last updated in June 2013.

Comprehensive and current policies and procedures help to ensure that assets are well-maintained, service levels are enhanced, and resource needs for the maintenance of campus facilities are effectively administered and accurately reported.

RECOMMENDATION

We recommend that the campus:

a. Document comprehensive SOPs for the work-order process that include, but are not limited to, review of requests, acceptance and creation of work orders, scheduling and assignment, technician notes and completion, review and approval by supervisors or managers, and timing of status changes.

b. Update the *Preventative Maintenance (PM) Work Orders* SOP to reflect current scheduling procedures and use of the WebTMA system.

MANAGEMENT RESPONSE

We concur. The campus will:

a. Document comprehensive SOPs for the work-order process that include, but are not limited to, review of requests, acceptance and creation of work orders, scheduling and assignment, technician notes and completion, review and approval by supervisors or managers, and timing of status changes.

b. Update the *Preventative Maintenance (PM) Work Orders SOP* to reflect current scheduling procedures and use of the WebTMA system.

This will be completed by June 30, 2020.

GENERAL INFORMATION

BACKGROUND

The need to protect the substantial public investment represented by California State University (CSU) facilities and grounds was brought to the forefront in the Legislative Analyst's Report on the 1979/80 state budget. Subsequently, the Legislature directed the CSU to implement a preventive maintenance program. As a result, the CSU has adopted directives, executive orders and technological tools to ensure that facilities-related assets are adequately maintained.

Executive Order (EO) 847, *Facility Maintenance*, refines the standards in which campuses maintain CSU facilities. It provides clear definition of operations and maintenance, deferred maintenance and capital renewal requirements to assure efficient and effective use of available maintenance funding. It also requires the university president to ensure that appropriate resources are directed toward meeting the requirement of proper operations and maintenance of the campus physical plant.

The Capital Planning, Design and Construction (CPDC) department at the CO maintains a space and facilities database (SFDB), a centralized system that provides information about capacity and facilities at each of the 23 campuses. It also provides details regarding custodial space and farm acreage on the campuses and contains information on each facility, including the condition, construction type, gross square footage, and master plan status. CPDC requires each campus to annually update its facility file in the SFDB; this information provides the basis for the capital outlay program, including funding for any required deferred maintenance, for the immediate and subsequent years.

In 2016, CPDC launched a multiyear plan to improve the quality of facilities data in multiple areas of development and operations. The plan included a new energy information system, which streamlined and improved campus monthly utility reporting; refinements in the reporting categories for self-support facilities such as recreation centers, public/private partnerships, and faculty/staff housing; and detailed facility condition assessments (FCA) to update, in a consistent manner, the estimated backlog of renewal needs. CPDC initiated a master enabling agreement with a qualified firm to conduct the FCAs. As of October 2019, 22 campuses had completed the process, and one was finalizing the FCA collected data. Information from the FCA reports will make campus reporting of facility conditions more uniform and allow CPDC to more accurately determine annual funding priorities to reduce the capital renewal backlog.

In recent years, funding appropriation challenges in the CSU system have affected facilities maintenance. Each year, CPDC must not only determine how much funding is necessary to maintain the 89 million square feet of facilities systemwide, but also identify, prioritize, and find funds for the backlog of deferred maintenance projects, which, as of 2018, has an estimated cost of $3.7 billion dollars. The 2018 FCA for San Jose State University, estimates that the campus will need $419 million in facility renewal costs over the next ten years, and that costs for immediate and critical needs are $16.4 million.

The San José State University (SJSU) campus sits on 154 acres in the urban center of the city. The campus operates and maintains 66 buildings encompassing more than 6.5 million square

feet of general education, administrative, athletics, lab, utility, and support space. Almost 64 percent of the buildings were built before 1989, and most have major systems that are original. Nineteen of the buildings were built before 1960, including the University House (1904), Washington Square Hall (1933), Computer Center (1955), Administration (1957), Dudley Morehead Hall (1957), Science Building (1957) and Health Building (1959). Newer construction projects include the Student Union renovation (2017), Yoshihiro Uchida Hall (2014), and Student Health and Counseling Center (2015). Until the Board of Trustees approved construction of an Interdisciplinary Science Building in 2018, scheduled for completion in 2021, the campus had not constructed a new academic building in almost 30 years.

At SJSU, the organization chart indicates that the FD&O reports to the associate vice president (AVP) in the division of Administration and Finance. As the AVP position has been vacant for the past three years, oversight for the department has been split between two senior directors responsible for the planning, design, and construction and facility services functions. FD&O is responsible for maintenance, repair, utilities, and construction projects for all state-owned buildings campuswide. For self-support units and non-state buildings, such as parking services, the SWC, and the Dr. Martin Luther King, Jr. Library, FD&O provides service on a chargeback basis or enters into an MOU to document the scope of services provided, as appropriate. Staff at FD&O include skilled trades, grounds and custodial staff, and administrative support.

SCOPE

We visited the SJSU campus from September 23, 2019, through November 1, 2019. Our audit and evaluation included the audit tests we considered necessary in determining whether administrative and operational controls are in place and operative. The audit focused on procedures in effect from July 1, 2017, through November 1, 2019.

Specifically, we reviewed and tested:

- Facilities management administration and organization, to determine whether it includes clear lines of organizational authority and responsibility, and current and comprehensive policies and procedures.

- The comprehensive planned/programmed maintenance schedule, to ensure that it captures all categories of maintenance, including routine, preventive, and deferred.

- The process by which the campus identified facility conditions, including deferred maintenance and capital renewal needs, and annually reported the information to the CO.

- Campus implementation of an effective CMMS to ensure proper administration of maintenance tasks, including scheduling, cost management reporting, and productivity tools to account for resource utilization.

- Campus implemention of effective and efficient custodial and groundskeeping programs that include productivity and performance standards to ensure the work is performed in an effective and efficient manner.

- The campus process to ensure proper capture, tracking, and collection of costs for non-maintenance and auxiliary-related work orders.

- Campus procedures to control access to work order and electronic key access systems and procedures to adequately safeguard the inventory of physical keys to facilities.

As a result of changing conditions and the degree of compliance with procedures, the effectiveness of controls changes over time. Specific limitations that may hinder the effectiveness of an otherwise adequate system of controls include, but are not limited to, resource constraints, faulty judgments, unintentional errors, circumvention by collusion, and management overrides. Establishing controls that would prevent all these limitations would not be cost-effective; moreover, an audit may not always detect these limitations.

Our testing and methodology, which was designed to provide a review of key operational, administrative and financial controls, included interviews, walkthroughs, and detailed testing on certain aspects of the campus facilities operations. Our review was limited to gaining reasonable assurance that controls were in place to identify and address facility maintenance needs, but did not assess the quality of any repair or maintenance tasks.

CRITERIA

Our audit was based upon standards as set forth in federal and state regulations and guidance; CSU Board of Trustee policies; Office of the Chancellor policies, letters, and directives; campus procedures; and other sound administrative practices. This audit was conducted in conformance with the Institute of Internal Auditors' *International Standards for the Professional Practice of Internal Auditing*.

This review emphasized, but was not limited to, compliance with:

- EO 649, *Safeguarding State Property*
- EO 847, *Policy Statement on Facility Maintenance*
- EO 1000, *Delegation of Fiscal Authority and Responsibility*
- Government Code (GC) §13402 and §13403
- Integrated California State University Administrative Manual (ICSUAM) §3552.01, *Cost Allocation/Reimbursement Plans for the CSU Operating Fund*
- ICSUAM §8060.00, *Access Control*
- ICSUAM §9047.01, *Space Facilities Database*
- SJSU FD&O *Customer Service Key Request Procedure & Returned Key(s) Procedure*
- SJSU FD&O SOP 3.108 *Preventative Maintenance (PM) Work Orders*
- SJSU FD&O *Monthly Work Order Recharge*

AUDIT TEAM

Audit Manager: Ann Hough
Senior Auditor: Mayra Villalta
Internal Auditor: James Kim