**UC** **RIVERSIDE: AUDIT & ADVISORY SERVICES**

Date: August 30, 2019

To: Susan Marshburn, Executive Director

Facilities Services

Subject: Audit of the UCR Deferred Maintenance Process

Ref: R2019-01

We have completed our audit of the UCR Deferred Maintenance (DM) Process in accordance with the UC Riverside Audit Plan. Our report is attached for your review.

We will perform audit follow-up procedures in the future to review the status of management action. This follow-up may take the form of a discussion or perhaps a limited review. Audit R2019-01 will remain open until we have evaluated the actions taken.

We appreciate the cooperation and assistance provided by you and your staff. Should you have any questions concerning the report, please do not hesitate to contact me.

Gregory Moore

Director

cc: Ethics & Compliance Risk and Audit Controls (ECRAC) Committee

Mark Anthony Chancellor, Chief Financial and Administrative Officer

UNIVERSITY OF CALIFORNIA AT RIVERSIDE

AUDIT & ADVISORY SERVICES

INTERNAL AUDIT REPORT R2019-01

AUDIT OF THE UCR DEFERRED MAINTENANCE PROCESS

August 2019

Approved by:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Niloufar Alian

Principal Auditor

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Rodolfo Jeturian

Assistant Director

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Gregory Moore

Director

**UC RIVERSIDE**

**UCR DEFERRED MAINTENANCE PROCESS**

**INTERNAL AUDIT REPORT R2019-01**

**August 2019**

1. **MANAGEMENT SUMMARY**

Based upon the results of worked performed within the scope of audit, it is our opinion that the system of internal controls over the UCR Deferred Maintenance (DM) process could be strengthened. Currently, the UCR Facilities Services is developing the DM process to enhance internal controls and ensure its compliance with applicable University of California Office of President (UCOP) Policy and Procedures.

Positive observations noted during the audit are as follows:

* A list of DM projects as well as internal DM procedures were developed by Facilities Services Management.
* A reconciliation process is in place between UCRFS Totals and the Capital Program Management System (CPMX).

Specifically, we observed areas noted below that need enhancement to strengthen internal controls and /or effect compliance with UC Policy and Procedures:

* The DM Project Listing does not fully meet policy requirements (Observation III.A).
* The DM Projects have not been categorized based on the Prioritization Criteria (Observation III.B).
* Revenues and expenditures were not tracked properly (Observation III.C).

These items are discussed below. Minor items that were not of magnitude to warrant inclusion in the report were discussed verbally with management.

1. **INTRODUCTION**
   1. **PURPOSE**

UC Riverside Audit & Advisory Services (A&AS), as part of its Audit Plan, performed a limited review of the DM process to evaluate its system of internal controls and compliance with applicable University policies and procedures. Included in the review were the consideration and evaluation of significant processes and practices, specifically addressing the following components:

1. Management philosophy, operating style, and risk assessment practices;
2. Organizational structure, and delegations of authority and responsibility;
3. Positions of accountability for financial and programmatic results;
4. Process strengths (best practices), weaknesses, and mitigating or compensating controls; and
5. Information and communications systems, applications, databases, and electronic interfaces.
   1. **BACKGROUND**

DM occurs when the facility owner leaves unperformed planned maintenance, repairs, replacement, and renewal projects due to lack of resources or perceived low priority and deferral of the activity results in a progressive deterioration of the facility condition or performance. The cost of deterioration including capital costs, operating costs and productive losses is expected to increase if the activity continues to be deferred. DM Backlog is the total dollar amount of deferred maintenance deficiency identified by a comprehensive facilities condition assessment of facilities and their integral systems and equipment.

Furthermore, the DM process applies to the renovation or replacement of building and infrastructure components or systems that are involved by aged or deficient condition. DM does not apply to the renovation, renewal or replacement of building and infrastructure components or systems that are prioritized by growth in new space, change in space use or the need for greater infrastructure capacity.

The University is responsible for inspecting, tracking and estimating the cost of approximately 115 DM projects totaling $537,954,534 (as of September 4, 2018).

* 1. **SCOPE**

We reviewed supporting documentation for transactions that occurred during Fiscal Years (FYs) 2017-2018 and 2018-2019.

The review included evaluating the adequacy and effectiveness of internal controls over the DM process. The review was principally limited to the following areas:

1. **Preliminary Assessment**

Our preliminary assessment included an overview of the following areas:

* General Overview and Risk Assessment
* General Controls Environment
* Business Processes
* Information and Communication Systems.

1. **Procedures**
2. We reviewed the following guidelines and policies:

* UCOP Operation and Maintenance Program (Volume 6, Chapter 1)
* UCOP Deferred Maintenance Program (Volume 6, Chapter 2)
* Internal DM procedures.

1. We used data analytics to determine if:

* Expenditures were tracked for DM projects
* Fund Sources were identified.

1. We reviewed the DM process implementation to determine if:

* A master list of DM projects and scope of work were compiled by gathering information from customers, organizational facilities managers and Senior leadership and management
* Each project was categorized based on urgency, safety/regulatory, energy efficiency and return on investment
* A cost estimate (Life Cycle Analysis) for projects was developed
* Capital Planning collected data from key stakeholders, Vice Chancellors and Deans
* DM projects were reviewed timely to make recommendations on the projects to the Vice Chancellor of Planning and Budget
* DM projects were reviewed and approved appropriately and timely
* The Capital Project Committee was informed of the status of DM projects timely.

1. We selected a judgmental sample of projects from the Capital Program Management Systems (CPMS and CPMX) and performed the following:

* Reviewed a judgmentally selected sample of five projects to determine if the project estimated budgets and time lines on these projects were established properly
* Obtained and compared FY 2018 DM expenditures in UCRFS Totals with CPMX
* Reviewed established source funds for DM Projects to determine if the funds received were tracked properly in UCRFS.
  1. **INTERNAL CONTROLS AND COMPLIANCE**

As part of the review, internal controls were examined within the scope of the audit.

Internal control is a process designed to provide reasonable, but not absolute, assurance regarding the achievement of objectives in the following categories:

* Effectiveness and efficiency of operations
* Reliability of financial reporting
* Compliance with applicable laws and regulations.

Substantive audit procedures were performed from October 2018 to February 2019. Accordingly, this evaluation of internal controls is based on our knowledge as of that time and should be read with that understanding.

1. **OBSERVATIONS, COMMENTS, AND CORRECTIVE ACTION PLANS**
   1. **The DM Project Listing does not fully meet policy requirements.**

We obtained and reviewed a copy of the DM Project Listing from Facilities Services and observed that the DM Project Listing does not meet policy requirements such as budget estimates and prioritizations in accordance with UCOP Facilities and Inspection Program, Section 2.1 provisions. The DM Project listing did not show how long these projects have been pending for maintenance/repairs.

According to the Deferred Maintenance Program UCOP, section 2.1, “the purpose of the Facility Audit and Inspection Program is to identify, quantify (provide budget estimates) and prioritize DM projects and capital renewal and replacement projects according to the urgency of need and significant to the University’s mission.”

**Management Corrective Action Plan**

We have added columns to the Facilities Services Deferred Maintenance List that now include:

* Date Project Submitted
* Priority (1, 2, 3,) based on the descriptions noted in the UC Facilities Manual
* Energy Project Opportunity
* Seismic Program Rating
* ICAMP Review

Each of the columns helps evaluate the project and compares it with other programs (i.e. seismic and energy savings) that may influence the priority of the project. This list will be used for UCR internal review only as the UC Office of the President provides a separate spreadsheet for reporting DM Projects.

Facilities Services develops the master deferred maintenance list using several sources, which include work order data, ICAMP reviews, input from deans and vice chancellors, campus department facilities managers and Facilities Services leadership. Facilities Services will increase the visibility of the deferred maintenance master list and process using the Facilities Services website. Campus community members will be able to submit deferred maintenance items for review.

**Expected Implementation Date**

January 15, 2020.

* 1. **The DM Projects have not been categorized based on the Prioritization Criteria.**

Facilities Services has not categorized each project based on urgency, safety/ regulatory, energy and efficiency. In addition, there was no evidence to show that DM projects were prioritized and the scope of work was compiled by gathering information from customers such as the organization’s facilities managers and senior leadership as noted under the DM Process procedures. Furthermore, there was no approval process in place. Based on our discussion with Facilities Services Management, Facilities Services is in the process of developing and enhancing the DM Process.

According to UCOP Prioritization, Section 2.1.2, the following are the prioritization criteria:

“Priority 1: Currently Critical – These are needs and/or projects which significantly impact the mission of the University and require immediate action to return a facility to normal operation, stop accelerated deterioration or correct a cited safety hazard, especially those conditions which potentially impact an entire Campus or pose a significant risk to health and safety.

Priority 2: Potentially Critical – These needs and/or projects will become critical in a year if not corrected expeditiously. Situations in this category include intermittent interruptions, rapid deterioration, and potential safety hazards. The significant of these conditions to mission of the University should be a factor.

Priority 3: Necessary, Not Yet Critical – These needs and /or projects include conditions requiring reasonably prompt attention to preclude deterioration or potential downtime and the associated damage or higher costs if deferred further. Conditions which do not significantly impact the mission of the University should be placed in this category.

Although determining a need and/or project priority can be a subjective process, the impact upon the University’s mission and the potential for failure should be determinative in prioritization DM and capital renewal needs.”

**Management Corrective Action Plan**

The prioritization for all projects is under review by Facilities Services Maintenance Services unit based on the descriptions in the UC Facilities Manual and will be noted on the new DM List format.

**Timeline:**

UCOP requires an updated DM list to be submitted annually in September. Facilities Services is currently gathering data for additional projects, prioritizing the projects based on the criteria noted and will submit this to the Vice Chancellor for Planning, Budget and Administration no later than September 30, 2019 for his approval.

**Expected Implementation Date**

October 15, 2019

* 1. **Revenues and expenditures were not tracked properly.**

We reviewed five projects selected from the CPMS and the CPMX systems with a total original budget amount of approximately $6.4 million and noted the following:

* + - 1. Four of five DM projects have been waiting for maintenance longer than 12 months. The four projects had original start dates ranging from March 2014 to October 2016.
      2. One project was entered into CPMX incorrectly as a DM project.
      3. Two of the five projects are listed as active in the system and the other three projects do not have a status listed.
      4. Three of the five projects were not included on the project listing provided by Facilities Services.

A&AS reviewed actual expenditures in UCRFS Totals and compared them with actual expenditures posted in the CPMX system and noted the following:

1. There was a variance between the expenditures entered into the CPMX system and UCRFS Totals ranging from $88 to over $400,000 for four of the five projects reviewed and three of those projects had a variance of over $400,000.

2. We were unable to identify specific expenditures related to one of the projects in UCRFS Totals due to incorrect project description. The project had over $3.7 million of expenditures posted in the CPMX system.

Although Facilities Services has been reconciling DM project expenditures between CPMX and UCRFS Totals, the process could be enhanced.

We also observed that the funds received for all five projects were commingled with General Funds but tracked by Cost Centers. However, commingling funds with General Funds is not the most efficient and effective way. The UCOP DM Program guidelines state that “as a general rule, include all phases of a project’s scope (design, administration and construction) for funding in a given year. Under exceptional circumstances, projects with lengthy work or unusual construction scheduling may have design work budgeted one year and construction, the next. Funding for one project segment does not commit funding of any other project segment in either the same or subsequent years. Deferred maintenance projects can be initiated and funded with planned or preventive maintenance funds, particularly if emergency action is required.”

**Management Corrective Action Plan**

Starting in FY 20 as projects are implemented the monies for state funded buildings (19900) will be transferred to plant accounts for management and capitalization as needed (this includes tracking in CPMX/CPMS). In addition, we are implementing local written procedures/instructions regarding revenue and expenditure tracking process.

**Expected Implementation Date**

February 15, 2020