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ABBREVIATIONS

CO  Office of the Chancellor
CPDC  Capital Planning, Design and Construction
CMMS  Computerized Maintenance Management System
CSU  California State University
EO  Executive Order
FRRM  Facilities Renewal Cost Model Project
ICSUAM  Integrated California State University Administrative Manual
OUA  Office of the University Auditor
SAM  State Administrative Manual
EXECUTIVE SUMMARY

As a result of a systemwide risk assessment conducted by the Office of the University Auditor (OUA) during the last quarter of 2011, the Board of Trustees at its January 2012 meeting directed that Facilities Management be reviewed. The OUA had previously reviewed Operations and Maintenance of Plant in 2000.

We visited the California Maritime Academy campus from April 30, 2012, through May 25, 2012, and audited the procedures in effect at that time.

Our study and evaluation revealed certain conditions that, in our opinion, could result in significant errors and irregularities if not corrected. Specifically, the campus did not maintain adequate internal control over the following areas: general environment, maintenance programs, and physical and logical security. These conditions, along with other weaknesses, are described in the executive summary and body of this report. In our opinion, except for the effect of the weaknesses described above, the operational and administrative controls for facilities management activities in effect as of May 25, 2012, taken as a whole, were sufficient to meet the objectives stated in the “Purpose” section of this report.

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.

The following summary provides management with an overview of conditions requiring attention. Areas of review not mentioned in this section were found to be satisfactory. Numbers in brackets [ ] refer to page numbers in the report.

GENERAL ENVIRONMENT [7]

The campus had not fully documented policies and procedures for the oversight of facilities management.

MAINTENANCE PROGRAM AND COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM [8]

The campus had not developed programs to adequately identify and address preventive maintenance, deferred maintenance, and capital renewal requirements. In addition, the campus had not reported updated deferred maintenance and capital renewal information to the chancellor’s office through the Facilities Renewal Cost Model Project database for the past two fiscal years.

UTILITIES MANAGEMENT [9]

The campus did not comply with key energy utilization initiatives. Specifically, the campus did not have a formal strategic energy resource plan, and monthly energy utilization reports were not submitted in a timely manner.
PHYSICAL AND LOGICAL SECURITY [10]

The campus did not adequately authorize and monitor individuals with key access to campus buildings. Also, the campus had not developed and documented formal policies and procedures for requesting, authorizing, granting, monitoring, or rescinding access to the computerized maintenance management system.
INTRODUCTION

BACKGROUND

The Legislative Analyst’s Report on the 1979/80 budget addressed the need to protect the substantial public investment represented by California State University (CSU) facilities, and the Legislature subsequently directed the CSU to implement a preventive maintenance program on each campus. In December 1979, a CSU Task Force on Plant Maintenance was appointed to explore preventive maintenance needs for the system. It concluded that the concept of preventive maintenance was too narrow in scope to accommodate the total maintenance needs of the CSU. Consequently, the concept of “planned/programmed maintenance,” which incorporated preventive maintenance and systematic planning and programming, was proposed. The CSU Executive Council reviewed the task force report and approved the concept in March 1981. Since then, the CSU has issued a sequence of directives and executive orders to reflect the system’s commitment to ensuring that facilities-related assets are adequately maintained.

In 1999, the Office of the University Auditor conducted an audit of Operations and Maintenance of Plant at ten campuses and issued a systemwide report. The report included exceptions related to planned/programmed maintenance, work order administration, cost recovery, and chargebacks and required facilities condition reporting to the Office of the Chancellor (CO). Several of the recommendations from the resulting systemwide report were incorporated into Executive Order (EO) 757, issued September 1, 2000, and later into EO 847, Policy Statement on Facility Maintenance, issued January 10, 2003. The latter is the most recent dictate on the subject.

In 2000, the CSU adopted the Facilities Renewal Cost Model Project (FRRM) with the long-term objective of securing adequate funding for deferred maintenance and renewal needs for CSU physical plants. FRRM implementation provided a standardized means for campuses to fulfill the requirement to prepare an annual five-year projection of deferred maintenance and capital renewal costs. It also provided the CO with information necessary for capital budgeting and planning.

Since the last audit and the adoption of FRRM, the CSU system has been confronted with funding appropriation challenges that have had a profound effect on facilities maintenance. The CSU support budget documentation for 2012/13 identifies a deferred maintenance need of $470 million. However, this amount represents the highest priority projects out of an estimated $1.6 billion in deferred maintenance and capital renewal backlog derived from the 2009/10 FRRM data. The model also concludes that absent investment of at least $99 million per year to maintain the current backlog level, the need will grow to $2.2 billion by 2016.

Meanwhile, appropriations for the CSU Capital Outlay budget have decreased significantly over the past several years, from $410 million for 2007/08 to less than $20 million in 2012/13. Between the fiscal years 2005/06 and 2008/09, the Trustees and the legislature provided for $140 million within the budget for capital renewal projects, but that funding has since ceased. The Five-Year Capital Improvement Plan for 2012/13 reflects campus facility needs approaching $6 billion. However, this number is artificially depressed by criteria, created to encourage campus prioritization, that limits the number of projects the campuses can request for funding. The CO’s Capital Planning, Design and Construction (CPDC) office, in consultation with the Trustees, has been working on solutions for funding infrastructure renewal, seismic strengthening, and other capital priorities.
The CSU codified its commitment to energy conservation and sustainability in February 1989 with the issuance of EO 538, *Policy Statement on Energy Conservation and Utilities Management for the California State University and Energy Consumption Reduction Goal for 1992/93 Compared to 1986/87*. This EO was superseded in August 2006 with EO 987, *Policy Statement on Energy Conservation, Sustainable Building Practices, and Physical Plant Management for the California State University*. This EO retained general operational provisions and sustainable building practices while adding the CSU Sustainable Measurement Checklist process. Since some of the deadlines for energy conservation goals outlined in the EO have expired, and other mandates within the EO have been deemed outdated, CPDC is considering options on how to update and issue new guidelines.
Our overall audit objective was to ascertain the effectiveness of existing policies and procedures related to facilities management and to determine the adequacy of controls over related processes to ensure compliance with relevant Trustee policy, Office of the Chancellor directives, and campus procedures.

Within the overall audit objective, specific goals included determining whether:

- Administration of facilities management is well defined and includes clear lines of organizational authority and responsibility and documented delegations of authority.

- Management has established policies and procedures for facilities maintenance and utilities management and has developed the means to monitor and measure compliance with applicable laws and CSU policies.

- Facilities management risks have been identified, assessed, and monitored.

- A comprehensive planned/programmed maintenance schedule that captures all preventive maintenance and repair requirements is in place.

- The campus has effectively identified facility deferred maintenance and capital renewal needs and is reporting the information to the CO annually.

- The campus has implemented an effective computerized maintenance management system (CMMS) to ensure proper administration of maintenance tasks, including scheduling, costs management reporting, and productivity tools to account for resource utilization.

- The campus is preparing and submitting biennial facilities assessments and equipment audits to the CO in an accurate and timely manner.

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

- The campus has implemented an effective utility tracking system to capture and report information pertinent to CSU goals for sustainability and energy conservation.

- Keys and other physical access devices are issued to authorized individuals, and access devices are properly secured and monitored.

- Systems and applications under facilities management administration are adequately controlled and secured, and access rights are granted on a need-to-know basis.
The proposed scope of the audit as presented in Attachment A, Audit Agenda Item 2 of the January 24 and 25, 2012, meeting of the Committee on Audit stated that Facilities Management includes custodial services; groundskeeping; facility repairs, preventive maintenance, and renovations; and utility distribution. Proposed audit scope would include, but was not limited to, review of cost allocations; deferred maintenance; building and grounds conditions; sustainable building practices; materials and equipment inventory; and work order scheduling and control systems.

Our study and evaluation were conducted in accordance with the International Standards for the Professional Practice of Internal Auditing issued by the Institute of Internal Auditors and included the audit tests we considered necessary in determining whether operational and administrative controls are in place and operative. This review emphasized, but was not limited to, compliance with Board of Trustee policies and Office of the Chancellor and campus policies, letters, and directives. The audit focused on procedures in effect from January 1, 2010, through May 25, 2012.

We focused primarily on the internal administrative and operations controls over facilities management activities. Specifically, we reviewed and tested:

- The campus framework for facilities management, including the required implementation of a CMMS and a utility tracking system.
- Methods by which the campus identifies, prioritizes, and monitors routine, preventive, and special maintenance projects.
- The capabilities and management utilization of a CMMS to capture and monitor task progress and to track resource allocations and costs.
- Methods by which the campus identifies and quantifies deferred maintenance backlog, and the escalation of the information to the proper management level, including the CO.
- Methods for capturing and recovering costs of services provided to non-state and auxiliary organizations.
- The campus strategic energy resource plan and its correlation to systemwide goals for energy conservation and sustainability.
- Compliance with specific energy conservation policies.
- Devices and technology used to control physical access to campus facilities.
OBSERVATIONS, RECOMMENDATIONS, AND CAMPUS RESPONSES

GENERAL ENVIRONMENT

The campus had not fully documented policies and procedures for the oversight of facilities management.

We found that the campus had not documented policies and procedures for providing effective materials management; establishing and documenting time budgets and time spent completing work orders; following up on aged work orders; ensuring that chargeback credits are received; or tracking manufacturer’s warranty information.

Executive Order (EO) 847, Policy Statement on Facility Maintenance, dated January 10, 2003, states that the campus shall provide policies and procedures for effective materials management with resultant written records demonstrating internal controls over the purchase, storage, and use of facilities maintenance department materials.

Government Code §13403 states that internal accounting and administrative controls are the methods through which state entity heads can give reasonable assurance that measures to safeguard assets, check the accuracy and reliability of accounting data, promote operational efficiency, and encourage adherence to prescribe managerial policies are being followed.

State Administrative Manual (SAM) §20050 states that one symptom of a deficient internal control system is policy and procedural or operational manuals that are either not currently maintained or are non-existent.

SAM §3515 states that agencies will register and maintain proper records of warranties to ensure that defects covered by the warranty are covered by the manufacturer.

The director of facilities management stated that the department had relied on informal procedures in the past for maintenance materials management. He also stated that existing facilities management practices had not been documented due to limited resources and a focus on higher priority tasks.

Failure to document and maintain campus policies for the oversight of facilities management increases the risk of administrative or accounting errors that could impact management effectiveness.

Recommendation 1

We recommend that the campus fully document policies and procedures for the oversight of facilities management.

Campus Response

We concur. The campus will create and document policies and procedures for the oversight of facilities management by February 1, 2013. This finding shall be resolved once the campus and the
university auditor’s office agree that adequate policies and procedures for the oversight of facilities management are in place.

MAINTENANCE PROGRAM AND COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM

PREVENTIVE AND DEFERRED MAINTENANCE PROGRAMS

The campus had not developed programs to adequately identify and address preventive maintenance, deferred maintenance, and capital renewal requirements.

EO 847, Policy Statement on Facility Maintenance, dated January 10, 2003, states that the campus is to develop a program that provides for the systematic maintenance of state-supported campus facilities, including routine, preventative, and deferred maintenance, as well as a capital renewal based on the predictable life cycles of facility subsystems and equipment. It further states that these programs shall be managed in a manner that will facilitate the timely completion of all identified tasks.

The director of facilities management stated that progress on the preventive maintenance, deferred maintenance, and capital renewal programs had been delayed due to a lack of resources.

Failure to develop preventive maintenance, deferred maintenance, and capital renewal programs increases the risk of financial impairment to state-owned facilities assets and potential interruption of academic programs.

Recommendation 2

We recommend that the campus develop programs to adequately identify and address preventive maintenance, deferred maintenance, and capital renewal requirements at the campus.

Campus Response

We concur. The campus will develop programs that adequately identify and address preventive maintenance, deferred maintenance, and capital renewal requirements at the campus by February 1, 2013.

FACILITIES CONDITION REPORTING

The campus had not reported updated deferred maintenance and capital renewal information to the chancellor’s office (CO) through the Facilities Renewal Cost Model Project (FRRM) database for the past two fiscal years.

EO 847, Policy Statement on Facility Maintenance, dated January 10, 2003, states that campuses must prepare and submit to the CO Capital Planning, Design and Construction (CPDC) an annual five-year projection of deferred maintenance and capital renewal costs of facilities and infrastructure
based upon the life cycle of major building and utility subsystems, including fixed maintained equipment.

The director of facilities management stated that the campus had not updated FRRM due to a transition in the director position.

Failure to comply with deadlines for submission of required facilities condition information increases the risk that systemwide planning and analysis of deferred maintenance and capital renewal requirements will be hampered or flawed due to lack of relevant data.

**Recommendation 3**

We recommend that the campus report updated deferred maintenance and capital renewal information to the CO through the FRRM database in a timely manner.

**Campus Response**

We concur. The campus will establish a business process for timely reporting of deferred maintenance and capital renewal information to the CO through the FRRM database. The business process shall be in place by November 1, 2012.

**UTILITIES MANAGEMENT**

The campus did not comply with key energy utilization initiatives.

We noted that:

- The campus did not have a formal strategic energy resource plan.
- Monthly energy utilization reports were not submitted in a timely manner. Energy reports for the months of January 2011 through May 2011 were not submitted to the CO CPDC until November 2011, and the October 2011 report was not submitted until March 2012.

EO 987, *Policy Statement on Energy Conservation, Sustainable Building Practices, and Physical Plant Management for the California State University*, dated August 2, 2006, states that each campus will develop and maintain a campuswide integrated strategic energy resource plan, which will include tactical recommendations in the areas of new construction, deferred maintenance, facility renewal, energy projects, water conservation, solid waste management, and a structured energy management plan. It further states that campuses shall provide the CO with the necessary energy and utility data for the systemwide database in a timely manner.

The director of facilities management stated that the campus lacked a formal campus strategic energy resource plan because of resource constraints and because reliance on California State University (CSU) and state energy policies was deemed sufficient given the small size of the campus. He also
stated that past energy reports were aggregated and submitted to the CO in mass to save time and effort.

Lack of a formal campus strategic energy resource plan increases the likelihood that CSU goals to reduce energy consumption will not be met, and failure to comply with deadlines for submission of monthly energy reports increases the risk that systemwide planning and initiatives for energy conservation will be hampered or flawed due to lack of relevant data.

Recommendation 4

We recommend that the campus:

a. Develop and document a formal campus strategic energy resource plan.
b. Submit monthly energy utilization reports to the CO in a timely manner.

Campus Response

We concur. The campus shall have a formal campus strategic energy resource plan, as well as a business process that ensures the campus submits timely monthly energy utilization reports to the CO. Both of these items shall be in place by February 1, 2013.

PHYSICAL AND LOGICAL SECURITY

KEYS ISSUANCE

The campus did not adequately authorize and monitor individuals with key access to campus buildings.

We found that:

- Two of eleven keys issued did not have appropriate authorization and/or keyholder agreement forms on file.
- Policies and procedures had not been developed to address the periodic review and monitoring of individuals with key access to campus buildings.

SAM §20003 states that the elements of a satisfactory system of internal administrative control include, but are not limited to, a plan that limits access to assets to authorized personnel who require these assets in the performance of their assigned duties.

Integrated California State University Administrative Manual (ICSUAM) §8080, Physical Security, dated April 19, 2010, states that each campus must identify physical areas that must be protected from unauthorized physical access while ensuring that authorized users have appropriate access.
The director of facilities management stated that the locksmith position is a shared duty within a stationary engineer position, and because of resource constraints, other procedures took priority over those addressing key issuance.

Failure to authorize and monitor individuals with key access to buildings increases the risk that accountability for keys will be lost and keys will be misused.

**Recommendation 5**

We recommend that the campus:

a. Ensure that appropriate authorization and/or keyholder agreement forms are maintained on file for all keys issued.

b. Develop policies and procedures to address the periodic review and monitoring of individuals with key access to campus buildings.

**Campus Response**

We concur. The campus will ensure that appropriate authorization and/or keyholder agreement forms are maintained on file for all keys issued. The campus will also develop policies and procedures, which include periodic review and monitoring of individuals with key access to campus buildings, by February 1, 2013.

**WORK ORDER SYSTEM ACCESS REVIEWS**

The campus had not developed and documented formal policies and procedures for requesting, authorizing, granting, monitoring, or rescinding access to the computerized maintenance management system (CMMS).

ICSUAM §8060, *Information Security Policy*, dated April 19, 2010, states that appropriate campus managers and data owners must review, at least annually, user access rights to information assets containing protected data, and the results of the review must be documented. It further states that campus information assets must be limited to only those having a need for specific access in order to accomplish an authorized task.

The director of facilities management stated that due to the limited number of employees with access to the CMMS system, formal procedures for access control had not been established, and the existing informal controls had not presented any issues to date.

Failure to adequately control user access to systems increases campus exposure to loss from inappropriate acts.
Recommendation 6

We recommend that the campus develop and document formal policies and procedures for requesting, authorizing, granting, monitoring, and rescinding access to the CMMS.

Campus Response

We concur. The campus will develop and document formal policies and procedures to ensure proper control and oversight of system access of the CMMS by February 1, 2013.
# APPENDIX A:
## PERSONNEL CONTACTED

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
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<tbody>
<tr>
<td>Thomas A. Cropper</td>
<td>President</td>
</tr>
<tr>
<td>William B. Eisenhardt</td>
<td>President (At time of review)</td>
</tr>
<tr>
<td>William Brown</td>
<td>Director, Facilities Management</td>
</tr>
<tr>
<td>Kristen Cunningham</td>
<td>Facilities Administration Coordinator, Facilities Management</td>
</tr>
<tr>
<td>Vineeta Dhillon</td>
<td>Director, Purchasing and Risk Management</td>
</tr>
<tr>
<td>Susan Foft</td>
<td>Accounting Manager, Fiscal Services</td>
</tr>
<tr>
<td>Kurtis Lohide</td>
<td>Vice President, Administration and Finance</td>
</tr>
<tr>
<td>Steve Mastro</td>
<td>Associate Vice President, Finance Services, Fiscal Services</td>
</tr>
<tr>
<td>Ken Toet</td>
<td>Controller, Fiscal Services</td>
</tr>
</tbody>
</table>
October 3, 2012

Mr. Larry Mandel
University Auditor
The California State University

Subject: Campus Responses To Recommendations: Audit Report 12-40, Facilities Management at California Maritime Academy

Mr. Mandel:

Enclosed is our response to the recommendations in Audit Report Number 12-40, Facilities Management at the California Maritime Academy. Upon acceptance of our response, we will follow up with your office in providing supporting documentation for each recommendation by the anticipated completion dates.

Please let us know if you have any questions or need additional information.

Sincerely,

Kurtis D. Lohide
Vice President for Administration and Finance

Enclosure

cc: Thomas C. Cropper, President
    Stephen Mastro, Associate Vice President for Fiscal Affairs
    Ken Toet, Controller
    Robert Brown, Director of Facilities

THE CALIFORNIA MARITIME ACADEMY
200 Maritime Academy Drive, Vallejo, CA 94590-8881  PHONE (707) 654-1038  FAX (707) 654-1013  www.csum.edu  E-MAIL mnickerson@csum.edu
FACILITIES MANAGEMENT

CALIFORNIA MARITIME ACADEMY

Audit Report 12-40

GENERAL ENVIRONMENT

Recommendation 1

We recommend that the campus fully document policies and procedures for the oversight of facilities management.

Campus Response

We concur. The campus will create and document policies and procedures for the oversight of facilities management by February 1, 2013. This finding shall be resolved once the campus and the university auditor’s office agree that adequate policies and procedures for the oversight of facilities management are in place.

MAINTENANCE PROGRAM AND COMPUTERIZED MAINTENANCE MANAGEMENT SYSTEM

PREVENTIVE AND DEFERRED MAINTENANCE PROGRAMS

Recommendation 2

We recommend that the campus develop programs to adequately identify and address preventive maintenance, deferred maintenance, and capital renewal requirements at the campus.

Campus Response

We concur. The campus will develop programs that adequately identify and address preventive maintenance, deferred maintenance, and capital renewal requirements at the campus by February 1, 2013.

FACILITIES CONDITION REPORTING

Recommendation 3

We recommend that the campus report updated deferred maintenance and capital renewal information to the CO through the FRRM database in a timely manner.
Campus Response

We concur. The campus will establish a business process for timely reporting of deferred maintenance and capital renewal information to the CO through the FRRM database. The business process shall be in place by November 1, 2012.

UTILITIES MANAGEMENT

Recommendation 4

We recommend that the campus:

a. Develop and document a formal campus strategic energy resource plan.

b. Submit monthly energy utilization reports to the CO in a timely manner.

Campus Response

We concur. The campus shall have a formal campus strategic energy resource plan as well as a business process that ensures the campus submits timely monthly energy utilization reports to the CO. Both of these items shall be in place by February 1, 2013.

PHYSICAL AND LOGICAL SECURITY

KEYS ISSUANCE

Recommendation 5

We recommend that the campus:

a. Ensure that appropriate authorization and/or keyholder agreement forms are maintained on file for all keys issued.

b. Develop policies and procedures to address the periodic review and monitoring of individuals with key access to campus buildings.

Campus Response

We concur. The campus will ensure that appropriate authorization and/or keyholder agreement forms are maintained on file for all keys issued. The campus will also develop policies and procedures, which include periodic review and monitoring of individuals with key access to campus buildings by February 1, 2013.
WORK ORDER SYSTEM ACCESS REVIEWS

Recommendation 6

We recommend that the campus develop and document formal policies and procedures for requesting, authorizing, granting, monitoring, and rescinding access to the CMMS.

Campus Response

We concur. The campus will develop and document formal policies and procedures to ensure proper control and oversight of system access of our CMMS by February 1, 2013.
October 26, 2012

MEMORANDUM

TO: Mr. Larry Mandel
   University Auditor

FROM: Charles B. Reed
      Chancellor

SUBJECT: Draft Final Report 12-40 on Facilities Management,
         California Maritime Academy

In response to your memorandum of October 26, 2012, I accept the response as
submitted with the draft final report on Facilities Management, California
Maritime Academy.

CBR/amd