
Internal Audit Report

CHES Annual Maintenance Program Staffing & Effectiveness

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I. EXECUTIVE SUMMARY

Audit and Management Advisory Services (AMAS) has completed a limited scope review of the CHES Facilities Annual Maintenance Program Staffing and Effectiveness. This audit is included on the campus FY 2022 internal audit plan.

Defects and deficiencies can occur with facilities constructed or modified on campus. Timely reporting of defects maximizes the campus's chances of recovery when contractors or architects refuse to accept responsibility for defects. Our scope focused on CHES Facilities practices and training for observing and reporting on maintenance abnormalities for investigation in CHES facilities.

As stated above, once new facilities are completed and occupied, there is a need to timely report any maintenance abnormalities to appropriate personnel for further investigation, especially prior to the end of a warranty period. Such issues are generally detected through regular responses to maintenance requests, which results in reliance on the facilities staff expertise in this area.

Based on the results of work performed within the scope of the audit, we found CHES Facilities has an overall process for observing and reporting abnormal maintenance issues in facilities constructed or modified by the campus. However, there is an opportunity to improve expertise in this process so that potential construction defects can be addressed promptly.

The following observation requiring management corrective action is identified below:

A. CHES Facilities Training Program

In all interviews, we found there is an overall process for observing and reporting abnormal maintenance issues in facilities constructed or modified by the campus. However, there may be opportunities to continually improve this process through the establishment of formalized training given regularly.

Agreement was reached with management on the recommended action to address the risk identified in this area. The observations and the related recommendation are described in greater detail in section III.

II. INTRODUCTION

Purpose

The purpose of the limited scope review is to assess the CHES Facilities' practices and training for observing and reporting abnormal maintenance issues to PPDO to investigate for defects and deficiencies in facilities constructed or modified by the University. This audit was included on the campus FY 2022 internal audit plan.

Background

Once construction is completed, there is generally an inspection performed by personnel within the Physical Planning, Development & Operations (PPDO). After these facilities are occupied, the most common way to possibly observe construction defects is through Colleges, Housing and Educational Services (CHES) Facilities response to maintenance requests in the CruzFix system for PPDO to investigate the abnormal maintenance issues.

UC Facilities Manual: Reports of Defects and Deficiencies

The UC Facilities Manual states that: "Defects and deficiencies can occur with facilities constructed or modified by the University. Timely reporting of defects maximizes the University's chances of recovery when contractors or architects refuse to accept responsibility for defects." See Appendix B (UC Facilities Manual, Volume 6, Chapter 4.5 Reports of Defects and Deficiencies) for the full section that is relevant to this audit.

Colleges, Housing and Educational Services (CHES)

CHES is a multi-funded organization of the Division of Finance, Operations and Administration at UC Santa Cruz. CHES provides leadership in the areas of college student life and residential services, housing services and facilities, employee housing, capital planning, business and financial analysis, dining services, conference services, early education services, the Bay Tree Bookstore, and ID card services. Through these units, educational and developmental programs and services are offered to all members of the campus community including students, faculty, staff, children, and external constituents.

Physical Planning, Development & Operations (PPDO)

PPDO supports the UC Santa Cruz academic vision by managing and overseeing all physical planning, design, and construction. As a department, it falls within the Division of Finance, Operations and Administration (FOA). The department comprises the Physical and Environmental Planning Services, Design and Construction Services, Engineering Services, Construction Project Business Services, Physical Plant Services, and Real Estate Services units. As part of their Physical and Environmental Planning Services, Code Enforcement and Inspection Services are also provided. PPDO also collaborates with other campus departments, such as CHES, to facilitate and realize their programmatic, or operational needs when building or altering facilities.

CruzFix

CruzFix launched May 2nd, 2022, and is UCSC's new integrated facilities management system which has financial and space interfaces to existing campus systems. CruzFix allows students, faculty and staff to

submit service requests via an intuitive and streamlined app on their mobile device (or desktop). CruzFix will be replacing the current FAMIS Classic and Fixit systems. The new system integrates both Housing and Physical Plant service requests into one system.

Scope

Our scope is focused on CHES Facilities practices and training for observing and reporting maintenance abnormalities of construction or renovation in CHES facilities. We did not perform a preliminary risk assessment due to the nature of this limited scope review. Also based on our initial interviews with management, we chose to perform a series of interviews in lieu of substantive testing due to the following:

- There is a process in place for reporting maintenance abnormalities that relies on experience and direct communication, neither of which would be fully documented in the current systems used.
- The launch of CruzFix the same week of the engagement notice could mean review of procedural data in the system may be obsolete, as the affected departments are adjusting to this new system and current processes may naturally change.

Substantive audit procedures were performed from May - June 2022. We conducted this review by means of the following:

- Reviewed UC and UC Santa Cruz policies, best practices, and other guidance relevant to the audit.
- Interviewed personnel from CHES and PPDO to gain an understanding of overall processes and procedures for the identification and reporting of maintenance abnormalities.
- Requested supporting documentation for the processes described in interviews.

For additional details, please see Appendix A. Summary of Work Performed and Results.

III. OBSERVATIONS REQUIRING MANAGEMENT CORRECTIVE ACTION

A.	CHES Facilities Training Program	
<p>In all interviews, we found there is an overall process for reporting on abnormal maintenance issues that may occur with facilities constructed or modified by the campus. However, there may be opportunities to continually improve this process through the establishment of formalized training given regularly.</p>		
Risk Statement/Effect		
<p>When abnormal maintenance issues are unidentified and not reported timely there is the risk of repairs not covered by warranties and increased damage by unaddressed defects, and disruption to residents.</p>		
Agreement		
A.1	<p>CHES should develop a regular training/refresher program that helps ensure Facilities staff are able to quickly report potential abnormal maintenance issues.</p>	Implementation Date
		February 1, 2023
		Responsible Manager
		Director of Facilities, CHES

A. CHES Facilities Training Program – Detailed Discussion

Based on the results of work performed within the scope of the audit, we found CHES Facilities has an overall process for reporting on potential abnormal maintenance issues that may occur with facilities constructed or modified by the University still under warranty. After interviews with key personnel, we found the overall process as follows:

- A work ticket is submitted through CruzFix, and this is prioritized and assigned accordingly. This includes the inspection of residential halls upon move-out, which is performed by students and Resident Assistant as part of the check-out procedure.
- When the facilities staff is onsite to respond to the issue, they report to PPDO the observed abnormal maintenance issue.
- The appropriate supervisors are informed of this. In turn, the supervisors inform PPDO, the project manager, and other appropriate staff. There is good communication among all involved personnel in this area.
- Much of the new-hire training relies on close on-site interaction with the supervisor, which also helps inform them about recent facilities construction/ renovation.

Although this process is good, there is an opportunity to improve or preserve expertise of Facilities staff in observing abnormal maintenance issues and quickly reporting them. Since there is no current formalized training provided in this area, establishing formalized training and other guidance could help strengthen current knowledge in this area.

APPENDIX A. SUMMARY OF WORK PERFORMED AND RESULTS

Preliminary Analysis	
Work Performed	Results
Reviewed UC and UC Santa Cruz policies, best practices, and other relevant guidance.	We reviewed UC Facilities Manual, Volume 6, Chapter 4.5 Reports of Defects and Deficiencies
Interviewed and communicated with personnel from CHES and PPDO.	Developed an audit program based on feedback from management and staff.

Fieldwork	
Work Performed	Results
Interviewed and communicated with personnel from CHES and PPDO.	Documented current processes for observing and reporting abnormal maintenance issues.
Performed interviews with all CHES Facility Asset Coordinators to ensure there is a process in place.	<p>We found the overall process as follows:</p> <ul style="list-style-type: none"> • A work ticket is submitted through CruzFix, and this is prioritized and assigned accordingly. This includes the inspection of residential halls upon move-out, which is performed by students and Resident Assistant as part of the check-out procedure. • When the facilities staff is onsite to respond to the issue, they may observe abnormal maintenance issues. • The appropriate supervisors are informed of this. In turn, the supervisors inform PPDO, the project manager, and other appropriate staff. There is good communication among all involved personnel in this area. • Much of the new-hire training relies on close on-site interaction with the supervisor, which also helps inform them about recent facilities construction/ renovation.

APPENDIX B. UC FACILITIES MANUAL, REPORTS OF DEFECTS AND DEFICIENCIES

UC Facilities Manual, Volume 6, Chapter 4.5 Reports of Defects and Deficiencies

The information in this article applies to defects and deficiencies associated with all facilities owned by or under the control of the University which the University has constructed or modified.

The purpose of this section is to encourage timely reporting of defects or deficiencies and to provide guidance in determining responsibility for design and construction defects or deficiencies.

In order to maximize the University's chances of recovery when contractors or architects refuse to accept responsibility for defects, General Counsel should be contacted early, before action is taken to correct the defect. If the defects are not reported, or reports are delayed, then the chances for recovery are lessened.

Two factors account for the majority of delays or failures to report defects or deficiencies to Counsel:

- 1) Problems are observed but are not recognized as being serious and therefore are not reported. In some cases, remedial work is undertaken which alters conditions and compromises legal recovery efforts.*
- 2) Defects are observed and are recognized as being serious but are not reported because of the erroneous assumption that the University has no further rights since the guarantee period or statute of limitations period has expired.*

4.5.1 GUIDELINES FOR REPORTING DEFECTS AND DEFICIENCIES

***Initial Evaluation.** Discuss defects and deficiencies among staff, and as soon as possible, contact General Counsel for advice. The following steps should then be taken:*

- Using technically competent Facility personnel or outside experts, evaluate the seriousness of the defect.*
- Have University of California General Counsel (OGC) prepare suitable demand letters.*

Note that some defects present an emergency situation where remedial measures must be accomplished immediately. The Facility administrator must decide how to proceed to protect life and property; however, if recovery is to be effected, the procedures listed in this section should be followed as closely as possible.

***Responsibility Refusal by Design Professional or Contractor.** If a building deficiency is determined to be serious, and neither the design professional nor the contractor accepts responsibility for its correction, General Counsel should be contacted and provided with an adequate background statement of the problem.*

The objective of the background information is to get an overview of the problem early enough to maximize the effective alternatives available. An adequate background statement includes the following information:

- 1. A brief description of the nature and scope of the deficiency.*
- 2. A concise summary of the design history of the problem: i.e., the specific program given to the design professional, whether any design recommendations for the deficient areas were vetoed for budget or other reasons, what the construction documents required, what the contractor installed, the extent of the design professional's approval of shop drawing submittals, substitution requests, and field changes, and the installation made.*
- 3. A copy of all specification provisions and pertinent drawings applicable to the deficiency (including any applicable general or special guarantee provision) and a brief explanation in layman's terms of technical portions of the construction documents transmitted.*
- 4. A concise statement of the construction history of the defect including the approximate time of installation, when the deficiency first developed, a brief outline summary of any pertinent correspondence, job meetings,*

minutes, and inspector's reports bearing on the problem (with full copies of such documents attached), the date of project acceptance, and the duration of any guarantee applicable to the deficiency.

5. A description of the extent of any corrective action attempted indicating what it was, who recommended it, who performed it, and when.
6. A description of the present condition of the deficiency.
7. A description and statement of estimated cost for corrections which will probably be required.
8. An expression of Facility opinion as to the responsibility for and cause of the defect coupled with a brief statement of the facts supporting that conclusion.

Expressing Opinion on Responsible Cause. The initial expression of opinion as to who is responsible for a defect or deficiency should be made by Facility personnel if they have the technical competence. In cases when employment of an outside expert is necessary to augment Facility capabilities, General Counsel should have an advance opportunity to evaluate the potential forensic ability of such an expert. If such an expert is not retained by or at the request of Counsel, the expert's report on the problem probably cannot be kept confidential in the event of litigation, and the expert may be subject to being deposed as a witness.

Preservation and Documentation of Evidence. If litigation is a possibility, evidence of building defects or deficiencies must be preserved or documented and safeguarded. If not, there should be no expectation of recovery of damages by a lawsuit. Preserve and document evidence by:

- Retaining defective material.
- Taking photographs.
- Having a competent person examine the defect and express a technical opinion as to its cause.
- Retaining relevant correspondence and documents.

Confidentiality of Evidence. Parties to a lawsuit have broad rights to examine the files of their opponents. Most communications including memoranda to file which are not sent from a University employee to University Counsel may be inspected and used as evidence to oppose the University's case. To prevent this evidence from being revealed to the University's detriment, follow these guidelines:

- Take care not to make any damaging admissions or reveal any weaknesses in the potential case.
- Evaluation of the University's prospects for recovery in potential litigation shall be made only by General Counsel.
- With the exception of item 8, above, avoid writing memoranda which contain admissions that may be against the University's interest, which include allocation of responsibility or explanations of or reasons for defects or deficiencies, or which comment on consultants' reports. When such memoranda are necessary, draft copies shall be sent to General Counsel for comment and for transmittal at Counsel's option.

4.5.2 PREVENTING BUILDING DEFICIENCIES

If design professionals and contractors whose past performance is unsatisfactory are excluded from participating on University projects, then an effort will have been made "up front" to prevent defects and deficiencies.

The deficient past performance of a design professional should be considered when selecting a design professional (see FM, Volume 3). Unsatisfactory past performance of contractors should be considered when bid documents are issued (see FM, Volume 5).