

## **CAMPUS DEFERRED MAINTENANCE EXAMPLES**

*(Submitted by Institution)*

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### **EMPORIA STATE UNIVERSITY**

#### Obsolete Electrical Components:

Many of the buildings on our campus have electrical main distribution panels that are 50 or more years old. Replacement parts and breakers have become obsolete and can no longer be ordered from the manufacturer. The only method available to us to make repairs or replace breakers is to locate them on the "secondary market," which essentially means used parts from buildings that are being remodeled or demolished. Reclamation and restoration shops are the only source for these items and its becoming more difficult locating specific models of electrical components. Our greatest fear is that at some time one of these systems will fail and we will not be able to make repairs. This would effectively close a building until we can completely replace the system or locate the requisite parts. Such would be a costly event and one which would not be cost effective.

#### Damage from Shifting Foundation:

Roosevelt Hall is literally floating on expansive soils. This facility was built in 1953 with a foundation system that did not adequately resist the movement of the clay laden expansive soil beneath it. Consequently, this movement has caused considerable interior and exterior wall damage and cracking in the foundation walls. This damage is expanding and could cause damage to building systems (water lines, gas lines, etc), if left uncorrected. Building elements are not normally designed for excessive movement and will create their own "control joints" to accommodate this action. An extensive structural study will be conducted during the upcoming year to identify remedies and related costs. Given remedial action, to stabilize the foundation, this facility should be usable to several decades. This would be a cost effective return on the dollars spent for remediation.

#### HVAC and Distribution Renovation:

Most buildings at ESU are heated and air-conditioned by HVAC equipment which is several decades old. Much of the equipment is beyond its expected life cycle. Existing rehabilitation and repair allocations have allowed replacing some package chillers and units, as those units have become inoperable. However, unaddressed in many instances is the distribution systems and piping which is internal to the buildings. Many piping and fan coil assemblies at ESU are original to construction of the buildings. The result is frequent and costly leaks. Additionally, service interruptions in air conditioning are becoming more frequent during the cooling season. Some infrastructure repair and replacement is necessary in nearly every building, with the need inversely proportionate to the age of the facility.

### Tunnel Structural Repairs:

Utility tunnels connect most of the major buildings at ESU. These tunnels are several decades old. Most of the concrete and related infrastructure has required little attention, since its construction. However, many of these concrete structures are showing considerable signs of degradation, with leaking and falling concrete relatively common. Necessary is a comprehensive program to repair and rehabilitate the existing tunnel sections to avoid service interruptions which would result from their failure.