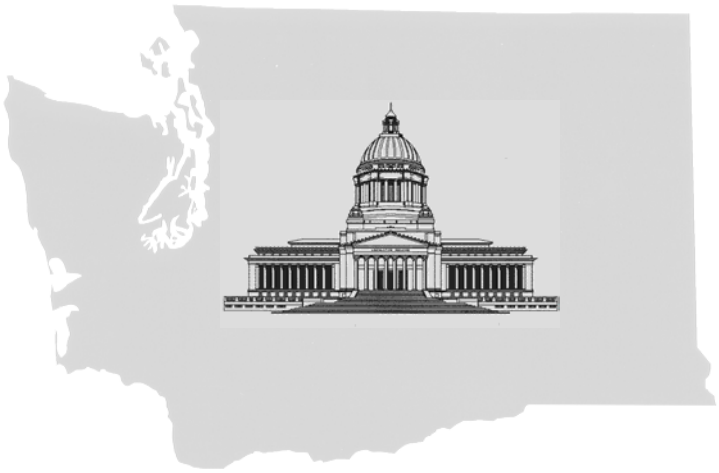
State of Washington
Joint Legislative Audit and Review Committee (JLARC)



Higher Education Facilities Preservation Study

Report 03-1

January 8, 2003

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The Joint Legislative Audit and Review Committee (JLARC) carries out oversight, review and evaluation of state-funded programs and activities on behalf of the Legislature and the citizens of Washington State. This joint, bipartisan committee consists of eight senators and eight representatives, equally divided between the two major political parties. Its statutory authority is established in RCW 44.28.

JLARC staff, under the direction of the Committee and the Legislative Auditor, conduct performance audits, program evaluations, sunset reviews and other policy and fiscal studies. These studies assess the efficiency and effectiveness of agency operations, impacts and outcomes of state programs, and levels of compliance with legislative direction and intent. The Committee makes recommendations to improve state government performance and to correct problems it identifies. The Committee also follows up on these recommendations to determine how they have been implemented. JLARC has, in recent years, received national recognition for a number of its major studies.

HIGHER EDUCATION FACILITIES PRESERVATION STUDY

REPORT 03-1

REPORT DIGEST

JANUARY 8, 2003

STATE OF WASHINGTON

JOINT LEGISLATIVE AUDIT AND REVIEW COMMITTEE

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OVERVIEW

Washington's public higher education institutions manage over two-thirds of all state facilities—over **2,400 buildings totaling 52 million square feet of space and valued at $11.5 billion**. Ongoing investment in facilities preservation and modernization activities and projects, through both capital and operating budgets, and appropriated and non-appropriated funds, is necessary to realize the public's full benefit from these significant assets. Investment in facility preservation and modernization occurs through partnerships between individual institutions and the state. However, the Legislature and Governor have not had complete information about facility inventories, conditions, operating and capital investments, and preservation and modernization backlogs across institutions.

The 2001 Legislature mandated this JLARC study in order to understand public higher education facility preservation, or the maintenance and repair of facilities to support their current use. Modernization projects (upgrading or replacing obsolete building systems) and major renovation projects were not directly examined as part of this study.

To understand preservation, basic data was assembled on facility inventories, conditions, expenditures, and backlogs. JLARC also examined how preservation data could be collected and assembled to provide ongoing information for monitoring, budgeting and accountability purposes, and understand whether the state's funding practices can foster prudent levels of ongoing facility preservation. JLARC worked extensively with institutions to collect and assemble the data needed to answer these questions.

COMPARABLE FRAMEWORK

JLARC, along with its consultants and higher education institutions, developed a **Comparable Framework** to collect and assemble institution-produced facilities data to get more accurate inventories of higher education buildings, gauge the relative condition of buildings, and estimate the magnitude of preservation backlogs across institutions on a comparable basis. This collaborative effort has produced new information in the following areas:

- Comprehensive higher education building inventories
- Estimates of current replacement values (CRVs), an important basis for understanding preservation backlogs
- Comparable, field-tested condition ratings of larger state-supported buildings, categorizing each building into one of five standard condition categories across institutions
- Estimates of preservation backlogs for all institutions
- Development of several performance measures to track facility conditions and preservation backlogs over time

CONDITIONS AND BACKLOGS

JLARC's analysis of gathered data indicates that **most higher education buildings are currently in good condition**. However, across institutions, estimated preservation backlogs currently total approximately **$1.3 billion**, and are likely to grow as buildings age over time.

PRESERVATION EXPENDITURES

Ongoing investment in a variety of preservation projects and activities can ensure that public higher education building assets are preserved, that health, safety, education, and research demands are addressed, and that facility life-cycle costs are minimized. Higher education institutions fund such projects in both their operating and capital budgets, relying on both appropriated and non-appropriated funds. **State budget practices, however, may create an unintended incentive for institutions to underfund operating budget preservation projects and activities at desired levels, particularly during times of budget shortfalls.** The information JLARC was able to collect for this study indicates that institutional operating expenditures for facility maintenance appear to have grown more slowly than overall operating expenditures and fall below nationally derived benchmarks. The data also suggest that those individual institutions that do spend more on preservation activities and projects have facilities that are generally in better condition with smaller preservation backlogs. Additional tracking of conditions and expenditures over time, and tailoring of benchmarks to Washington institutions, could lend refinement to this analysis.

CONCLUSIONS AND RECOMMENDATIONS

Given the value of the assets involved, sustaining a state-led effort to track facility conditions and preservation expenditures over time could improve visibility and accountability with respect to higher education facilities preservation. In addition, because the state's existing budget practices may not ensure prudent levels of preservation investment by institutions, the Legislature should consider coupling any funding provided for backlog reduction to policy and budgeting reforms that 1) provide incentives for institutions to fund preservation at some agreed upon minimum threshold levels, and 2) specify how facility preservation costs should be distributed between appropriated and non-appropriated funds.

Summary of Recommendation 1: The Legislature should designate an agency to sustain and expand the Comparable Framework to assemble information needed to support facilities-related budget and policy development for the 2005-07 and 2007-09 Biennia.

Summary of Recommendation 2: The Office of Financial Management, in consultation with legislative fiscal committees and higher education institutions, should develop minimum thresholds for higher education operating and capital budget facility preservation expenditures, and procedures for consistent reporting of preservation expenditures to the state.

Summary of Recommendation 3: The Office of Financial Management should develop operating and capital budget funding policies governing the distribution of higher education facility preservation costs between appropriated and non-appropriated funds, and restricting the use of state general fund resources to subsidize facility costs that should be paid from non-general fund sources.

Summary of Recommendation 4: The Legislature should consider examining options for a centrally administered higher education preservation backlog reduction funding process within the capital budget that creates incentives for institutions to improve and sustain their facility preservation efforts.

Joint Legislative Audit and Review Committee Addendum

The Joint Legislative Audit and Review Committee approved this addendum to the final report at its January 8, 2003 meeting.

The Joint Legislative Audit and Review Committee recognizes the recommendations within the Higher Education Facilities Preservation Study as appropriate interim steps to correct the acute facilities preservation issues analyzed in the report. However, the Committee also expresses a concern that sustaining these recommendations over time will require more complete reform of higher education budget, performance, and accountability systems. The Committee suggests that the Legislature and Governor consider examining other potential changes to higher education budgeting and management systems, as well as the legislative processes used to evaluate the performance of higher educational institutions, to foster improved management of institutions' complete financial performance, including but not limited to, facilities preservation and stewardship.

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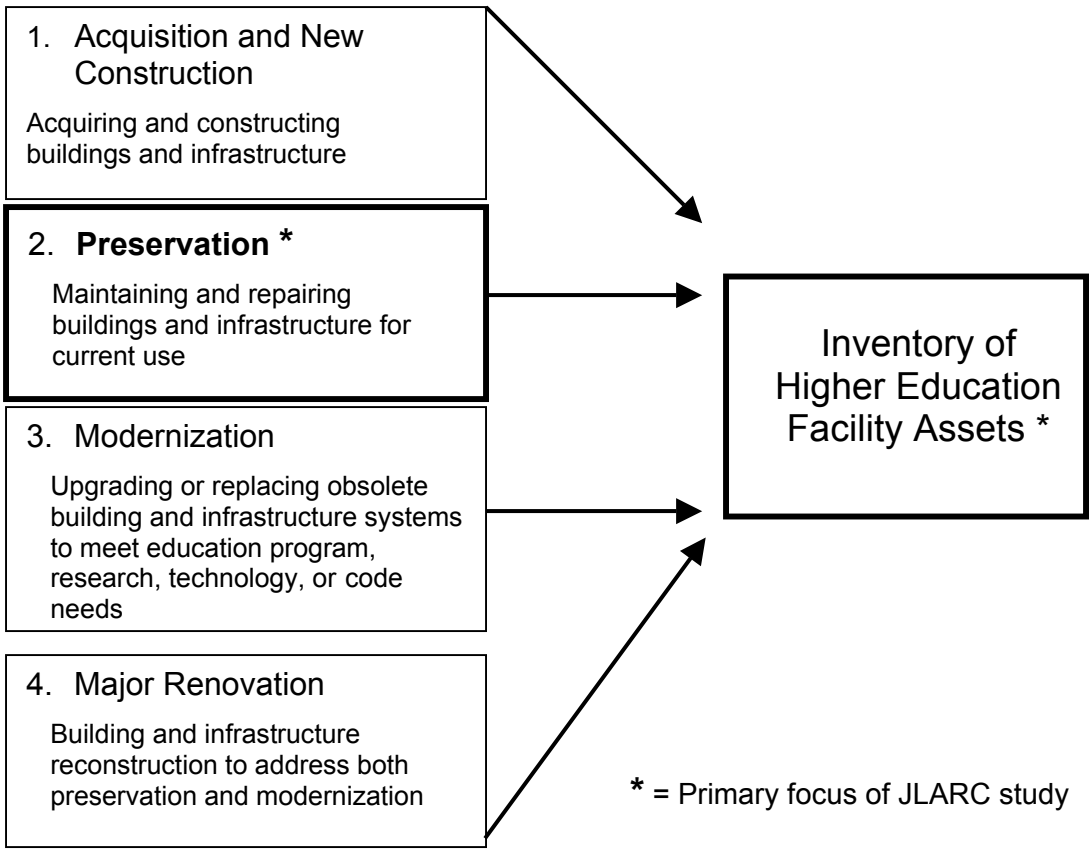
CHAPTER 1 – INTRODUCTION

Washington's public higher education system is comprised of six independently governed baccalaureate institutions, and a coordinated system of 34 community and technical colleges. These institutions manage over 52 million gross square feet of publicly owned facilities, contained in 2,463 buildings at 40 main campuses and 93 other sites across the state. These public assets comprise over two-thirds of all state facilities.

With this large stock of current capital assets, ongoing investment in a broad range of preservation, modernization, and renovation efforts is required to ensure adequate facility conditions, to meet health and safety requirements, to address education and research demands, and to minimize facility life-cycle costs. These facility investments, which come from state operating and capital budget appropriations, as well as non-appropriated institution-controlled funds, occur in the four major stages outlined in Figure 1-1 below. This JLARC study focused primarily on the preservation investment stage, while also assembling comprehensive information to describe and quantify the state's current inventory of facility assets.

Figure 1-1

Facility Investment **Stages**



Source: JLARC

LEGISLATIVE DIRECTIVE

The 2001-03 Capital Budget directed JLARC to collect, assess, evaluate and analyze facility preservation information and outline a potential **Comparable Framework**. JLARC was also asked to assess operating and capital budget processes for facilities preservation throughout Washington's public higher education system, as well as to identify any incentives or disincentives inherent in these budget processes and in their implementation at the higher education institutions. Work began on this JLARC study in September 2001.

STUDY PROCESS

Two advisory and technical processes were set up to assist JLARC staff in the course of this project. A **Legislative Advisory Group**, comprised of interested legislators from JLARC, fiscal committees and relevant policy committees, as well as committee and caucus staff, was convened. This Group has met twice in the early stages of the study.

Since collecting information from existing condition assessment and preservation management systems at all of Washington's higher education institutions was key to the progress of this study, JLARC staff also convened a **Technical Review Panel** comprised of staff from the Office of Financial Management (OFM), the Higher Education Coordinating Board (HECB), the State Board for Community and Technical Colleges (SBCTC), a Community College, and the six public four-year universities and state colleges. The Panel has met six times for work sessions during the course of this JLARC effort.

Finally, with the resources provided by the 2001 Legislature, JLARC staff, through a competitive bid process, selected Meng Analysis, a Seattle-based firm with considerable experience in Washington's public higher education sector, to assist in this extensive study.

REPORT OUTLINE

CHAPTER 2 introduces the Comparable Framework – an approach to translate and cross-walk preservation information maintained by individual institutions into a statewide framework. This chapter also highlights key findings from the Comparable Framework, and references a series of detailed data summaries included in the Appendices.

CHAPTER 3 examines the structure of higher education budgets with respect to facility preservation, including funding sources, state requirements and guidelines, and endemic incentives and disincentives that influence preservation expenditures.

CHAPTER 4 examines institutional facility preservation expenditure patterns, with comparisons in Washington and with national benchmarks.

CHAPTER 5 summaries the study's findings and conclusions, and sets forth four recommendations.

STUDY SUMMARY AND POTENTIAL FUTURE DIRECTIONS

Study Summary & Potential Future Directions				
		Where Were We Before JLARC Study?	**What Has JLARC Study Produced?**	**What Potentially Lies Ahead?**
Basic Data	**Terms & Definitions**	Limited availability of statewide preservation terms & definitions, with inconsistent application across institutions.	Terms & definitions needed for understanding facility preservation have been established and consistently applied across institutions.	Continuing to consistently apply standard terms & definitions across institutions.
	Inventory	Under-reporting of 9 million gross square feet (GSF) of higher education buildings; no comprehensive state-level data on facility use, construction type, building quality, and current replacement value (CRV).	Comprehensive higher education building inventories differentiating buildings by use, type, and quality have been established. CRVs have been estimated for larger state-supported buildings.	Developing site and campus infrastructure inventories; tracking dates of renewal and replacement of major building systems.
	Condition	No comparable condition information across institutions.	Comparable, field-tested, condition information for larger state-supported buildings; five standard condition categories across institutions.	Establishing condition ratings for site and campus infrastructure systems.
Performance Measures	**Preservation**	No standard statewide facility preservation performance or fiscal measures.	Several performance and fiscal measures have been developed: Current Replacement Value (CRV); Building Condition; Preservation Backlogs; and the Facility Condition Index (FCI).	Applying facility preservation performance and fiscal measures to site and campus infrastructure.
	Modernization	No standard statewide facility modernization performance or fiscal measures.	Not the focus of this study.	Exploring the development of modernization measures consistent with those used for facility preservation.
Budget and Expenditure Information	**Funding Responsibilities**	No clear or consistent delineation of capital funding responsibilities for individual buildings.	As a starting point, institutions have identified each building as state capital supported, non-state capital supported, or mixed state and non-state supported.	Defining explicit funding policies referencing this JLARC study as well as OFM's Higher Education Capital Funding Guidelines report.
	Funding Levels	No standard budgeting or expenditure benchmarks referenced at the statewide level.	Initial benchmarks for annual operating and capital budget preservation expenditures have been established.	Developing minimum funding thresholds for facility preservation and monitoring expenditures over time.
	Backlogs	Preservation backlog estimates available for only two institutions (UW, WWU).	Preservation backlog estimates have been prepared for larger state-supported buildings at all institutions. Due to data limitations at this time, preservation backlog estimates have not been prepared for site and campus infrastructure.	Expanding backlog estimates to include site and campus infrastructure, and, potentially in the future, facility modernization.

CHAPTER 2 – COMPARABLE FRAMEWORK OVERVIEW

Currently, little information is available to the Legislature, Governor, Office of Financial Management (OFM), and state Higher Education Coordinating Board (HECB) to gauge the condition of Washington's public higher education buildings and the magnitude of preservation backlogs on a comparable basis across the state. The major facilities reporting systems at the state level are not complete, directly comparable across institutions, nor designed to directly support preservation decision making.[1] However, most institutions independently produce and maintain a significant portion (though not all) of the facilities preservation data needed for state-level budgeting, monitoring, and accountability. JLARC's study approach was to maximize the utility of institutional preservation information.

PURPOSE AND DESIGN

Purpose and Design of the Comparable Framework

Purpose: To collect, cross-walk, calibrate, verify on a sample basis, and assemble facilities preservation information produced and maintained by Washington's public higher education institutions into a data framework that can be used to understand and budget for the preservation of higher education facilities.

Key Design Parameters: The framework has been designed to:

- focus on information needed for state budget and accountability activities;
- use data produced and managed by institutions;
- establish clear definitions and data protocols using "common-denominators" across institutions, and referencing national standards where appropriate;
- clean up and reconcile duplicate and/or contradictory data in current systems;
- cross-walk, translate, and calibrate data across institutions to create comparability;
- rate facility conditions and estimate preservation backlogs on a comparable basis;
- support independent verification of institution data through field surveys;
- establish useful performance measures for ongoing monitoring; and
- be updated and expanded in the future.

MAJOR ELEMENTS

The major elements of the comparable framework are outlined in Figure 2-1 on the following page.

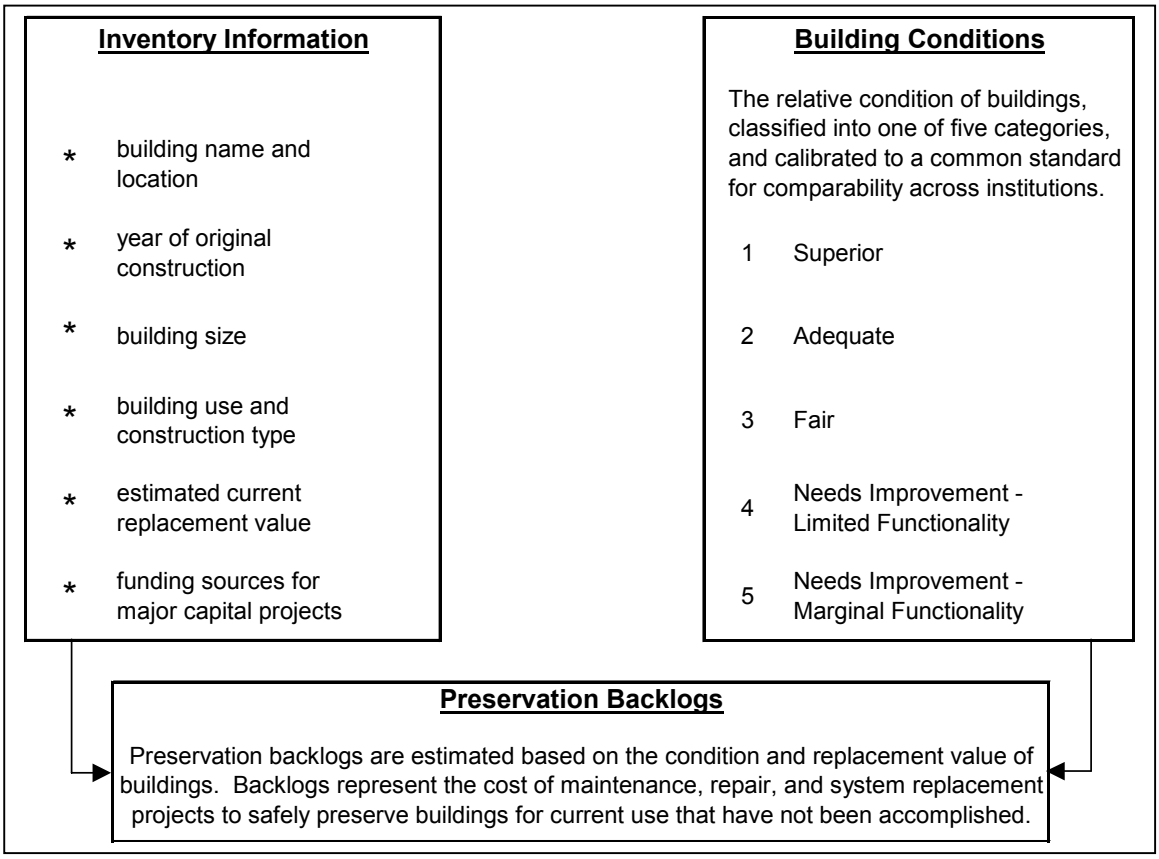
INSTITUTION CONTRIBUTIONS

The Comparable Framework was developed in close consultation with higher education institutions, OFM, HECB, and SBCTC. Institutions have made significant contributions to the framework. They completed a comprehensive survey about the content and format of their preservation information, participated in and helped facilitate field surveys,[2] answered many questions from JLARC and its

[1] Includes OFM's Facility Inventory System (FIS) and HECB's Inventory and Utilization System (IUS), both of which are described later in this chapter.

[2] Field surveys were conducted on 66 buildings across the state.

Figure 2-1
Major Elements of the Comparable Framework



consultants on an ad-hoc basis, and reviewed data after translation into the framework. Also, to supplement their existing preservation information, both Central Washington University and The Evergreen State College independently applied the condition assessment methodology used in JLARC's field surveys to their entire stock of buildings.

EXISTING CENTRALLY MANAGED DATA SOURCES

JLARC used the data from existing facility information systems managed by OFM, HECB, and SBCTC as a starting point in constructing the Comparable Framework. This information was later supplemented by data collected directly from individual institutions. Throughout the project, a significant amount of work was required to reconcile duplicate and contradictory data both within and between existing systems, and to fill in data gaps. The central data sources used to begin constructing the framework are described below:

- **OFM Facility Inventory System (FIS)** – This system was created pursuant to legislation passed in 1993.[3] All state agencies are required to report information about their facility inventories and conditions to OFM on an annual basis. Though FIS contains much data, OFM has not verified FIS for completeness, accuracy, or comparability across institutions. JLARC found numerous gaps in FIS information, as well as conflicts and discrepancies with data maintained by individual agencies.

[3] Chapter 325, Laws of 1993.

- **HECB Inventory and Utilization System (IUS)** – This system was created pursuant to legislative direction in the 1995-97 and 1997-99 Operating Budgets.[4] IUS is designed to collect institution-reported information about student enrollment capacity within existing higher education facilities. JLARC found that the completeness of IUS reporting varies considerably across institutions. In addition, we found numerous conflicts with data reported to OFM's FIS, particularly in the area of building identification codes.
- **SBCTC Facility Condition Survey (FCS)** – Each biennium, the State Board for Community and Technical Colleges undertakes a uniform system-wide condition survey covering most community and technical college facilities. Survey information is used in development of the State Board's capital budget request. JLARC was able to translate much of the data collected through this process directly into the Comparable Framework.

KEY FRAMEWORK TERMS AND DEFINITIONS

Term	Definition	Notes
Facility Preservation	Maintenance, repair, system replacement, and mandatory code upgrade projects to safely preserve facilities and their systems for current use.	The definition of "preservation" was carefully designed to provide a solid basis for comparing facility conditions and maintenance and repair backlogs across institutions. "Preservation" does not include facility modernization and renovation projects.
Current Replacement Value (CRV)	The estimated cost to replace buildings at current prices, with equivalent utility and function, using modern materials in compliance with current codes and regulations.	CRVs have been calculated by JLARC for each building based on: size, use, construction type, quality of finishing & equipment, and geographic location.
Relative Condition Score	The relative condition of each building, categorized into one of five categories.	1. Superior 2. Adequate 3. Fair 4. Needs Improvement - Limited Functionality; 5. Needs Improvement - Marginal Functionality (Condition category descriptions are provided on page 62.)
Preservation Backlog	The estimated cost of building maintenance, repair, system replacement, and mandatory code upgrade projects to safely preserve facilities and their systems for current use that have not been accomplished. (Also known as Backlog of Maintenance and Repairs or BMAR).	Preservation backlogs have been calculated for each building based on the building's relative condition score (RCS) and current replacement value (CRV). Backlogs cannot be used to estimate detailed costs for individual preservation projects, but can be used as a gauge for monitoring/accountability purposes and to inform institution and system wide budgeting and policy development.
Facility Condition Index (FCI)	The preservation backlog expressed as a percentage of current replacement value. *FCI = Preservation Backlog / CRV*	The lower FCI, the better the condition. Conversely, the higher the FCI, the greater portion of the building needing repair or replacement.

[4] Chapter 283, Laws of 1996, Section 610; and Chapter 454, Laws of 1997, Section 1509.

Term	Definition	Notes
Predominant Facility Use	The predominant use of the building, classified into one of four categories: Teaching & Study, Research, Office, and Other. For buildings with more than one dominant use, classification is based on the facility's major cost drivers.	The four predominant use categories contain 14 subcategories based on those used in the Higher Education Coordinating Board's Inventory and Utilization System (IUS).
Construction Type	The building's predominant structural system defining its construction cost, classified into one of four categories.	The four construction type categories include heavy construction, medium construction, light construction, and temporary construction.

LIMITATIONS OF THE COMPARABLE FRAMEWORK

- The Comparable Framework is focused on building preservation. It is not designed or intended to cover modernization[5] or renovation[6] projects or costs, which are often significant elements of institutional capital plans and budget requests.
- The Comparable Framework relies on institutions' own data. It was not possible within the time and resources available to JLARC to thoroughly verify each piece of data. However, JLARC's field surveys and statistical analyses confirm that the data is sufficiently reliable for statewide comparisons.
- The cost information included in the Comparable Framework is intended to provide a relative measure of building values and preservation backlogs. It cannot be used to estimate individual project costs, but can be used to inform institution and statewide budgeting and policy development.
- Because institutions currently maintain little information about campus infrastructure systems (e.g., roads, utilities, and site improvements) that can be assembled on a statewide basis, the Comparable Framework does not currently contain preservation information in this area. OFM and institutions alike have expressed interest in filling this gap in any future updates, as infrastructure represents an important component of institutional preservation programs.[7]
- At this time, the comparable framework does not quantify health and safety related preservation backlogs. Most institutions have not developed data specifically focused on the health and safety impacts of backlogs. Institutions indicate that, for the most part, health and safety problems are immediately addressed due to risk and liability concerns.

[5] Examples of modernization projects and costs include upgrading education technology, reconfiguring and outfitting buildings for new education or research programs, and non-mandatory code upgrades.
[6] Major renovations projects usually include both preservation and modernization elements. The relative importance and cost of these elements can vary significantly from project to project.
[7] Additional information pertinent to the availability of infrastructure information is provided on page 15.

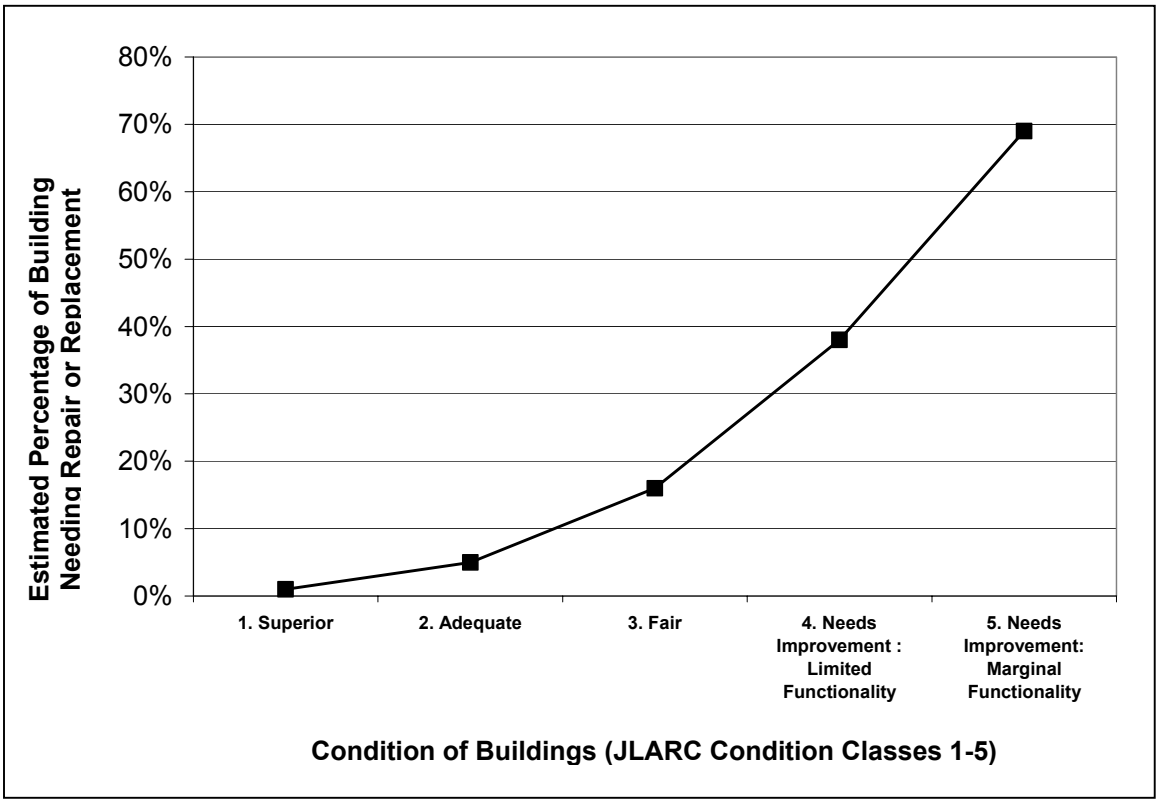
MAJOR FINDINGS

Approximately 75 percent of Washington's higher education buildings are state supported. Though most buildings are currently in good condition, about one-third are in fair condition with older systems that will need improvement in the foreseeable future, and 10 percent have aged and deteriorated to the point where they need immediate improvement. Preservation backlogs for larger state-supported buildings currently total approximately $1.3 billion. This represents 11.56 percent of their estimated total replacement value of $11.5 billion.[8]

2003 Statewide Facility Condition Index (FCI) = 11.56%

Ongoing investment in preservation is required to ensure adequate and cost-effective stewardship. As facility conditions deteriorate with age and use, preservation demands escalate, as indicated in Figure 2-2 below. The next chapter moves to an assessment of whether Washington's budget structure for facilities preservation fosters cost-effective stewardship.

Figure 2-2. Preservation Demands Increase as Facilities Deteriorate



NOTE: Detailed Comparable Framework data can be found in Appendices 3 & 4.

[8] Site and campus infrastructure replacement values and preservation backlogs are not included in these totals.

CHAPTER 3 – BUDGET STRUCTURE FOR FACILITIES PRESERVATION

INTRODUCTION

Ongoing investment in a variety of preservation projects and activities can ensure that public higher education building assets are preserved, that health, safety, education, and research needs are met, and that facility life-cycle costs are minimized. This chapter examines the budget structure used to fund preservation projects and activities.

Investment in preservation is accomplished through partnerships between individual institutions and the state. Institutions rely on both appropriated and non-appropriated funds to pay for preservation. Usually, maintenance and minor repairs are funded from operating budgets; major repairs, large building system replacements and renovations are paid from capital budgets. Because there are differences in sources of revenue, budget policies, appropriated and non-appropriated funds, and incentives between operating and capital budgets, this chapter addresses the following questions:

1. What are state-supported buildings?
2. What are the major sources of state and institution revenue in the operating and capital budgets, both appropriated and non-appropriated, for preserving state-supported buildings?
3. How do state budget policies affect the availability of funding for preservation of state-supported buildings?
4. Do state budget practices create incentives for cost-effective facility stewardship?

Educational & General (State-Supported) Buildings

As with the Comparable Framework in the previous chapter, this analysis focuses on the state-supported buildings that house Educational and General programs. Educational and General programs are those that support the primary missions of the institution—instruction, research, and public service. Across the state, educational and general buildings represent about three-fourths of all higher education space.

Buildings housing Educational & General programs are commonly referred to as state-supported, because state capital budget funds are typically a major source of funding for constructing the building. **However, there are significant sources of revenue other than state funds that are available for operating and maintaining "state supported" Educational & General facilities.** Such other sources include tuition and fees, and a portion of overhead charges (Indirect Cost Recoveries) generated from governmental research grants and contracts.

Auxiliary Buildings

In addition to Educational & General programs, higher education institutions also operate secondary programs such as housing, student centers, food services, and hospitals. These secondary programs, and the facilities that house them, are frequently known as "Auxiliaries," and represent about one-fourth of all higher education space. User fees, like charges for

dormitory accommodations, cover the costs of facilities housing auxiliary programs. Because state appropriations typically do not support either the capital or operating costs of auxiliary facilities, they are not considered state-supported facilities.

OPERATING REVENUES

Costs of routine and preventive maintenance of Educational & General facilities, as well as other operational costs such as utilities and cleaning, are funded from higher education institutions' operating budgets. The three major sources of operating budget revenue available to institutions for funding their Educational and General expenditures include: State Appropriations, Tuition & Fees, and Governmental Grants and Contracts.

Figure 3-1 below, and Figure 3-2 on the following page, illustrates the relative importance of these three major revenue sources. Revenue sources vary across institutions. For example, state appropriations range from 29 percent of Educational & General revenues at the University of Washington, to 56 percent of such revenues for the Community and Technical College System. As a whole, state appropriations comprise less than half of the total revenue available to pay institutions' Educational and General costs. In other words, **less than half of institutions' total Educational and General revenues are subject to legislative appropriation**, and only a small portion of these appropriations are typically earmarked for specific purposes through budget provisos.

Figure 3-1. Relative Significance of Educational & General Revenue Sources

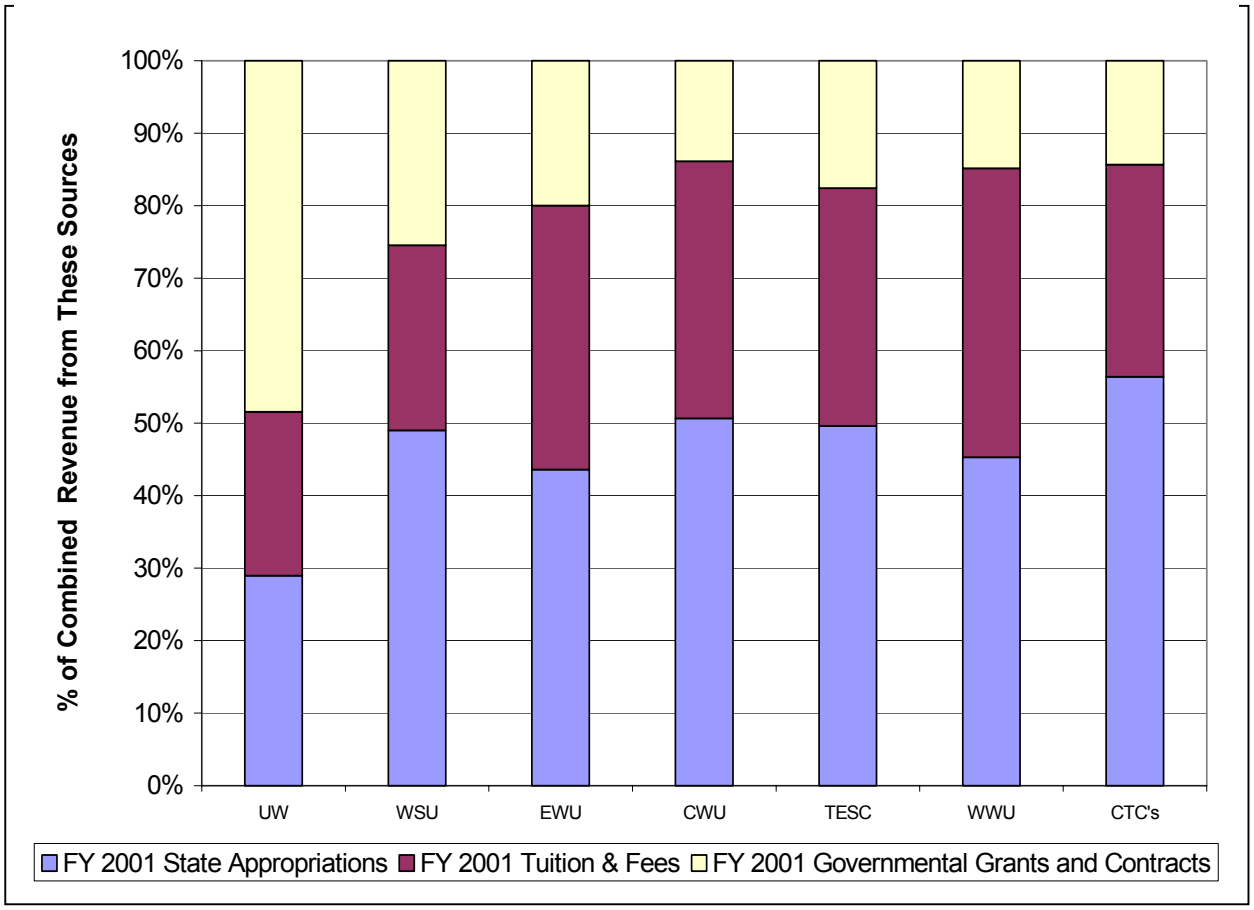


Figure 3-2

	FY 2001 State Appropriations per Student	FY 2001 Tuition & Fees per Student	FY 2001 Governmental Grants and Contracts per Student
UW	$9,765	$7,614	$16,324
WSU	$10,112	$5,272	$5,251
EWU	$6,034	$5,040	$2,765
CWU	$5,467	$3,826	$1,497
TESC	$6,569	$4,348	$2,327
WWU	$5,048	$4,440	$1,652
CTC's	$3,877	$2,012	$985

OPERATING BUDGET PRACTICES

Currently, state operating budget appropriations to higher education institutions are generally determined as follows:

- The vast majority of a college or university's State General Fund appropriation in any particular biennium is reflected in its **maintenance level** budget. The maintenance level represents an institution's existing level of appropriation adjusted for inflation. Maintenance level budgets typically are not earmarked or otherwise controlled by the Legislature. Thus, institutions have considerable discretion concerning how much is spent for operating and maintaining state-supported facilities.
- The Legislature makes incremental additions to the maintenance level budget by funding growth in **student enrollment** throughout the higher education system. The amount of funding provided for each additional student is based on an institution's actual operating costs, including facility operations and maintenance costs, as reflected in the Education Cost Study conducted every four years by the Higher Education Coordinating Board. **When the Legislature funds growth in student enrollment, it is implicitly funding growth in facilities operations and maintenance costs.**
- Other incremental additions and reductions are often earmarked for specific purposes. For example, the Legislature may earmark an incremental increase in funding for faculty salaries, or an incremental decrease in funding may be earmarked for certain administrative costs. Some of these earmarked incremental increases or decreases in funding could affect the availability of funding for operating and maintaining state-supported facilities. For example, a funding decrease that is targeted toward "general administrative efficiencies" could affect the availability of funding for facilities operations and maintenance.

In summary, current state operating budget practices result in limited legislative control over higher education Educational & General expenditures, including those for facility maintenance. Facility maintenance must compete with other institutional and academic priorities for available funding. For this reason, **operating budget preservation spending levels largely reflect institutional priorities and decisions**.

Historical Operating Budget Policies

In the 1970s and early 1980s, state appropriations for higher education operating budgets were developed based on a detailed formula that drove out specific amounts of funding for various functions, including plant operations and maintenance. The funding amounts for the various functions were specifically earmarked in the appropriations acts, thus directing institutions to spend the amounts earmarked for the purposes for which they were appropriated. The current process for developing institutional budgets is far more general, does not identify specific amounts of funding for specific functions, and does not result in large earmarked amounts in the appropriations acts. Also until the 1993-95 Biennium, tuition and fees revenue was part of the state appropriation. Since then, tuition and fees have been a non-appropriated funding source for the institutions, making this significant revenue source free from legislative control. Therefore, between the reduction in the Legislature's earmarking appropriated funds, and the shift of tuition and fees from appropriated to non-appropriated status, the degree of legislative control over how higher education institutions spend their operating budgets has decreased substantially.

CAPITAL BUDGET PRACTICES

Higher education institutions fund major repairs, system replacements, and renovations of Educational and General facilities from their capital budgets. Institutions also use capital dollars for purposes other than the preservation of facilities, particularly new construction and land acquisition. Major sources of capital revenue for Educational and General facilities include state general funds, state bonds, and state trust land revenue. **In contrast to the patterns with respect to institutional operating budgets, state funding sources comprise the vast majority of revenue available for capital funding of Educational and General facilities.** Additionally, in contrast to the relatively small extent of legislative earmarking of operating budget appropriations, capital appropriations are predominately earmarked for specific projects, and must be spent on these specific projects. Thus, the Legislature provides the vast majority of capital funding for Educational and General facilities and exercises a great deal of control over how these capital funds are spent.

INCENTIVES AND DISINCENTIVES

Colleges and universities pay for routine and preventive maintenance within their operating budgets, and major repairs and renovations within their capital budgets. Because there is little legislative direction over institutional operating expenditures, funds for routine and preventive maintenance compete with all other institutional priorities for funding. Should institutions spend insufficient funds for routine and preventive maintenance, pressure builds on the state capital budget for major repair and renovation funding. In summary, **Washington's operating and capital budget practices may create an unintended incentive for higher education institutions to underfund routine and preventive maintenance in their operating budgets, and a corresponding incentive to look to state-funded capital resources to pay for major repairs and renovations.**

OTHER ISSUES

Potential for State General Funds to Support Auxiliary Facilities

As discussed earlier, Auxiliary facilities typically do not receive state operating and capital funding support. However, state-level accounting information is not sufficiently detailed to determine whether state funds are being used to subsidize the operations and maintenance of

Auxiliary facilities. Therefore, the potential exists that state funding could be used to support Auxiliary facilities. While JLARC did not attempt to ascertain this possibility, we did note that a recent external management review found that state funding was supporting the operations and maintenance of Auxiliary facilities at one of Washington's higher education institutions.[9]

Use of Research Grant Indirect Cost Recovery Funds

Buildings on university and college campuses that contain research programs are typically considered Educational & General (state-supported) facilities. Federal and state government agencies are the largest sources of research grants and contracts at Washington's higher education institutions. Such external sources of funding customarily pay for both the direct costs of the research and the indirect, or overhead costs of the institution. Institutions negotiate an "Indirect Cost Recovery" rate with both the federal and state government and this rate includes components that allow for the reimbursement of both the capital and operating costs of facilities used for research programs. As with Auxiliary facilities, state-level accounting information is not sufficiently detailed to determine whether all federal Indirect Cost Recovery revenue that is generated for the capital and operating costs of facilities is being spent for that purpose.

Funding for Operating and Maintaining New Facilities

As previously discussed, institutions receive funding for operating and maintaining facilities as part of their state maintenance level appropriations. In addition, when the Legislature provides incremental funding for enrollment growth, it is also implicitly providing additional funding for facilities operations and maintenance, since student funding is based on past actual expenditures, including those for operations and maintenance. Institutions usually request additional incremental state appropriations for operating and maintaining new facilities beyond that included for maintenance levels and enrollment growth. These requests are considered by the Governor and Legislature during the biennial budget process, though they often do not contain a full discussion of the variety of funding sources available to institutions for operations and maintenance.

Recent Accounting Changes Promulgated by the Governmental Accounting Standards Board

The Governmental Accounting Standards Board (GASB) is a private, non-profit, organization that establishes standards for financial accounting and reporting by state and local governmental entities. GASB Statements 34 and 35, issued in 1999, require that the depreciation of capital assets, or "using up" of buildings and infrastructure over time, be reported on government financial statements. This change from earlier reporting requirements is intended to increase the visibility of capital asset depreciation to the public and government officials. Special provisions of GASB 34 and 35 related to infrastructure assets outline the development of infrastructure inventories, condition assessments, and annual preservation costs. These provisions may contribute to improved infrastructure inventory and preservation information for Washington's public higher education institutions in the future.

[9] Facilities Management Evaluation Program, Western Washington University, September 2001.

CHAPTER 4 – PRESERVATION EXPENDITURE TRENDS

INTRODUCTION

Chapter three describes the structure of and issues surrounding facilities preservation budgets. This chapter reviews recent preservation expenditure trends for Educational and General (state-supported) facilities. Specifically, this chapter addresses the following questions:

1. What are the trends in operating and capital expenditures for facility preservation?
2. How do expenditures compare among institutions?
3. How do expenditures compare with external benchmarks?

Facility Preservation Expenditures

Currently, the state does not require detailed reporting of higher education facility preservation expenditures. For the purpose of this analysis, JLARC requested historical expenditure information directly from institutions, defined as follows:

Facility preservation expenditures include:

- operating budget expenditures for ongoing and preventive maintenance and small repairs; and
- capital budget expenditures for facility preservation, typically characterized as "minor works preservation" projects and other separately funded projects specifically targeted at preservation.

Facility preservation expenditures do not include:

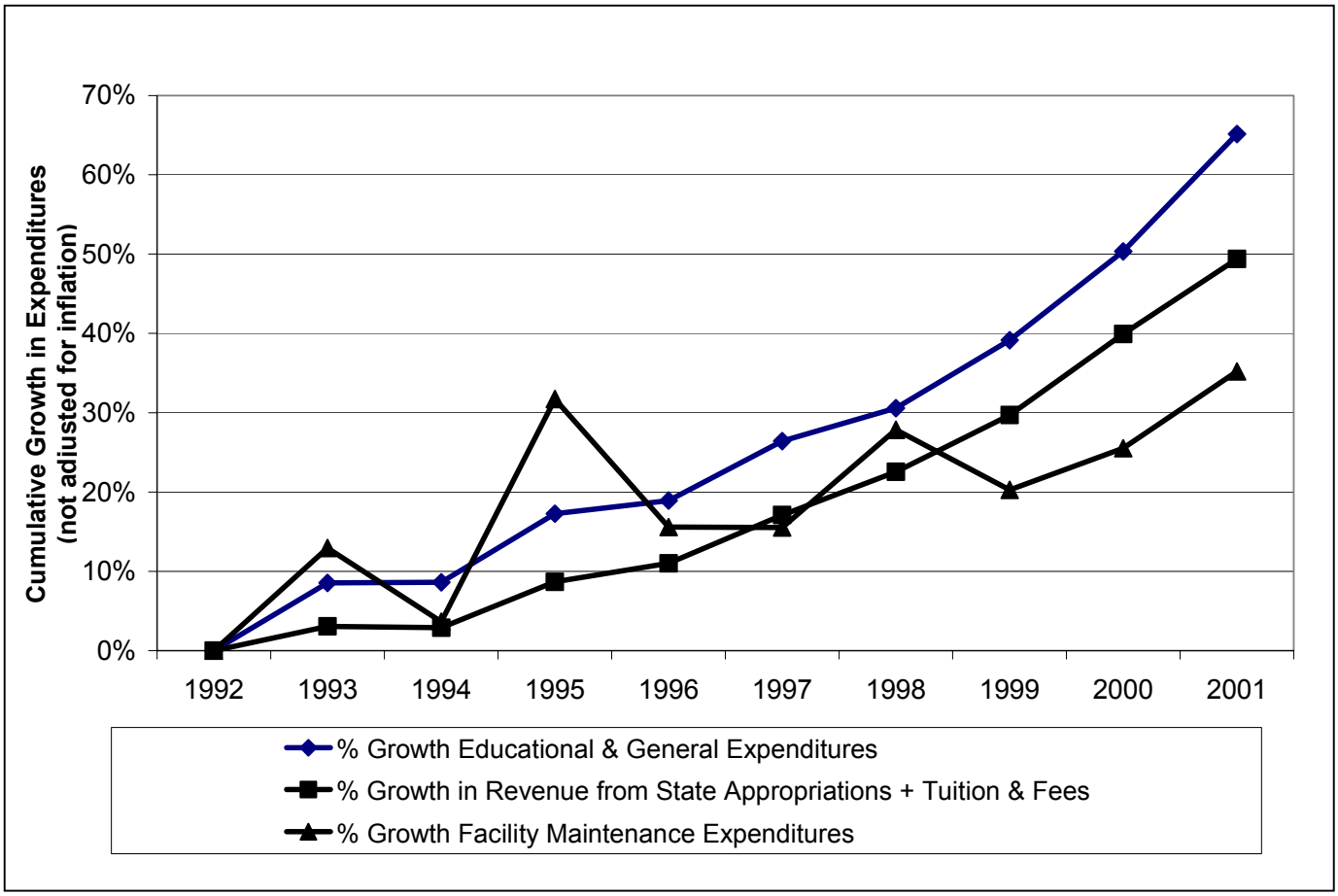
- operating budget expenditures for utilities, custodial and grounds keeping services, solid waste disposal, and security; and
- capital budget expenditures for new construction, modernization, and major renovations.

EXPENDITURE TRENDS

Figure 4-1 on the following page shows that the combined expenditures for facility maintenance among higher education institutions grew more slowly over the past decade than expenditures for Educational and General purposes in total.

Facilities maintenance expenditures also grew more slowly than revenue from state appropriations and tuition and fees.[10]

Figure 4-1. Facility Maintenance Expenditures Have Grown More Slowly Than Educational & General Expenditures or Revenue from State Appropriations and Tuition & Fees



There is considerable variation among institutions in the degree to which maintenance expenditures have kept up with total Educational & General expenditures over the past decade, as displayed in Figure 4-2 on the following page.

[10] We compared the growth in facility maintenance expenditures against both total Educational and General Expenditures and revenue from State Appropriations + Tuition and Fees in order to illustrate that facility maintenance expenditures are growing more slowly than both a broad measure of expenditures and a narrower measure of revenue sources. The broader comparison of facility maintenance expenditures against Educational and General expenditures includes expenditures for research grants and contracts, while the narrower comparison against revenue from State Appropriations + Tuition & Fees excludes research grants and contracts. We decided to include both comparisons because governmental research grants and contracts (the majority of all research grants and contracts) typically generate Indirect Cost Recovery revenues that are generated for the specific purpose of facility maintenance.

In no cases, however, have facility maintenance expenditures kept up with Educational & General expenditures. In fact, after adjusting for enrollment growth and inflation, facility maintenance operating budget expenditures in institutions have declined somewhat over the past decade. (See Figure 4-3 on the following page).

Capital Budget Expenditures

While the combined inflation-adjusted higher education *operating budget* expenditures per square foot for facility preservation have declined somewhat over time, the opposite is true with respect to *capital budget* expenditures. Figure 4-4 on page 20 illustrates that capital expenditures for facility preservation purposes have tended to increase among Washington's higher education institutions. In light of the trend toward lower inflation-adjusted *operating* budget facility preservation expenditures and higher inflation-adjusted *capital* preservation expenditures per gross square foot, **the percentage of total facility preservation expenditures funded by the capital budget grew from 55 to 65 percent between FY 1992 and FY 2001.**

Figure 4-2. The Extent to Which Growth in Facilities Maintenance Expenditures Has Kept Up With Total Educational & General Expenditures Varies by Institution

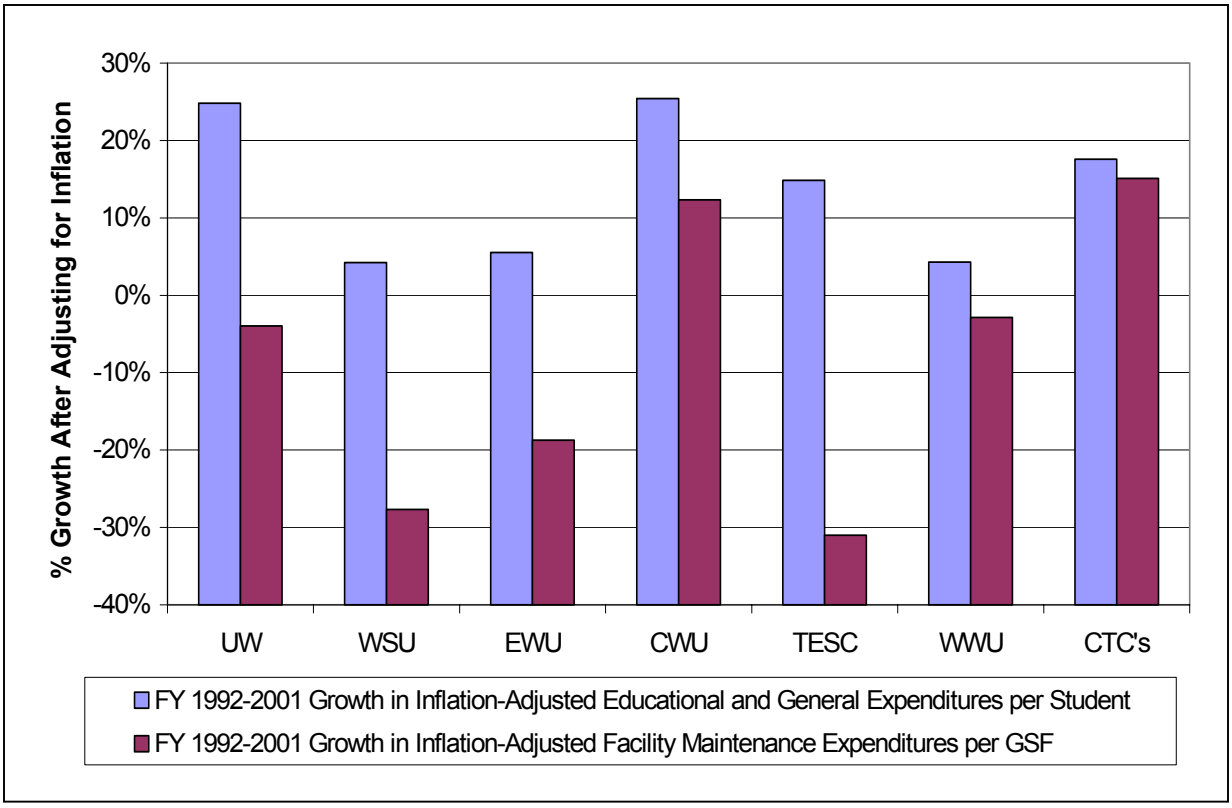


Figure 4-3. Operating Maintenance Expenditures
per GSF (adjusted for inflation) Have Decreased Somewhat from 1992-2001

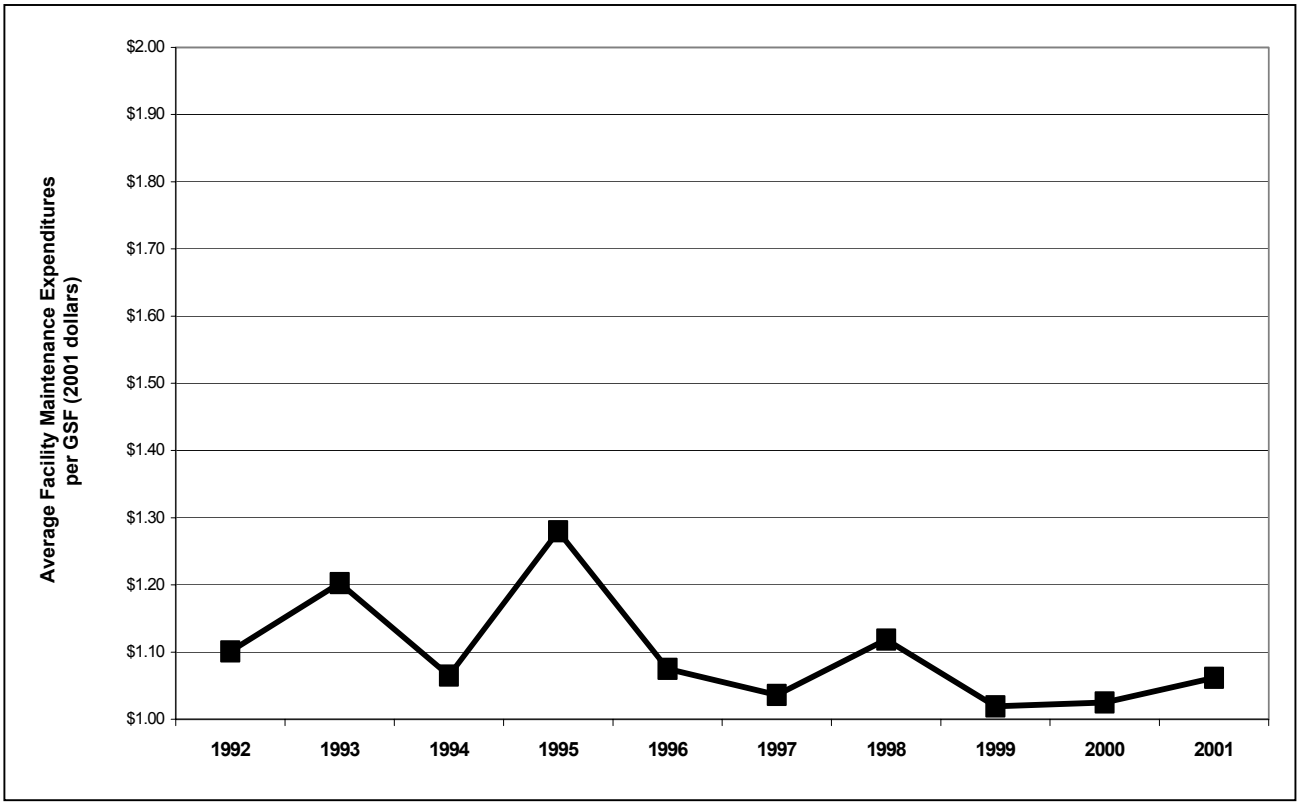
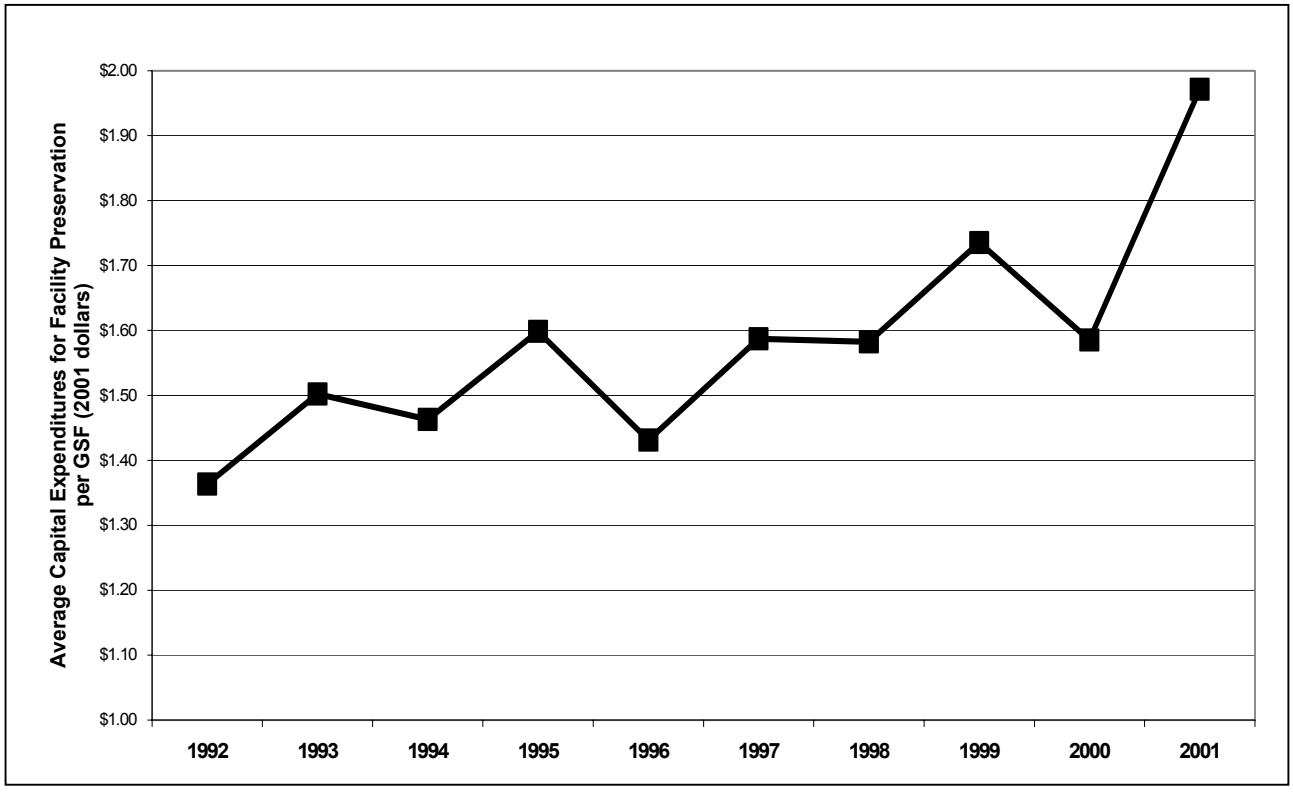


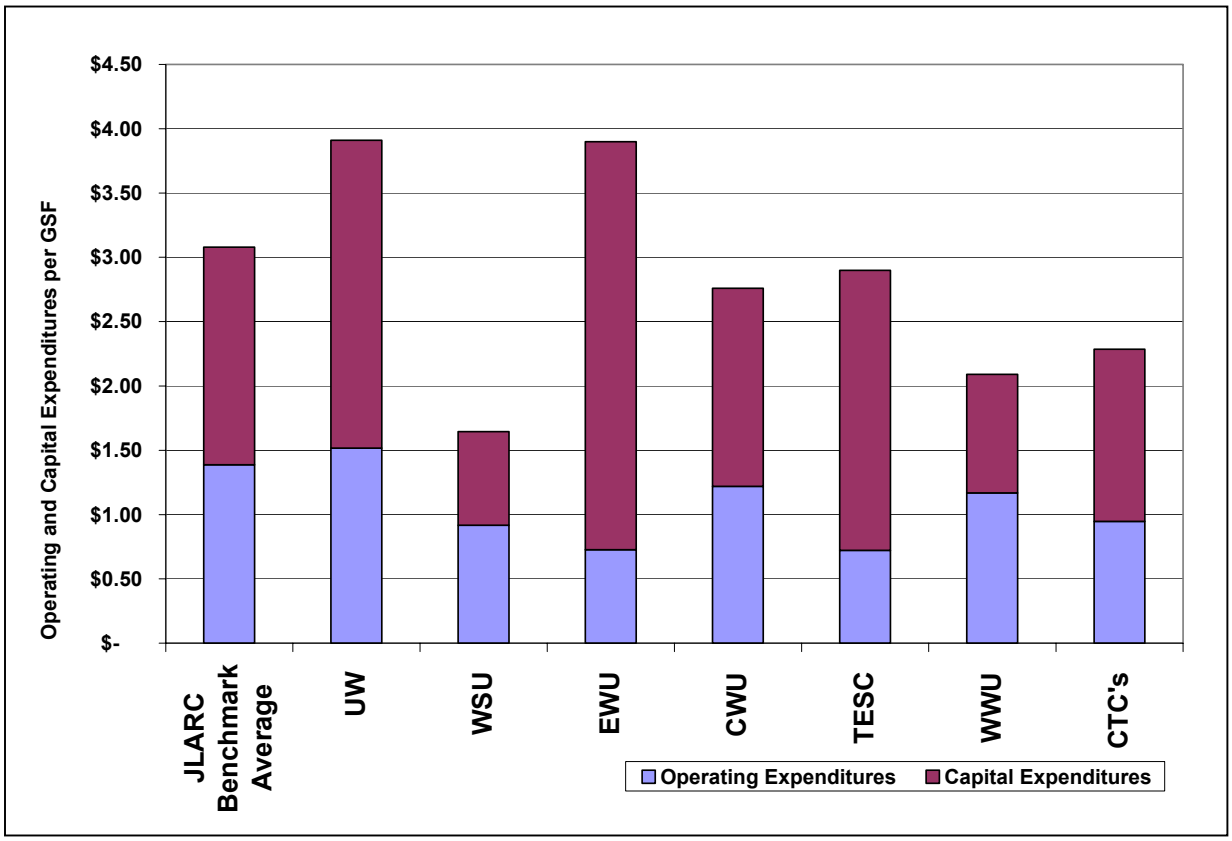
Figure 4-4. Capital Preservation Expenditures
per GSF (adjusted for inflation) Have Increased From 1992-2001



COMPARISONS AMONG INSTITUTIONS AND WITH NATIONAL BENCHMARKS

Figures 4-5 below, and 4-6 on the next page, illustrate how operating and capital expenditures for facilities maintenance compare among Washington higher education institutions, and with national benchmark averages. Combined operating and capital facility preservation expenditures at two institutions (University of Washington and Eastern Washington University) exceed benchmark averages. However, only the University of Washington is at or above benchmark averages for operating preservation expenditures. Several institutions (University of Washington, Eastern Washington University, Central Washington University, and The Evergreen State College) are close to, or exceed, benchmark averages for capital preservation expenditures. In general, **Washington's higher education institutions tend to spend less from their *operating budgets* for facility preservation than the benchmark average, while capital budget expenditures are closer to or exceed the benchmark average.**

Figure 4-5. Preservation Expenditures Vary Across Institutions and Against Benchmarks



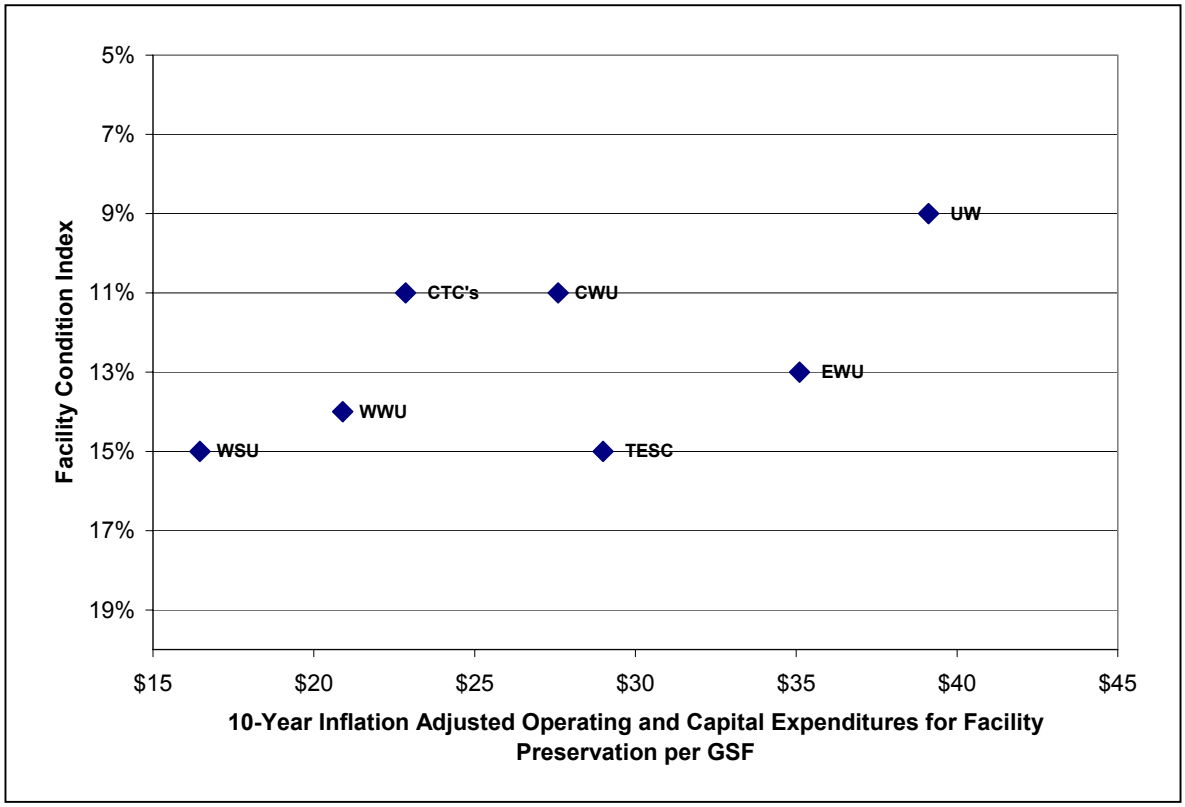
Source: Average expenditures were calculated by JLARC using data provided by the institutions, and adjusted for inflation. Benchmarks were developed by JLARC as described in Appendix 5.

Figure 4-6. Washington Higher Education Institutions Average FY 1992-2001 Facility Preservation Expenditures Compared to Benchmarks			
	Operating Budget Facility Preservation Expenditures	Capital Budget Facility Preservation Expenditures	Total Facility Preservation Expenditures
UW	$1.52	$2.40	$3.91
WSU	$0.92	$0.73	$1.65
EWU	$0.73	$3.17	$3.90
CWU	$1.22	$1.54	$2.76
TESC	$0.72	$2.18	$2.90
WWU	$1.17	$0.92	$2.09
CTC's	$0.95	$1.34	$2.29
JLARC Benchmark Average	$1.39	$1.69	$3.08

The Relationship Between Preservation Expenditures and Building Conditions

Combining facilities condition information with preservation expenditure information provides a powerful display of some of the "inputs" and "outputs" in higher education facility preservation. In theory, higher levels of operating and capital facility preservation expenditures should result in better facility conditions and smaller preservation backlogs. Figure 4-7 below illustrates this relationship using the information collected for this study.

Figure 4.7 Greater Expenditures are Associated with Facilities in Better Condition



CHAPTER 5 – FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This JLARC study was initiated in response to institutional disclosures of large preservation backlogs and requests for additional state preservation funding during the development of the 2001-03 Operating and Capital budgets. JLARC worked with institutions to examine the feasibility of assembling institution-produced data in a new way in order to understand facility inventories, conditions, and preservation backlogs on a comparable, statewide basis. JLARC also assessed whether the state's funding practices in the Operating and Capital budgets create incentives or disincentives for sound, cost-effective facility stewardship. This chapter sets forth findings and conclusions from this work, as well as four recommendations to improve higher education facilities preservation.

SUMMARY OF JLARC FINDINGS

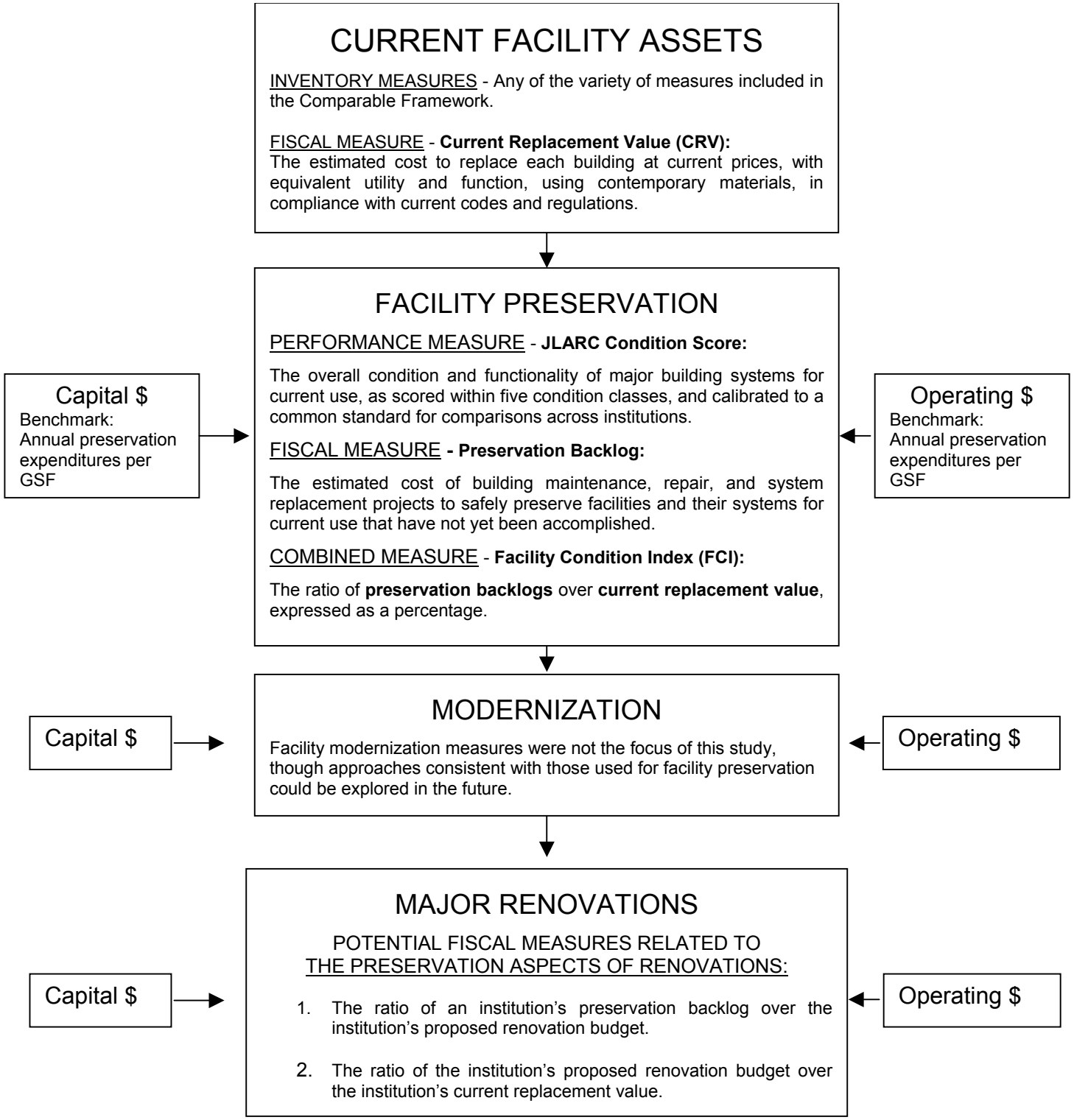
Facility Preservation Data and Accountability Systems

1. **Preservation Data Currently Reported to the State is Incomplete and Inconsistent Across Institutions** - Facilities preservation information routinely reported to OFM by higher education institutions, particularly the six baccalaureate institutions,[11] is not sufficient for statewide budgeting, monitoring, and accountability.
2. **Institutions Maintain Data that Could be Used by the State** - Most universities and colleges independently produce and maintain a significant portion (though not all) of the facilities preservation data needed for state-level budgeting, monitoring, and accountability. Institutions have expressed the desire that, to the extent possible, the state rely on institution-produced data for its budgeting and oversight needs in the future. Through the course of this study, JLARC found that institution-produced facilities preservation data can be translated and calibrated to a comparable standard and used to understand the relative amounts, ages, and conditions of buildings, as well as to estimate preservation backlog levels, on a statewide basis across institutions.
3. **The "Comparable Framework" Provides a Way to Assemble Institution Data for State Use** – The "Comparable Framework" methodology has produced data not previously available to the Legislature and Governor, including comparable condition ratings and preservation backlog estimates.
4. **Performance Measures Are Built Into the Comparable Framework** – Several performance measures have been developed to track preservation information over time. These are described in Figure 5-1 on the next page.
5. **The Comparable Framework Can Be Updated and Expanded** - The Comparable Framework has been designed to facilitate updates in the future. It is also designed to be flexible in order to allow future expansion to accommodate other facilities data that may be desired by the state for budgeting and accountability.

[11] More complete preservation information is reported by community and technical colleges as part of the biennial condition assessment and budget prioritization process conducted by the State Board for Community and Technical Colleges.

Figure 5-1
Facility Preservation Performance Measures and Benchmarks

This study has resulted in the development of several preservation performance measures and benchmarks that can be used inform capital and operating budget decision-making.



Building Conditions and Preservation Backlogs

1. **Most Buildings are in Good Condition** - The majority (53 percent) of larger state-supported higher education buildings are currently in superior or adequate condition. Of the remaining buildings, about 10 percent need immediate improvement, and about one-third are in fair condition but will need improvement in the foreseeable future.
2. **Preservation Backlogs Total $1.3 Billion** - Preservation backlogs for larger state-supported higher education buildings currently total $1.3 billion. Within this amount, the backlog for the 10 percent of buildings that need immediate improvement is estimated at $430 million.

Facility Preservation Budgets and Expenditures

1. **Budget Practices Create an Unintended Incentive for Institutions to Underfund Routine and Preventive Maintenance in Their Operating Budgets** - Underfunding of operating budget preservation activities prematurely shifts long-term preservation costs to the state-funded capital budget.
2. **Limited State Policy Guidance on Funding of Preservation** - State policy does not currently guide the distribution of preservation costs between appropriated and non-appropriated funds.
3. **Operating Budget Preservation Expenditures Fall Short of Benchmarks and are Declining** - JLARC's collection of expenditure information for this study suggests that recent institutional preservation expenditures from operating funds are declining in relative terms, while preservation expenditures from state capital funds are increasing. Overall, institutions are spending less on facilities preservation than the levels suggested by national benchmarks. In general, this is because of lower expenditures from predominantly institution-controlled operating funds. Institutional expenditures from predominantly state-controlled capital funds are generally closer to national benchmarks.
3. **Relationships Between Expenditures and Conditions Can be Tracked –** Tracking facilities conditions and preservation expenditures over time may improve the visibility and accountability of higher education preservation efforts.

CONCLUSIONS

1. **Existing Budget Practices May Not Promote Cost-Effective Preservation** - By creating an unintended incentive for institutions to under-fund operating budget preservation activities, the state's budget practices increase the risk of continued deterioration in building conditions and growing backlogs.
2. **Structural Change is Needed** - By itself, state capital funding directed at backlog reduction cannot address the structural budgeting and accountability issues that may contribute to the propagation of backlogs. A direction of shared responsibility between the state capital budget and higher education institutions, reflected in different budget and accountability systems, needs to be developed to remedy the existing situation.
3. **Backlog Reduction Funding Should be Coupled With Structural Changes** – If the state were to provide funding to institutions to reduce preservation backlogs, such

funding should be coupled to budget and policy changes that articulate state and institution roles and responsibilities with regard to facility preservation

4. **Incentives Need to be Created** – In order to foster preservation over time, incentives and budgetary mechanisms for institutions to adequately and equitably fund facility preservation from their operating funds, including both appropriated and non-appropriated funds, need to be created.
5. **Facility Conditions and Preservation Expenditures Should be Tracked Over Time** - Sustaining a state-led effort to track facility conditions and preservation expenditures over time could improve visibility and accountability with respect to higher education facility preservation.

RECOMMENDATIONS

Recommendation 1

The Legislature should designate an agency to sustain and expand the Comparable Framework to assemble information needed to support facilities-related budget and policy development for the 2005-07 and 2007-09 Biennia. The responsibilities of the designated agency should include:

a) Refining the comparable framework data collection, translation, and calibration methodologies developed for this study;

b) Updating the cost factors used to estimate current replacement value (CRV) and preservation backlogs;

c) Updating comparable framework data for use in upcoming budget cycles, including recalculating the Facilities Condition Index (FCI) for each institution;

d) Maintaining the comparable framework database for assembling and reporting needed information;

e) Designing and implementing a quality assurance process that includes field verification of comparable framework information on a sample basis to ensure data comparability and reliability;

f) Working with institutions to fill in existing gaps in comparable framework data, including dates of renewal and replacement of major building systems, and infrastructure inventories and conditions;

g) Developing methods to integrate the comparable framework with the reporting responsibilities of institutions under Governmental Accounting Standards Board (GASB) Statements 34 and 35, particularly regarding infrastructure assets.

h) Expanding the framework to include other comparable facility measures useful for state-level budgeting and accountability activities; [12]

i) Developing a biennial "facilities preservation report card" to synthesize, summarize, and publicize the facilities preservation information produced through the framework

[12] For example, the development of modernization measures consistent with those used for facility preservation could be explored.

for each institution, as well as the fiscal information generated under Recommendations 2 and 3 below; and

j) Reporting comparable framework results to the Legislature and Governor in September 2004, and September 2006, to support development of the state capital and operating budgets.

Legislation Required: Yes.
Fiscal Impact: Up to $500,000 per biennium.
Completion Date: September 2004 and September 2006.

Recommendation 2

The Office of Financial Management, in consultation with legislative fiscal committees and higher education institutions, should develop minimum thresholds for higher education operating and capital budget facility preservation expenditures, and procedures for consistent reporting of preservation expenditures to the state.

a) The minimum thresholds should be established on a dollar-per-square-foot basis and be tailored to each institution, taking into consideration both current expenditure levels and appropriate expenditure benchmarks. The minimum thresholds should also anticipate a phase-in period of up to six years, with full compliance expected by the end of the 2007-09 Biennium.

b) Operating budget preservation expenditures should be reported using clearly defined subprograms. Capital budget preservation expenditures should also be reported using uniform reporting categories. OFM should consult with individual institutions, the SBCTC, and the Legislative Evaluation and Accountability Program Committee (LEAP) when developing reporting requirements and protocols for this fiscal information.

Legislation Required: None.
Fiscal Impact: Potential impacts to some of the individual institutions.
Completion Date: December 2003, for initial implementation in Fiscal Year 2005.

Recommendation 3

The Office of Financial Management (OFM) should develop operating and capital budget funding policies governing the distribution of higher education facility preservation costs between appropriated and non-appropriated funds. At a minimum, the funding policies should:

a) Restrict institutions from using state general fund resources to subsidize facility preservation costs that should be paid from non-general fund sources;

b) Require institutions to disclose all funding sources available for maintaining buildings when requesting additional state funding for this purpose.

When developing these funding policies, OFM should take into consideration the directions articulated in its September 2002 report on Higher Education Capital Funding Guidelines.

Legislation Required: None.
Fiscal Impact: No additional costs, but potential shifts among funding sources.
Completion Date: December 2003, for initial implementation in Fiscal Year 2005.

Recommendation 4

The Legislature should consider examining options for a centrally administered higher education preservation backlog reduction funding process within the capital budget that creates incentives for public higher education institutions to improve and sustain their facility preservation efforts. Potential options could include, but not be limited to, the following:

- ***a) Designating a state agency to design and operate a pilot project, and associated processes, for partially funding backlog reduction in the 2003-05 Biennium;***
- ***b) Considering eligibility criteria that would give priority to those higher education institutions that are in compliance with minimum preservation expenditure thresholds;***
- ***c) Distributing funding using criteria assembled through the development of the Comparable Framework in this JLARC study; and***
- d) ***Developing targeting criteria for backlog reduction resources that would be in line with overall state higher education policies.***

Legislation Required: Yes.
Fiscal Impact: Unknown. (Does not necessarily require new resources.)
Completion Date: 2003 Legislative Session.

COMMITTEE ADDENDUM

The Joint Legislative Audit and Review Committee approved this addendum to the final report at its January 8, 2003 meeting.

The Joint Legislative Audit and Review Committee recognizes the recommendations within the Higher Facilities Preservation Study as appropriate interim steps to correct the acute facilities preservation issues analyzed in the report. However, the Committee also expresses a concern that sustaining these recommendations over time will require more complete reform of higher education budget, performance, and accountability systems. The Committee suggests that the Legislature and Governor consider examining other potential changes to higher education budgeting and management systems, as well as the legislative processes used to evaluate the performance of higher educational institutions, to foster improved management of institutions' complete financial performance, including but not limited to, facilities preservation and stewardship.

AGENCY RESPONSES

We have shared this report with the Office of Financial Management, the Higher Education Coordinating Board, and the State Board for Community and Technical Colleges and provided them an opportunity to submit written comments. Their responses are included as Appendix 2. JLARC's comments on these agency responses follow as Appendix 2A. The Council of Presidents' Office (COP), representing the six state baccalaureate institutions, has also prepared comments on the study. The COP comments, as well as JLARC's response, are included as Appendix 8.

ACKNOWLEDGEMENTS

We appreciate the assistance of the legislative members and staff who participated on the Legislative Advisory Committee, as well as the institution staff that responded to our information requests and hosted site visits and field surveys. In particular, we would like to thank the members of the Technical Review Panel for their considerable efforts throughout the course of this study. Finally, we would also like to acknowledge the contributions of Eric Meng, who served as our primary consultant on this study.

Thomas M. Sykes
Legislative Auditor

On January 8, 2003, this report was approved for distribution by the Joint Legislative Audit and Review Committee.

Representative Val Ogden
Chair

APPENDIX 1 – SCOPE AND OBJECTIVES

HIGHER EDUCATION FACILITY PRESERVATION STUDY: MAINTENANCE, REPAIR, AND RENEWAL MANAGEMENT AND BUDGETING

SCOPE AND OBJECTIVES

OCTOBER 31, 2001

STATE OF WASHINGTON
JOINT LEGISLATIVE AUDIT AND REVIEW COMMITTEE

STUDY TEAM

Karl Herzog
Larry Brubaker
Stephanie Hoffman

LEGISLATIVE AUDITOR

TOM SYKES

Joint Legislative Audit & Review Committee
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BACKGROUND

Washington's public higher education facilities cover over 43 million square feet of space, constituting approximately two-thirds of all state facilities. These state assets, representing a significant investment of public funds, are located at over 200 sites and managed by 40 separate institutions. Ongoing investment in a variety of maintenance, repair, and renewal activities is necessary to ensure that these assets are preserved, that facility-related health and safety requirements and education and research needs are met, and that facility life-cycle costs are minimized.

Little information is available to the Legislature, Governor, and state Higher Education Coordinating Board to gauge the overall condition of higher education facilities, the adequacy of maintenance and repair management activities and expenditures, and the magnitude and severity of preservation backlogs. The 2001-03 state capital budget provides funding and direction to the Joint Legislative Audit and Review Committee (JLARC) to conduct a study of higher education facility conditions, maintenance, repair, and renewal. A final report is due to the Legislature by September 15, 2002.

PROPOSED STUDY SCOPE

The JLARC Higher Education Facility Preservation Study will examine the condition, maintenance, repair, and renewal of state higher education facilities, including those within the six baccalaureate institutions and the community and technical college system. The study will produce information about higher education facility preservation that can be applied during the 2003-05 legislative budgeting process, as well as explore a framework for ongoing preservation reporting, management, and budgeting.

PROPOSED STUDY OBJECTIVES

1. Describe and assess the current and historic management and budgeting for higher education facility preservation, maintenance, repair, and renewal projects and activities.
2. Describe and assess the age, type, and condition of state higher education facilities on a comparable, statewide basis.
3. Describe and assess the magnitude of preservation backlogs on a comparable, statewide basis.
4. Identify, and assess the severity of, any health and safety, program delivery, and life-cycle cost issues and risks associated with facility conditions and preservation backlogs.
5. Recommend improvements to higher education facility preservation reporting, management, and budgeting to ensure both prudent stewardship of these facilities and the ongoing availability of complete, reliable, and comparable facility preservation information across Washington's public higher education institutions.

PROPOSED ADVISORY AND TECHNICAL GROUPS

- **Legislative Advisory Group** made up of interested legislators from JLARC, fiscal committees, and relevant policy committees, as well as committee and caucus staff. The first meeting is scheduled from 10:00 a.m. – 12:00 noon, November 14, 2001, at the SeaTac Holiday Inn.

- **Technical Review Panel** made up of staff from the Office of Financial Management (OFM), the Higher Education Coordinating Board (HECB), the State Board for Community and Technical Colleges (SBCTC), and individual baccalaureate institutions. The first meeting is scheduled from 10:00 a.m. – 1:00 p.m., November 27, 2001, at the SeaTac Holiday Inn.

OVERVIEW OF PROPOSED STUDY APPROACH

- The study approach recognizes that the Legislature, Governor, and HECB have expressed a need for more complete preservation information that is reliable and comparable across institutions. It also recognizes that individual institutions have generally developed their own management and budgeting approaches to facility preservation, while requesting state funding to address their facility preservation priorities.

- Rather than assuming that institutions' existing condition assessment and preservation management approaches need to be modified or supplanted by a uniform system, JLARC will attempt to construct, in consultation with the technical review panel and with assistance from facility preservation consultant(s), methods to translate and cross-walk existing preservation information produced and maintained by each of the institutions into a **comparable framework.**

- JLARC will engage appropriate facilities preservation consultant(s) to work in collaboration with JLARC and higher education agency staff to translate existing preservation information into this comparable framework. Consultant(s) will also assist JLARC in verifying preservation information maintained by individual institutions on a sample basis.

- This proposed comparable framework will be designed to include the key information identified in proposed study objectives 2, 3, and 4, and will be available for the 2003-05 legislative budgeting process. If, as the study progresses, we find that translation is not possible for some institutions or will leave too many missing gaps, then at that time we will more explicitly address potential changes to institutions' underlying methodologies and systems.

- In addition to the framework, JLARC will prepare several workpapers exploring relevant aspects of facility preservation management and budgeting. Examples will include: existing condition assessment, preservation management, and budgeting methodologies used by the SBCTC and individual institutions; the current and historic policy and budget context surrounding higher education facility preservation; and preservation approaches in other states. These workpapers will be generated for technical review by legislative staff, OFM, HECB, SBCTC, and the higher education institutions as they are developed.

JLARC STAFF CONTACT FOR THE STUDY

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APPENDIX 2 – AGENCY RESPONSES

- Office of Financial Management
- Higher Education Coordinating Board
- State Board for Community and Technical Colleges

JLARC's comments on agency responses follow as Appendix 2A.

NOTE: Comments by the Council of Presidents' Office (COP), as well as JLARC's response, are included as Appendix 8.

STATE OF WASHINGTON
OFFICE OF FINANCIAL MANAGEMENT
Insurance Building, PO Box 43113 • Olympia, Washington 98504-3113 • (360) 902-0555

RECEIVED
DEC 16 2002
JLARC

December 13, 2002

TO: Thomas M. Sykes, Legislative Auditor
Joint Legislative Audit and Review Committee

FROM: Marty Brown, Director MB

SUBJECT: **HIGHER EDUCATION FACILITY PRESERVATION STUDY – PRELIMINARY REPORT**

Thank you for the opportunity to comment on the preliminary report on the Higher Education Facility Preservation Study presented to the Joint Legislative Audit and Review Committee (JLARC) at its December 4 meeting. I generally concur with the report's findings.

Current budget practice is to provide General Fund-State money to colleges and universities by paying a fixed amount for each student FTE, with a portion of this amount intended for facility preservation. However, the state currently does not place restrictions on how the college or university spends these funds to assure that this portion goes to preservation. Each college and university exercises considerable discretion as to how it collects and spends significant amounts of non-appropriated funds (tuition, fees, federal grants, and private grants).

I agree with the report that implementation of its recommendations will not be cost-free. Needed changes to budgeting practices, policies, and data reporting systems could require significant lead times and resources not currently available to us or to the other involved agencies. The ability to properly carry out these new responsibilities depends on adequate and ongoing funding.

RECOMMENDATION	AGENCY POSITION	COMMENTS
1 – Designate an Agency.	Partially concur	There is an implication that the fiscal impact would end with the completion date of September 2006. It is our opinion that the maintenance and continuation of the described responsibilities would require significant ongoing funding and/or staffing. Given the nature of these recommendations, a private contractor may be helpful for accomplishing the proposed activities.
2 – OFM should develop thresholds and procedures for reporting.	Partially concur	The level of spending on preservation is only one of several indicators that could show if a college or university is adequately preserving its facilities.

2 (continued) – OFM should develop thresholds and procedures for reporting.	Partially concur	Formally establishing a minimum threshold – and a timetable for meeting it – will emphasize spending levels, but a focus should also be on the end result: having well-maintained buildings at the least cost. Better reporting of preservation and capital renewal spending should improve oversight of capital planning, budgeting, and expenditures by the Office of Financial Management (OFM), the Legislature and the colleges and universities. But, OFM does not currently have the data systems and support to implement this recommendation. Moreover, the cost of gathering the information should be balanced against the value of its use in subsequent decision-making.
3 –OFM should develop policies on preservation cost allocations.	Partially concur	This recommendation presents a departure from current practice. Unless the Legislature directs spending through a proviso, the state now allows colleges and universities broad discretion to determine which funds and how much is used to pay for preservation activities. Full disclosure of preservation funding can improve oversight of capital planning, budgeting, and expenditures by OFM, the Legislature, and the colleges and universities.
4 – The Legislature should consider funding options.	N/A	

OFM capital budget staff members have enjoyed working with Karl Herzog and Larry Brubaker on this report. Thank you, again, for the opportunity to comment.

cc: Karl Herzog, JLARC
Larry Brubaker, JLARC
Mike Roberts, OFM
Tom Boyer, OFM
Jim Crawford, OFM
Theo Yu, OFM

BOB CRAVES
Chair

MARC GASPARD
Executive Director

STATE OF WASHINGTON
HIGHER EDUCATION COORDINATING BOARD
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JLARC

December 10, 2002

Thomas M. Sykes
Legislative Auditor
Joint Legislative Audit and Review Committee
P. O. Box 40910
Olympia, WA 98504-0910

Dear Tom:

Thank you for requesting the comments of the Higher Education Coordinating Board (HECB) on the recommendations contained in your December 4, 2002 report of the *Higher Education Facilities Preservation Study* which your office provided on November 28, 2002.

We feel that the study you have undertaken provides a significant opportunity and first step in extending our understanding of the estimated physical condition of our state's higher education physical plant. In this regard, we feel that the ongoing development of the comparable framework will offer elected officials an important tool in prioritizing and arriving at difficult budgetary decisions; which, we feel, is the ultimate and sole test of the value of this type of information.

Before proceeding to our position on the four recommendations, we feel it important to clarify and emphasize the context of our responses. Specifically, the Legislature has charged the HECB with the responsibility of providing a state-wide perspective on the needs and priorities of our state's system of public higher education. Our enabling statute specifically directs the Board to assess these needs and priorities beyond the interests of the individual institutions; both the public two-year and four-year institutions.

While we welcome the opportunity to provide our comments in the above context of the Board's mission, and certainly will value the comments of the Governor's Office of Financial Management and the State Board for Community and Technical Colleges, we feel it important that the JLARC also request the comments and insights of the independently governed public four-year institutions on the important recommendations contained in this report.

Our comments on the report's four recommendations follow. We have used the suggested format for providing these responses. Please feel free to contact me to discuss our response.

Sincerely,

Marcus S. Gaspard
Executive Director

MSG:JR:cs
Enclosure

cc: HECB Members
Marty Brown
Earl Hale
Presidents of four-year institutions
JLARC Members

Recommendation	Agency Position	Comment
# 1 - *Designate an entity to further refine and administer the comparable framework of condition assessment*	**Partially Concur**	In the context of our previous statements, we concur with the logic of designating an entity to coordinate and administer the on-going refinement and coordination of building/program condition assessment information. This work appears to fall within the scope of the HECB's statutory responsibilities. Whether the designated entity is the HECB or another agency, we believe it will be necessary to collaboratively define the scope of this project. We feel that this refinement and coordination of information should continue to recognize the importance of the active participation of representatives of all sectors of public higher education, and be accomplished in a coordinated manner. Additionally we believe that the proposed refinement of the information gathering efforts should include an assessment of the programmatic suitability of spaces for modern learning needs.
#2 - *Establish thresholds for preservation and maintenance funding*	**Partially Concur**	Such benchmarks can be useful if they are recognized as a **guide** in developing operating and capital funding decisions. However, we believe that state appropriation decisions for public higher education should recognize the latitude of the two and four-year sectors to exercise institutional priorities in the allocation of appropriated funds. And, that any additional funds appropriated to reach the thresholds should be additive to current institution budgets.

Recommendation	Agency Position	Comment
#3 - *Establish state operating and capital funding policy*	**Partially Concur**	We are supportive of the study effort provided by MGT of America, Inc. to the Office of Financial Management. These findings recommend that formal policies be adopted for practices that, for the most part, are already in effect. We believe though that further consideration should be given to the MGT recommendation that state funds not be used for spaces housing non-state funded research activities. Specifically, we feel that in certain areas the value and state-wide benefits of the research can warrant some level of state investment. We would also ask that the JLARC give further consideration to the recommendation that the institutions undertake a new reporting process for all funds used for maintenance or "preservation" of facilities.
#4 - *Establish a centralized authority for allocating funds appropriated for preservation*	**Do Not Concur**	We believe that the potential of the comparable framework system has the opportunity to add value to the existing process of adopting and executing the state's budget. If effective, this additional information will aid elected officials in carrying-out their responsibilities. We do not believe that an additional "step" in an already lengthy budget allotment/allocation process will help in addressing the preservation backlog problem.

WASHINGTON STATE BOARD FOR
COMMUNITY & TECHNICAL
COLLEGES

December 9, 2002 Ref: 02-31-70

Thomas M. Sykes, Legislative Auditor
Joint Legislative Audit and Review Committee
506 16th Avenue SE
Olympia, WA 98501

RE: Response to Higher Education Facility Preservation Study – Agency Response to Preliminary Report

Dear Mr. Sykes:

Thank you for your November 27, 2002 request asking for the State Board for Community and Technical Colleges (SBCTC) response to the JLARC Higher Education Facilities Preservation study. SBCTC gained an appreciation of the difficulty of pulling together a substantial amount of data and trying to tie together dissimilar information. Our system appreciates JLARC's efforts to provide uniform definitions. In addition, creating a structure for the comparable framework allowed for general comparisons of condition, current replacement value and a better approximation of the relative backlogs across the higher education system. The process provided greater insight into the data base structures across the state and in some cases identified major holes or missing processes for facility condition assessment. The study took a great deal of time for the agencies associated with its development.

While the JLARC study did provide a framework for making some important improvements to our inventory system, we believe the two-year college system is doing a reasonable job at maintaining its inventory and budgeting process. The following is a description of the process already in place:

- SBCTC uses a common Facility and Equipment system, which provides a comprehensive inventory system that tracks 100% of state owned facilities and 100% of leased space and buildings under 24-hour control. This system tracks the major uses of rooms and assignable space with buildings, type, key dates, and overall gross square feet. The system is updated as colleges renovate, replace add new inventory, or remove structures. Computer files are checked and verified annually in April/May just prior to submitting the OFM Facility and Inventory System data.

Earl Hale, Executive Director 319 SE 7th Avenue P.O. Box 42495 Olympia, Washington 98504-2495 (360) 753-2000 FAX (360) 586-6440

- SBCTC uses a separate Facility Condition Survey to evaluate the condition of sites and state owned facilities. A consulting contract with an independent architectural and engineering firm is entered into each biennium to survey owned facilities across the system. This statewide evaluation and survey produced results similar to the JLARC study. There is a small variance as our system includes a component that addresses the functionality of the building and its future usefulness, a component that was removed in the JLARC comparable framework.

- SBCTC also uses the third party consultant to survey capital repair needs across all 34 colleges in state owned facilities (excluding enterprise facilities, dormitories, structured parking garages, temporary facilities, and structures scheduled to be replaced or renovated in the near future) and establish a severity index to prioritize these repairs.

SBCTC lacks inventory and tracking of infrastructure and relies on detailed engineers reports and estimates as and when problems are identified. Infrastructure inventory and monitoring must be improved. The Operations and Facilities Council, a system wide organization of plant managers, is currently evaluating how we can code, measure, and track the condition of infrastructure on a uniform basis across the 34 community and technical colleges.

While elements of the data cross-walked directly the JLARC comparable framework, a substantial amount of manual interface and effort was needed to fill in information gaps and provide new data elements. While JLARC provides an overall summary across all of higher education that helps judge the health and trends of the state owned facilities, JLARC's framework is not beneficial in making the key budgeting decisions needed within our system of two-year colleges each biennium. SBCTC's primary goal is to maintain a system that provides reliable and comparable data for our 34 colleges, and to improve it when it makes sense. Further, time and effort needs to ensure quality and fairness of the underlying data, which we do through our biennial Facility Condition Survey. It is essential to provide a well understood and accepted database for decisions not only on repairs but also to help select and set priorities on renovation and replacement projects.

Thanks you for the opportunity to respond to the preliminary report. The following attachment includes our response to the recommendations of the committee.

Sincerely,

Tom Henderson

Tom Henderson
Assistant Director, Capital Budget

Attachments

State Board for Community and Technical Colleges
Response to JLARC Higher Education Facilities Preservation Study
December 5, 2002

JLARC Recommendation	Agency Position	Comments:
Recommendation 1: The Legislature should designate an agency to sustain and expand the Comparable Framework to assemble information needed to support facilities-related budget and policy development for the 2005-07 and 2007-09 Biennia.	Partially concur	SBCTC has no recommendation for an agency to sustain the Comparable Framework data, however, we believe it will take at least $500,000 a biennium to hire and support an independent contractor to gather data, do quality checks, and manage the manual updates to fill in gaps. Even in this report there are SBCTC data that need to be changed which were not caught during the manual review of the database. For example; two-year colleges do not have research space but the automated translation took some of our business space and coded it to research (303,471 square feet). We concur it is important to better understand and inventory infrastructure as facilities in this area have been extremely costly and a growing problem for our system over the past few years. Expanding the framework may represent a costly and not very beneficial improvement to the system. SBCTC is concerned about tracking major building systems dates of renewal and replacement. Updating key tables and curves each biennium from this JLARC study may be a more prudent approach to building a "facilities preservation report card".

Recommendation 2: The Office of Financial Management, in consultation with legislative fiscal committees and higher education institutions, should develop minimum thresholds for higher education operating and capital budget facility preservation expenditure, and procedures for consistent reporting of preservation expenditure to the state.	Do not concur.	The data requirements and structure for comparative financial information should be established and understood before building a process that directs funding for capital and operating dollars. More work should be done on defining accounting procedures building comparable systems and accurate data before this recommendation can be advanced. Further, SBCTC has approximately $13.5M in un-funded operating and maintenance costs for buildings coming on-line in 2001-03. We are requesting these funds for the third time in the 2003-05 SBCTC operating budget. Had these funds been appropriated to colleges there would have been a different expenditure structure. When we do get money it is often to little to do the job. O&M cost per square foot for new facilities have been defined in pre-designs and in all cases were funded at a substantially lesser amount. Thresholds should not be set without predictable and adequate funding for the operating and maintenance of new facilities.
Recommendation 3: The Office of Financial Management should develop operating and capital budget funding policies governing the distribution of higher education facility preservation costs between appropriated and non-appropriated funds, and restricting the use of state general fund resources to subsidize facility costs that should be paid from non-general fund sources.	Partially concur.	We agree that a policy to restrict the use of state funds on self-supported enterprise functions is important. The primary revenue for SBCTC is state funding and tuition. Disclosure of all funding sources for maintaining buildings may set up an inconsistency in maintenance funding where funding of similar facilities at other two-year colleges is directly funded by the state.

Recommendation 4: The Legislature should consider examining options for a centrally-administered higher education preservation backlog reduction funding process within the capital budget that creates incentives for institutions to improve and sustain their facility preservation efforts.	Do not concur.	This recommendation requires a substantial investment of capital dollars. You cannot take a system that has 47% of its inventory in Building Condition 3,4 & 5 and expect to drive improvement without substantial investment. Further, building condition alone does not drive the need to replace and renovate a building. Buildings may be safe and clean, but totally inadequate to support the education environment and too poorly constructed to reasonably and economically be renovated. If it takes more than 80% of the Current Replacement Value (CRV) to provide an additional 20 years of "compromised use" it is generally better to replace the structure. For the two-year college system, maintaining a lot of small buildings with exterior circulation and ill articulated spaces is not cost effective and will not serve students well. The backlog should be addressed in a balanced process, which includes repair decisions as well as renovation and replacement decisions. Repair investments should be made in structures where the usable life will be sustained or improved by the investment. The backlog associated with the worst 10% of facilities (33% of the backlog cost) is probably handled best by a major renovation or replacement. Supporting predictive modeling or meeting a threshold measure may not be basis for allocating funds. The funding decision process should be driven by good planning and prioritization rather than by an artificial formula based distribution.

APPENDIX 2A – JLARC'S COMMENTS ON AGENCY RESPONSES

Summary of Recommendation 1: The Legislature should designate an agency to sustain and expand the Comparable Framework to assemble information needed to support facilities-related budget and policy development for the 2005-07 and 2007-09 biennia.

OFM position: Partially Concur.

HECB position: Partially Concur.

SBCTC position: Partially Concur.

Summary of Agency Responses: Agency responses are generally supportive of this recommendation. Filling in missing site and campus infrastructure information, and including "programmatic" issues (e.g. facility modernization) are mentioned as priorities. Concerns are raised about the ongoing costs of sustaining and expanding the framework.

Auditor Comments on Agency Reponses: The costs of sustaining and expanding the framework should be examined in light of the amount of space involved (2/3 of all state facilities), asset value ($11.5 billion for buildings only), and preservation backlogs ($1.3 billion for buildings only). During meetings of the Technical Review Panel convened for this study, higher education institutions strongly supported tracking facility conditions over time, and expanding the framework to include site and campus infrastructure and facility modernization.

Summary of Recommendation 2: The Office of Financial Management should develop minimum thresholds for higher education facility preservation expenditures, and procedures for consistent reporting of preservation expenditures to the state.

OFM position: Partially Concur.

HECB position: Partially Concur.

SBCTC position: Do Not Concur.

Summary of Agency Responses: Agencies indicate that preservation spending is one of several indicators of preservation adequacy, that minimum spending thresholds should be used only as a guide for budget decisions, and that "additive" state appropriations should be provided to institutions in order to meet the thresholds. Agencies question the validity of thresholds if the state does not provide the full amount of preservation funding requested by institutions, and indicate that new accounting procedures would have to be developed in order to make consistent preservation expenditure reporting possible.

Auditor Comments on Agency Reponses: As detailed in this report, state appropriations represent only one of many sources of funding available to institutions to maintain buildings.

JLARC acknowledges that new accounting procedures would have to be developed by OFM to implement this recommendation. However, the needed preservation expenditure information is already produced and maintained by institutions, is reported to the HECB

every four years for the Education Cost Study, and was collected by JLARC for this study in a straightforward manner. In addition, OFM has recently collected similar information from agencies for its "Maintenance Summary Reports."

In Fiscal Year 2001, institutions spent approximately $43 million on facility maintenance from their operating budgets, representing **less than two percent** of their total education and general expenditures. On a statewide basis, meeting the operating budget preservation benchmarks cited in this JLARC report would require an additional $13 million in spending. This is only a tiny fraction of the estimated $1.3 billion preservation backlog, and $11.5 billion in total estimated asset value. Though JLARC acknowledges that factors other than preservation expenditures influence building conditions (e.g. facility age, use, quality of original construction, etc.), expenditure levels are an important indicator of institution facility stewardship efforts, and can be measured uniformly across institutions over time.

During the course of this study, OFM followed a JLARC suggestion to include consistent budget categories and definitions for agency "minor works" projects, including small preservation projects, in its 2003-05 capital budget instructions. However several higher education institutions did not follow the new instructions in their 2003-05 budget requests. Having appropriate legislative accountability for facilities preservation will likely be impossible without consistently structured budget requests and reporting of expenditures.

Summary of Recommendation 3: The Office of Financial Management should develop operating and capital budget funding policies governing the distribution of higher education facility preservation costs between appropriated and non-appropriated funds.

OFM position: Partially Concur.

HECB position: Partially Concur.

SBCTC position: Partially Concur.

Summary of Agency Responses: Agency responses are generally supportive of this recommendation. The importance of restricting state funding in facilities that are intended to be self-supporting is highlighted, and state support for research activities is encouraged.

Auditor Comments on Agency Reponses: No comments.

Summary of Recommendation 4: The Legislature should consider examining options for a centrally administered preservation backlog funding process within the capital budget that creates incentives for public higher education institutions to improve and sustain their facility preservation efforts.

OFM position: N/A.

HECB position: Do Not Concur.

SBCTC position: Do Not Concur.

Summary of Agency Responses: Agencies indicate that this recommendation requires a substantial investment of capital dollars, that funding should not be formula-driven, and that a central pool would add another step to the budget process. In addition, agencies

stress that backlog reduction should be part of a balanced process that considers repair, renovation, and replacement options.

Auditor Comments on Agency Reponses: Major renovation and replacement projects, while necessary for some buildings, are an expensive way to "buy back" the full preservation backlog across the state. It is likely that cost-effective backlog reduction can be accomplished through prioritized and targeted repair and system-replacement funding—drawing from all relevant revenues available to our higher education institutions.

The Capital Budget has conventionally included a number of centrally administered funding pools targeted at specific objectives. Examples include community college repair pools managed by the SBCTC; branch campus acquisition and construction pools managed by OFM; asbestos, underground storage tank, and Americans with Disabilities Act (ADA) pools managed by OFM; and numerous local government grant and loan programs. Correctly designed, centrally administered funding pools can improve the visibility and focus of the funding process, and foster more effective application of legislative and executive policies. In addition, such pools can facilitate tracking of funding "inputs" over time, thus yielding greater accountability to the public and their elected representatives for expenditures of public funds.

APPENDIX 3 – DETAIL ON FACILITY INVENTORIES

This appendix summarizes the facility inventory information in the Comparable Framework.

Summary Number	Page	Title	Highlights
3-1	52	*Distribution of All Publicly-Owned Buildings Across Washington's Public Higher Education Institutions*	❖ Total of 2,463 buildings at 133 sites covering 52 million gross square feet (GSF) ❖ 53% of space is at the 2 research universities ❖ 28% of space is at the 34 community & technical colleges ❖ 18% of space is at the 4 regional universities
3-2	53	*Funding Sources Used for Major Higher Education Capital Projects*	❖ Institutions report that they rely on state capital budget funding for 76% of their buildings.
3-3	54	*Higher Education Building Sizes*	❖ Average building size is 21,196 GSF. ❖ Most buildings are under 20,000 GSF. ❖ Buildings over 20,000 GSF contain the vast majority (85%) of higher education space.
3-4	55	*Focus of JLARC's Detailed Data Collection*	❖ JLARC focused its detailed data collection on buildings over 2,000 GSF that rely entirely or partly on state capital budget support.
3-5	56	*Ages of Public Higher Education Buildings*	❖ Over one-half of all buildings are over 30 years old. ❖ The average age of all buildings is 36 years (weighted by GSF).
3-6	57	*Use of Public Higher Education Buildings*	❖ Teaching and studying buildings represent over 50% of higher education space across institutions.
3-7	58	*Higher Education Building Construction Types*	❖ The vast majority (88%) of buildings are of "heavy" or "medium" construction.
3-8	59	*Current Replacement Value (CRV)*	❖ JLARC's estimated current replacement value (CRV) of all higher education buildings is $11.5 billion. ❖ 52% of CRV is at the 2 research universities. ❖ 33% of CRV is at the 34 community & technical colleges. ❖ 15% of CRV is at the 4 regional universities/state college.

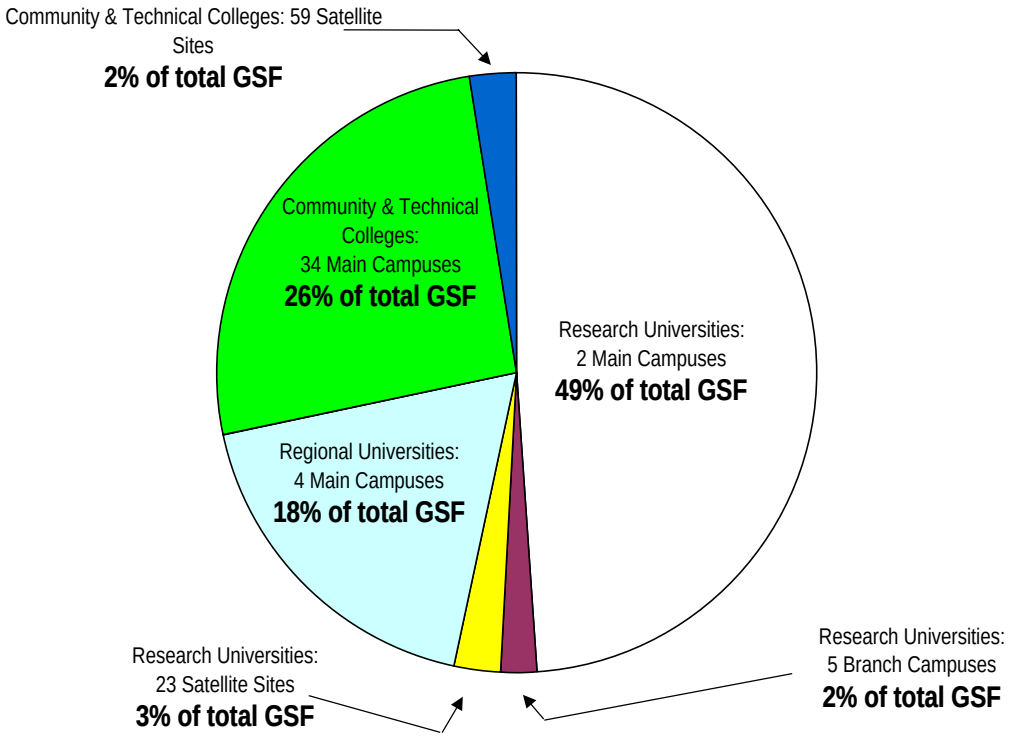
Summary 3-1

DISTRIBUTION OF ALL PUBLICLY OWNED BUILDINGS ACROSS WASHINGTON'S PUBLIC HIGHER EDUCATION INSTITUTIONS

52 million gross square feet (GSF): 2,463 buildings at 133 sites

- ***Just over one-half of all owned space is controlled by Research Universities.***
- ***Just over one-quarter of all owned space is controlled by Community and Technical Colleges.***
- ***About one-fifth of all owned space is controlled by Regional Universities.***
- ***About 94% of all owned space is located at the 40 main campuses (2 research, 4 regional, 34 comm./tech. colleges).***

Research Universities Control Half of All Higher Education Space



BY SITE TYPE

	GSF	% of Total GSF	# Sites	# Buildings
Research Universities - Main Campuses	25,589,573	49.0%	2	709
Research Universities - Branch Campuses *	973,443	1.9%	5	36
Research Universities - Satellite Sites	1,340,533	2.6%	23	447
Regional Universities - Main Campuses	9,451,781	18.1%	4	326
Regional Universities - Satellite Sites	70,151	0.1%	6	13
Comm./Tech. Colleges - Main Campuses	13,509,473	25.9%	34	810
Comm./Tech. Colleges - Satellite Sites	1,271,363	2.4%	59	122
TOTALS	52,206,317	100.0%	133	2,463

BY INSTITUTION TYPE

	GSF	% of Total	# Sites	# Buildings
Research Universities *	27,903,549	53.4%	30	1,192
Regional Universities	9,521,932	18.2%	10	339
Comm./Tech. Colleges	14,780,836	28.3%	93	932
TOTALS	52,206,317	28.3%	133	2,463

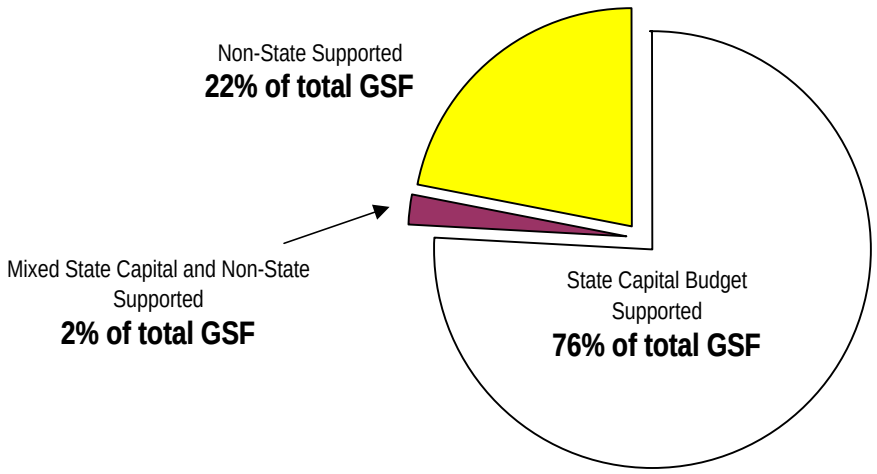
* Includes the SIRTI building at the Riverpoint Campus in Spokane, shared by WSU & EWU.

Summary 3-2

FUNDING SOURCES USED FOR MAJOR HIGHER EDUCATION CAPITAL PROJECTS

* *Institutions rely on State Capital Budget funding support for over three-quarters of their buildings (by gross square feet).*
* *For remaining buildings, institutions rely on capital funds from non-state sources (e.g., dormitory and student services fees).*

Over three-fourths of Higher Education Buildings Receive Support from the State Capital Budget



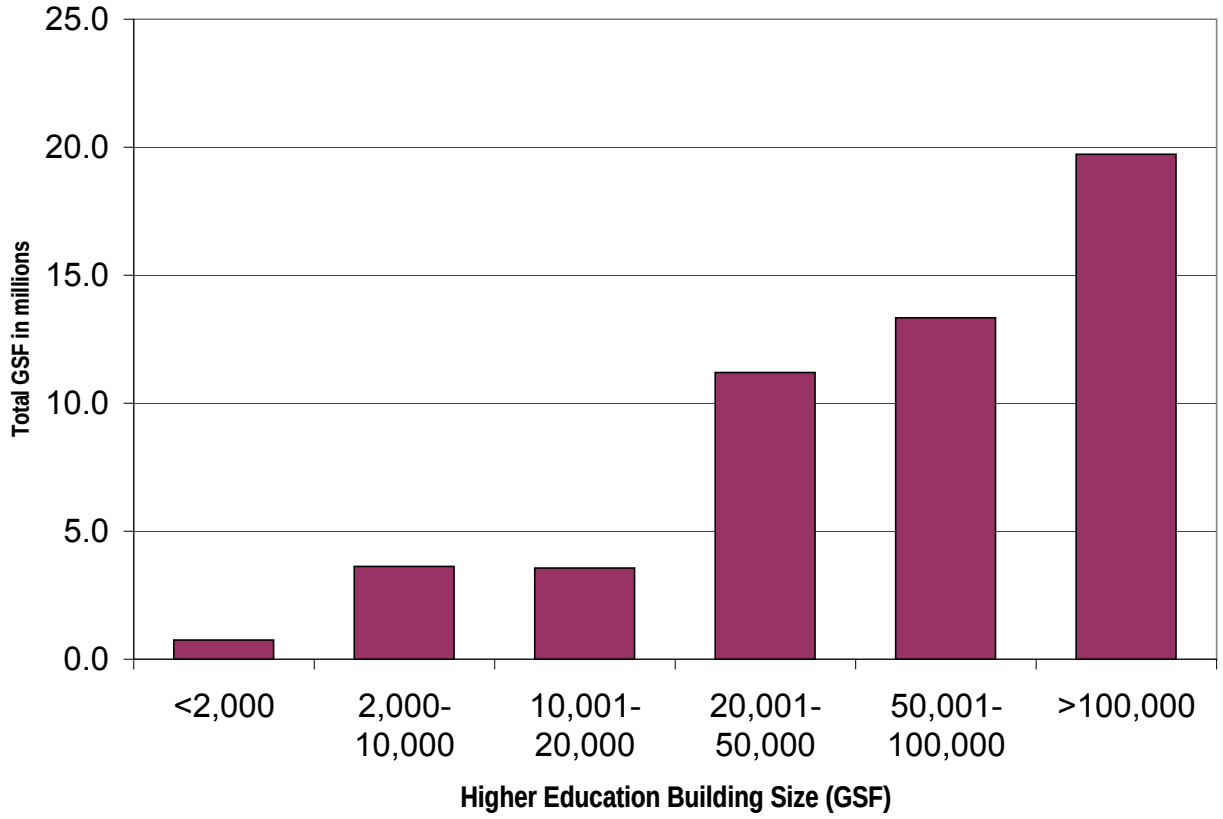
INSTITUTION	STATE CAPITAL BUDGET SUPPORTED FACILITIES		MIXED SUPPORTED FACILITIES		NON-STATE SUPPORTED FACILITIES	
	# of Facilities	GSF	# of Facilities	GSF	# of Facilities	GSF
University of Washington	268	11,058,515	1	32,098	71	5,314,695
Washington State University	646	7,960,244	25	652,016	181	2,826,659
Eastern Washington University	56	1,625,368	3	198,368	13	596,132
Central Washington University	53	1,631,998	2	126,903	36	1,087,476
The Evegreen State College	32	1,106,230	-	-	40	272,583
Spokane Intercollegiate Research & Technology Institute	1	59,322	-	-	-	-
Western Washington University	64	1,769,668	1	15,396	38	1,091,810
Community & Technical Colleges	922	14,336,127	6	188,352	4	256,357
TOTALS	2,042	39,547,472	38	1,213,133	383	11,445,712

Summary 3-3

HIGHER EDUCATION BUILDING SIZES

* *The average building size across all institutions is 21,196 gross square feet (GSF).*
* *The largest number of buildings are less than 20,000 GSF, yet together these smaller buildings comprise only 15% of all higher education space.*
* *Though there are fewer large buildings, these buildings contain the vast majority (85%) of higher education space.*

Most Public Higher Education Space is in Large Buildings



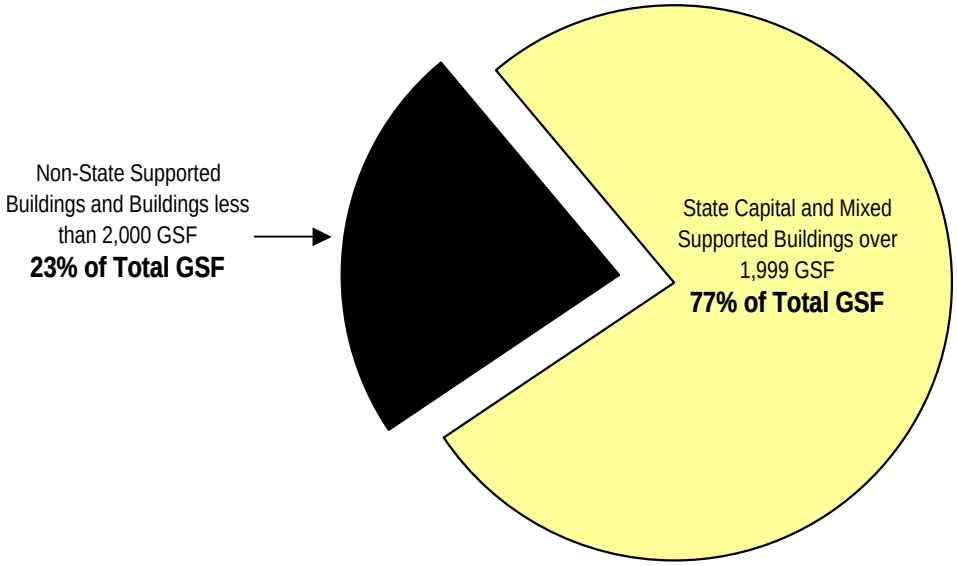
BUILDING SIZE (in GSF)	TOTAL GSF	% of Total GSF	# OF BUILDINGS	AVERAGE GSF PER BUILDING
<2,000	755,770	1.4%	845	894
2,000-10,000	3,626,016	6.9%	716	5,064
10,001-20,000	3,561,566	6.8%	248	14,361
20,001-50,000	11,202,296	21.5%	347	32,283
50,001-100,000	13,339,551	25.6%	190	70,208
>100,000	19,721,118	37.8%	117	168,557
TOTAL	52,206,317	100.0%	2,463	21,196

Summary 3-4

JLARC STUDY FOCUSED ON STATE AND MIXED SUPPORTED BUILDINGS OVER 1,999 GSF

* *JLARC focused its detailed data collection and translation activities on buildings over 1,999 GSF that rely entirely or partly on state capital budget support.*
* *These 1,343 buildings cover 40.1 million GSF, or roughly 77% of the entire inventory.*

JLARC Study Focused on 77% of Higher Education Space



INSTITUTION	TOTAL OWNED BUILDINGS		FOCUS OF JLARC'S DATA COLLECTION & TRANSLATION		
	# of Buildings	GSF	# of Buildings	GSF	% of Total GSF
UW	340	16,405,308	198	11,030,795	67%
WSU	852	11,438,919	320	8,336,317	73%
EWU	72	2,419,868	43	1,807,503	75%
CWU	91	2,846,377	46	1,752,327	62%
TESC	72	1,378,813	20	1,097,288	80%
SIRTI	1	59,322	1	59,322	100%
WWU	103	2,876,874	41	1,759,742	61%
CCTCs	932	14,780,836	674	14,253,591	96%
TOTAL	2,463	52,206,317	1,343	40,096,885	77%

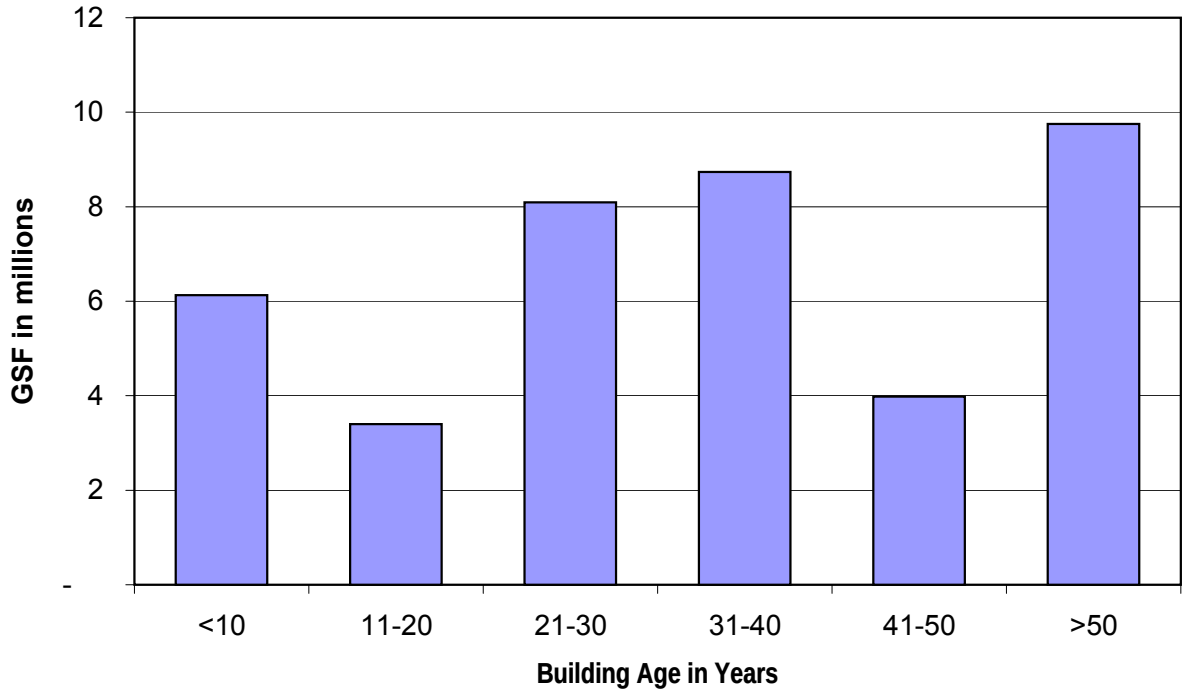
Summary 3-5

AGES OF PUBLIC HIGHER EDUCATION BUILDINGS

(State and Mixed Supported Buildings Over 1,999 GSF)

* *Over one-half of all buildings are over 30 years old.*
* *The average age of all buildings is 36 years (weighted by GSF).*
* *On average, WWU, UW, and EWU have the oldest buildings.*
* *Most institutions were <u>not</u> able to report the year their buildings were last renovated.*

Most Buildings are Over 30 Years Old



AGE OF BUILDINGS BY AGE CLASS				
AGE IN YEARS	# OF BUILDINGS	% OF BUILDINGS	GSF	% OF GSF
<10	177	13%	6,130,926	15%
11-20	178	13%	3,398,555	8%
21-30	229	17%	8,095,682	20%
31-40	307	23%	8,735,457	22%
41-50	177	13%	3,983,891	10%
>50	275	20%	9,752,374	24%
TOTAL	1,343	100%	40,096,885	100%

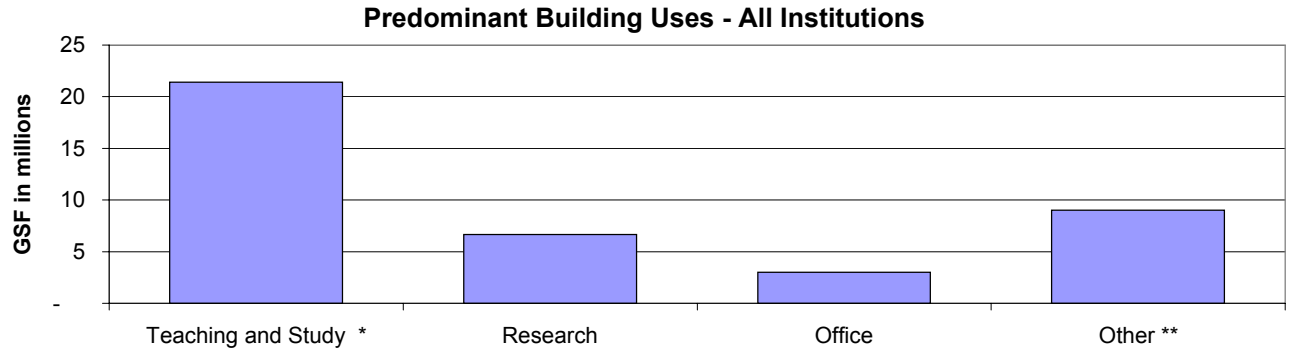
AVERAGE AGE OF BUILDINGS BY INSTITUTION	
INSTITUTION	AVERAGE AGE (weighted by GSF)
UW	43
WSU	37
EWU	42
CWU	34
TESC	29
SIRTI	7
WWU	47
CCTCs	29
ALL INSTITUTIONS	36

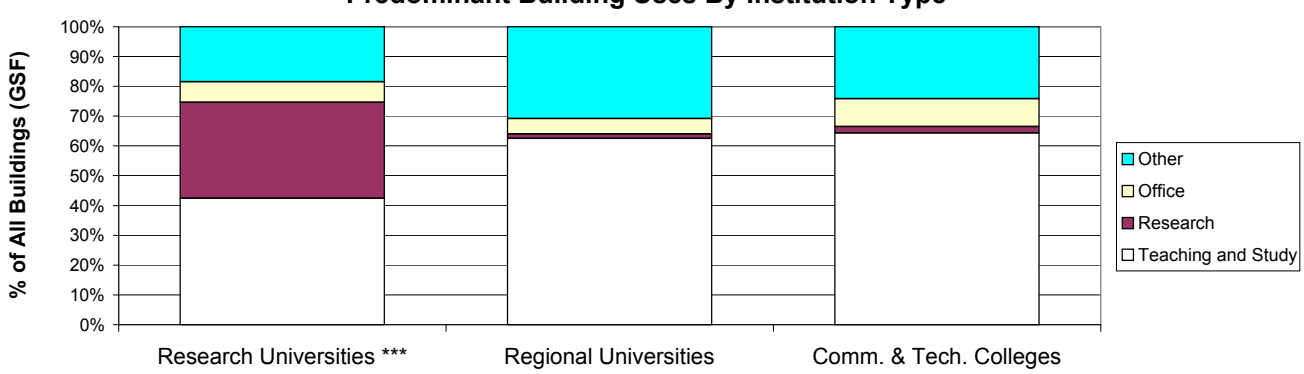
Summary 3-6

USE OF PUBLIC HIGHER EDUCATION BUILDINGS

(State and Mixed Supported Buildings Over 1,999 GSF)

* *Buildings were grouped into four major use categories designed to reflect the building's predominant function and major repair and replacement cost drivers.*
* *Buildings used for teaching and studying represent over one-half of higher education space across all institutions.*
* *UW and WSU have proportionally more research space, and less teaching and study space, than do regional universities and community & technical colleges.*





INSTITUTION	AMOUNT OF SPACE BY PREDOMINANT BUILDING USE CATEGORY (GSF)									
	Teaching and Study*		Research		Office		Other **		Total	
	GSF	% of Total Institution Space	GSF	% of Total Institution Space	GSF	% of Total Institution Space	GSF	% of Total Institution Space	GSF	% of Total Institution Space
UW	3,814,321	35%	5,188,115	47%	1,099,578	10%	928,781	8%	11,030,795	100%
WSU	4,418,050	53%	1,029,440	12%	237,451	3%	2,651,376	32%	8,336,317	100%
EWU	897,664	50%	5,008	0%	88,408	5%	816,423	45%	1,807,503	100%
CWU	1,020,662	58%	90,509	5%	205,691	12%	435,465	25%	1,752,327	100%
TESC	753,508	69%	-	0%	-	0%	343,780	31%	1,097,288	100%
SIRTI	-	0%	59,322	100%	-	0%	-	0%	59,322	100%
WWU	1,339,571	76%	-	0%	39,953	2%	380,218	22%	1,759,742	100%
CCTCs	9,174,171	64%	303,471	2%	1,326,270	9%	3,449,679	24%	14,253,591	100%
ALL INSTITUTIONS	21,417,947	53%	6,675,865	17%	2,997,351	7%	9,005,722	22%	40,096,885	100%

* Includes Teaching Lab Buildings, General Classroom Buildings, and Study Buildings (e.g., libraries).

** Includes Operational Support Buildings, Athletic Buildings, Multipurpose Buildings, Student Services Buildings, Performing Arts Buildings, Residential Buildings, Greenhouses, Stadiums, and Unclassified Buildings.

*** Includes Spokane Intercollegiate Research and Technology Institute (SIRTI).

Summary 3-7

HIGHER EDUCATION BUILDING CONSTRUCTION TYPES

(State and Mixed Supported Buildings Over 1,999 GSF)

* *Buildings were classified into 4 "Construction Type" classes according to the structural systems that influence overall construction cost:*

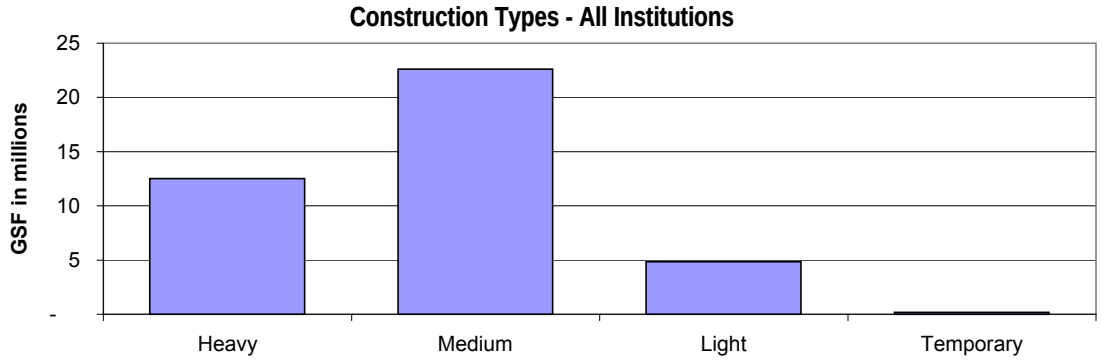
  "Heavy" = cast in place concrete

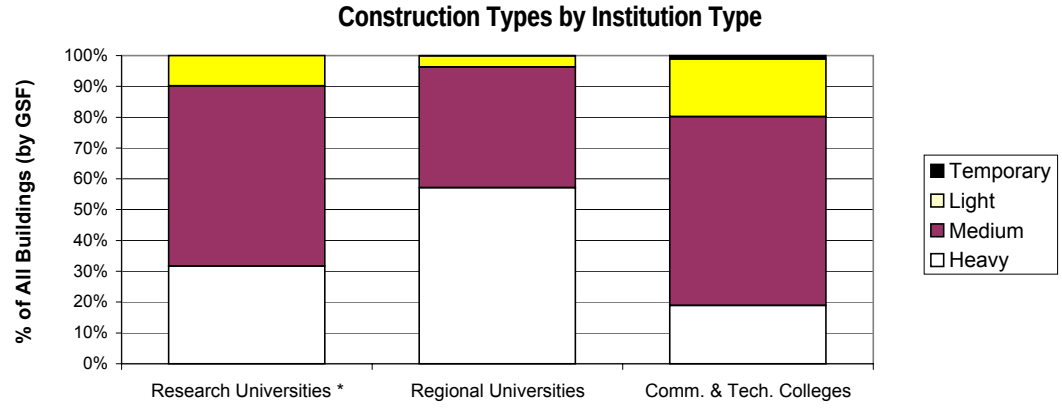
  "Medium" = masonry, protected steel, tilt-up, or heavy timber

  "Light" = stick frame or prefabricated steel

  "Temporary" = portables, modular buildings

* *The vast majority (88%) of all buildings are of "Heavy" or "Medium" construction.*
* *Community and technical colleges have proportionally more buildings of "Light" and "Temporary" construction than do other institutions.*





*Includes Spokane Intercollegiate Research and Technology Institute (SIRTI).

INSTITUTION	AMOUNT OF SPACE BY CONSTRUCTION TYPE (GSF)				
	Heavy	Medium	Light	Temporary	Total
UW	5,563,262	4,589,140	878,393	-	11,030,795
WSU	587,413	6,707,400	1,041,504	-	8,336,317
EWU	1,076,674	683,489	47,340	-	1,807,503
CWU	992,219	657,836	96,728	5,544	1,752,327
TESC	1,030,819	28,357	38,112	-	1,097,288
SIRTI	-	59,322	-	-	59,322
WWU	567,400	1,140,338	52,004	-	1,759,742
CCTCs	2,686,816	8,735,388	2,673,452	157,935	14,253,591
TOTAL	12,504,603	22,601,270	4,827,533	163,479	40,096,885

Summary 3-8

CURRENT REPLACEMENT VALUE (CRV)

(State and Mixed Supported Buildings Over 1,999 GSF)

* *Current replacement value (CRV) is the estimated cost to replace buildings at current prices, with equivalent function and utility, using modern materials in compliance with current codes and regulations.*

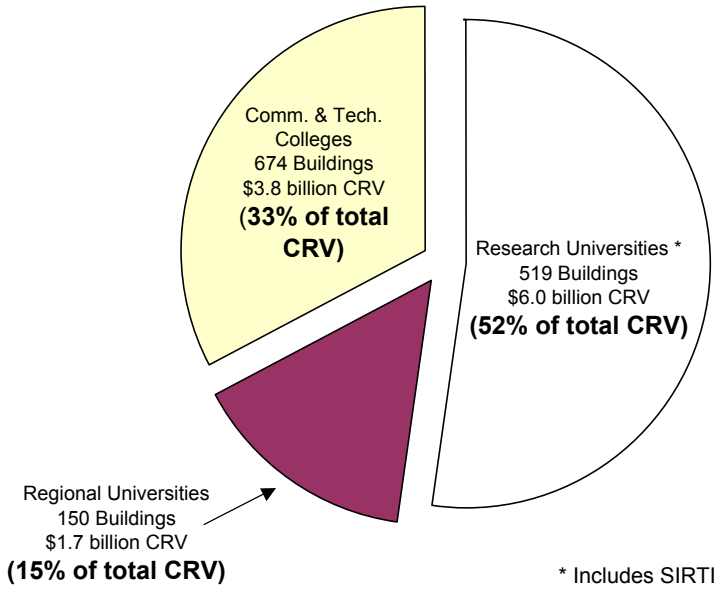
* *CRVs were calculated by JLARC for each higher education building based on: size, use, construction type, quality of finishings & equipment, and geographic location. CRV calculations were based on actual building cost data available in both local and national cost databases.*

Current Replacement Value (CRV) is calculated as follows:

CRV = Building Size x Building Use Factor x Construction Type Factor x Quality of Finishings & Equipment Factor x Geographic Location Factor x Markup for Soft Costs**

* *JLARC's estimated replacement value of all higher education buildings is $11.5 billion , with roughly 1/2 of this amount at the research universities, 1/3 at the community colleges, and 1/6 at the regional universities.*

Over One-Half of the Current Replacement Value of Public Higher Education Buildings is at the Research Universities



* Includes SIRTI

	STATE & MIXED SUPPORTED BUILDINGS >1,999 GSF			
INSTITUTION	# of Facilities	GSF	CRV	Average CRV/GSF
UW	198	11,030,795	$ 3,654,061,058	$ 331
WSU	320	8,336,317	$ 2,334,529,813	$ 280
EWU	43	1,807,503	$ 470,783,181	$ 260
CWU	46	1,752,327	$ 459,981,937	$ 262
TESC	20	1,097,288	$ 299,525,667	$ 273
SIRTI	1	59,322	$ 21,012,860	$ 354
WWU	41	1,759,742	$ 479,342,563	$ 272
CCTCs	674	14,253,591	$ 3,764,349,818	$ 264
TOTAL	1,343	40,096,885	$ 11,483,586,896	$ 286

** Design, Engineering, :Project Management, Permits, etc.

APPENDIX 4 – DETAIL ON BUILDING CONDITIONS AND PRESERVATION BACKLOGS

This appendix summarizes the building condition and preservation backlog information in the Comparable Framework.

Summary Number		Title	Highlights
4-1	62	*Overall Condition of Higher Education Buildings*	❖ The majority (53%) of higher education space is in superior or adequate condition. ❖ About 10% of space needs improvement in the immediate future.
4-2	63	*Condition of Buildings by Institution*	❖ Community and Technical Colleges have the greatest amount of space needing immediate improvement (1.3 million GSF), followed by WSU (1.1 million GSF) and UW (0.9 million GSF).
4-3	64	*Condition of Buildings by Building Use*	❖ About 2/3 of the space needing immediate improvement is used predominantly for teaching and studying purposes. ❖ Buildings used predominantly for research are in the best overall condition.
4-4	65	*JLARC's Preservation Backlog Estimating Method*	❖ Preservation backlogs are estimated costs of maintenance, repair, and system replacement projects to safely preserve buildings and their systems for current use. ❖ The backlog estimating method JLARC applied in this study produces estimates at the institutional level. It cannot be used to calculate costs for individual projects.
4-5	66	*Preservation Backlogs*	❖ Estimated preservation backlogs for all buildings total **$1.3 billion.** ❖ Community and Technical Colleges have the largest preservation backlogs ($426 million), followed by WSU ($345 million) and UW ($331 million).
4-6	67	*Facility Condition Index*	❖ The **Facility Condition Index** is the ratio of preservation backlogs over current replacement value, expressed as a percentage. ❖ Across institutions, TESC, WSU, and WWU have the highest FCIs.
4-7	68	*Backlogs in Buildings Needing Immediate Improvement*	❖ Estimated preservation backlogs in the 10% of buildings needing immediate improvement make up **$430 million** of the $1.3 billion total preservation backlog.

Summary 4-1

OVERALL CONDITION OF HIGHER EDUCATION BUILDINGS

(State and Mixed Supported Buildings Over 1,999 GSF)

* *JLARC developed methods to cross-walk and translate building condition information created and maintained by each institution into a "common denominator" scoring system. Scores were field-tested to ensure accuracy and comparability across institutions.*

* *The "common denominator" scoring system uses 5 condition classes that describe the overall condition and functionality of major building systems (e.g. foundations, building structures, roofs, interior construction and finishes, HVAC systems, electrical systems, plumbing, etc.).*

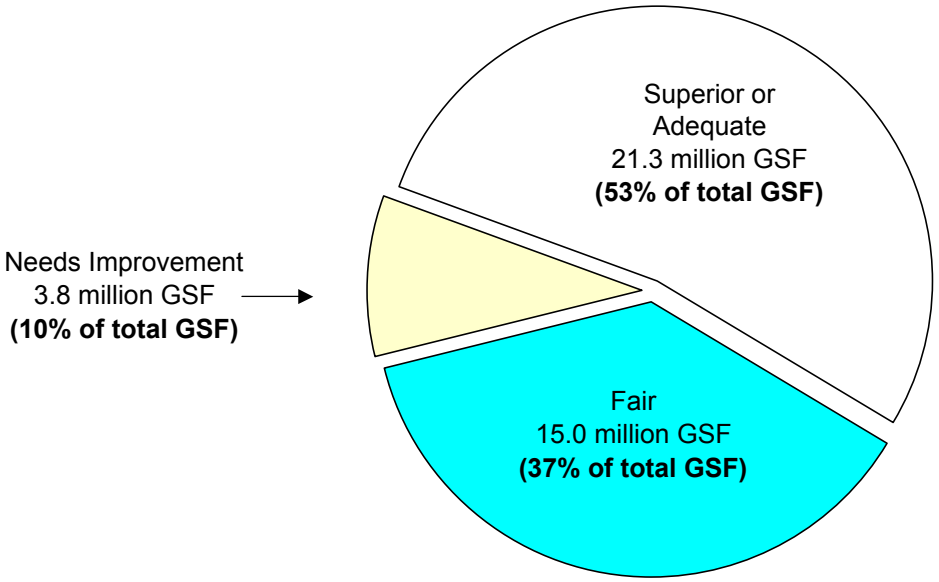
Condition Score	Condition Class	Description
1	Superior	A building with major systems that are in extremely good condition and functioning well.
2	Adequate	A building with major systems in good condition, functioning adequately, and within their expected life cycles.
3	Fair	A building with some older major systems that, though still functional, are approaching the end of their expected life cycles.
4	Needs Improvement: Limited Functionality	A building with some major systems that are in poor condition, exceed expected life cycles, and require immediate attention to prevent or mitigate impacts on function.
5	Needs Improvement: Marginal Functionality	A building with some major systems that are failing and significantly restrict continued use of the building.

53% of higher education space is in superior or adequate condition, with condition scores of 1 or 2.

37% of higher education space is in fair condition, with a condition score of 3.

10% of higher education space needs improvement, with condition scores of 4 or 5.

The Majority of Higher Education Space is in Superior or Adequate Condition

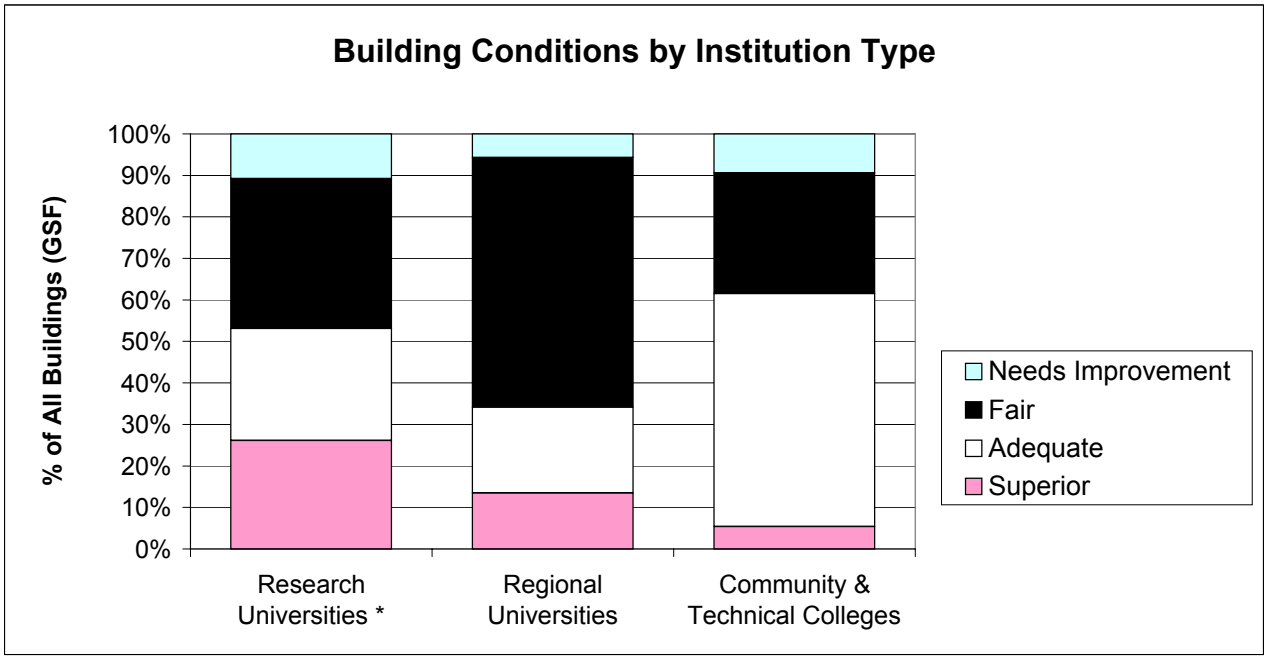


Summary 4-2

CONDITION OF BUILDINGS BY INSTITUTION

(State and Mixed Supported Buildings Over 1,999 GSF)

* ***The Community & Technical Colleges have the greatest amount of space needing immediate improvement (1.3 million GSF), followed by WSU (1.1 million GSF), and UW (0.9 million GSF).***
* ***Overall, the 4 Regional Universities have the smallest proportion of space in superior and adequate condition.***
* ***The average condition score of all higher education buildings, weighted by GSF, is 2.4 (roughly half way between "adequate" and "needs improvement").***



* Includes SIRTI.

INSTITUTION	Average Condition Score	AMOUNT OF SPACE IN EACH CONDITION CLASS										
		1. SUPERIOR		2. ADEQUATE		3. FAIR		4. NEEDS IMPROVEMENT - LIMITED FUNCTIONALITY		5. NEEDS IMPROVEMENT - MARGINAL FUNCTIONALITY		TOTAL
		GSF	% of Total (GSF)	GSF	% of Total (GSF)	GSF	% of Total (GSF)	GSF	% of Total (GSF)	GSF	% of Total (GSF)	GSF
UW	2.08	4,048,942	36.7%	3,063,462	27.8%	2,976,291	27.0%	918,880	8.3%	23,220	0.2%	11,030,795
WSU	2.64	1,023,781	12.3%	2,122,744	25.5%	4,031,528	48.4%	1,136,912	13.6%	21,352	0.3%	8,336,317
EWU	2.56	300,590	16.6%	327,423	18.1%	1,043,838	57.8%	135,652	7.5%	-	0.0%	1,807,503
CWU	2.36	272,271	15.5%	659,223	37.6%	736,830	42.0%	84,003	4.8%	-	0.0%	1,752,327
TESC	2.87	23,359	2.1%	95,214	8.7%	978,715	89.2%	-	0.0%	-	0.0%	1,097,288
SIRTI	2.00	-	0.0%	59,322	100.0%	-	0.0%	-	0.0%	-	0.0%	59,322
WWU	2.64	271,377	15.4%	241,527	13.7%	1,102,351	62.6%	144,487	8.2%	-	0.0%	1,759,742
CCTCs	2.43	773,171	5.4%	8,001,577	56.1%	4,134,653	29.0%	1,303,744	9.1%	40,446	0.3%	14,253,591
TOTAL	2.40	6,713,491	16.7%	14,570,492	36.3%	15,004,206	37.4%	3,723,678	9.3%	85,018	0.2%	40,096,885

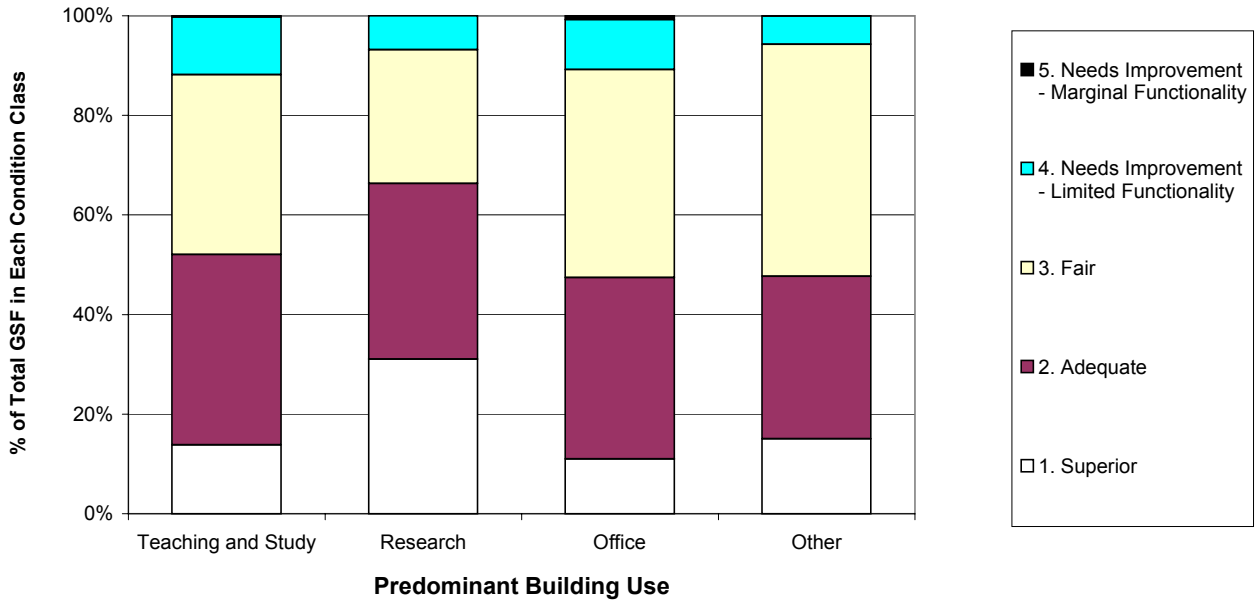
Summary 4-3

CONDITION OF PUBLIC HIGHER EDUCATION BUILDINGS BY BUILDING USE

(State and Mixed Supported Buildings Over 1,999 GSF)

* ***One-half of teaching and study buildings are in superior or adequate condition.***
* ***Two-thirds of research buildings are in superior or adequate condition.***
* ***Of all space in condition classes 4 & 5, 66% is in teaching and study buildings, and 12% in research buildings.***

Research Buildings Are in the Best Overall Condition



PREDOMINANT BUILDING USE	Average Condition Score	AMOUNT OF SPACE IN EACH CONDITION CLASS										
		1. SUPERIOR		2. ADEQUATE		3. FAIR		4. NEEDS IMPROVEMENT - LIMITED FUNCTIONALITY		5. NEEDS IMPROVEMENT - MARGINAL FUNCTIONALITY		TOTAL
		GSF	% of Total (GSF)	GSF	% of Total (GSF)	GSF	% of Total (GSF)	GSF	% of Total (GSF)	GSF	% of Total (GSF)	GSF
Teaching and Study	2.46	2,906,006	13.6%	8,068,076	37.7%	7,946,031	37.1%	2,444,930	11.4%	52,874	0.2%	21,417,917
Research	2.09	2,074,353	31.1%	2,352,803	35.2%	1,795,321	26.9%	453,388	6.8%	-	0.0%	6,675,865
Office	2.53	328,933	11.0%	1,091,910	36.4%	1,252,966	41.8%	300,322	10.0%	23,220	0.8%	2,997,351
Other	2.43	1,404,199	15.6%	3,057,703	34.0%	4,009,888	44.5%	525,038	5.8%	8,924	0.1%	9,005,752
TOTAL	2.40	6,713,491	16.7%	14,570,492	36.3%	15,004,206	37.4%	3,723,678	9.3%	85,018	0.2%	40,096,885

Summary 4-4

PRESERVATION BACKLOGS IN PUBLIC HIGHER EDUCATION BUILDINGS

(State and Mixed Supported Buildings Over 1,999 GSF)

* *Preservation backlogs are estimated costs of building maintenance, repair, and system replacement projects to safely preserve buildings and their systems for current use that have not been accomplished.*

* *Preservation backlogs include : deferred maintenance projects, cyclical repair and replacement projects on building systems that will have exceeded their useful life at the beginning of the 2003-05 Biennium, and mandatory code upgrades.*
* *Preservation backlogs do not include : program upgrades or renewal, non-mandatory code upgrades (e.g., ADA, energy code, major seismic upgrades), and building renovations.*

* *To produce comparable preservation backlog estimates for all of Washington's public higher education institutions, JLARC modified a backlog estimating tool used by National Aeronautics and Space Administration (NASA.) This tool is designed to produce backlog estimates at the institutional level. It cannot be used to calculate costs for individual preservation projects. However, it provides a relative measure of estimated preservation backlogs across institutions that can be used for overall budgeting, monitoring, and accountability purposes.*
* *The backlog estimating tool assigns a "preservation backlog" factor to each building based on its condition score. This factor is then multiplied by the building's current replacement value (CRV) , producing a preservation backlog estimate for that building. These amounts are totaled for all buildings to generate an overall backlog estimate for each higher education institution.*

JLARC Preservation Backlog Estimates are Calculated For Each Building as Follows:

Preservation Backlog = Current Replacement Value (CRV) x Midpoint Preservation Backlog Factor from the Following Table

Condition Score	Condition Class	Typical Preservation Backlog Factor Range, as % of CRV	Midpoint Preservation Backlog Factor used to Calculate Estimates of Preservation Backlogs
1	Superior	0-2%	1%
2	Adequate	3-7%	5%
3	Fair	8-24%	16%
4	Needs Improvement : Limited Functionality	25-51%	38%
5	Needs Improvement: Marginal Functionality	>52%	69%

* *Using this metholodogy, even buildings in superior and adequate condition (Classes 1 & 2) contribute to overall backlog estimates for institutions.*

Summary 4-5

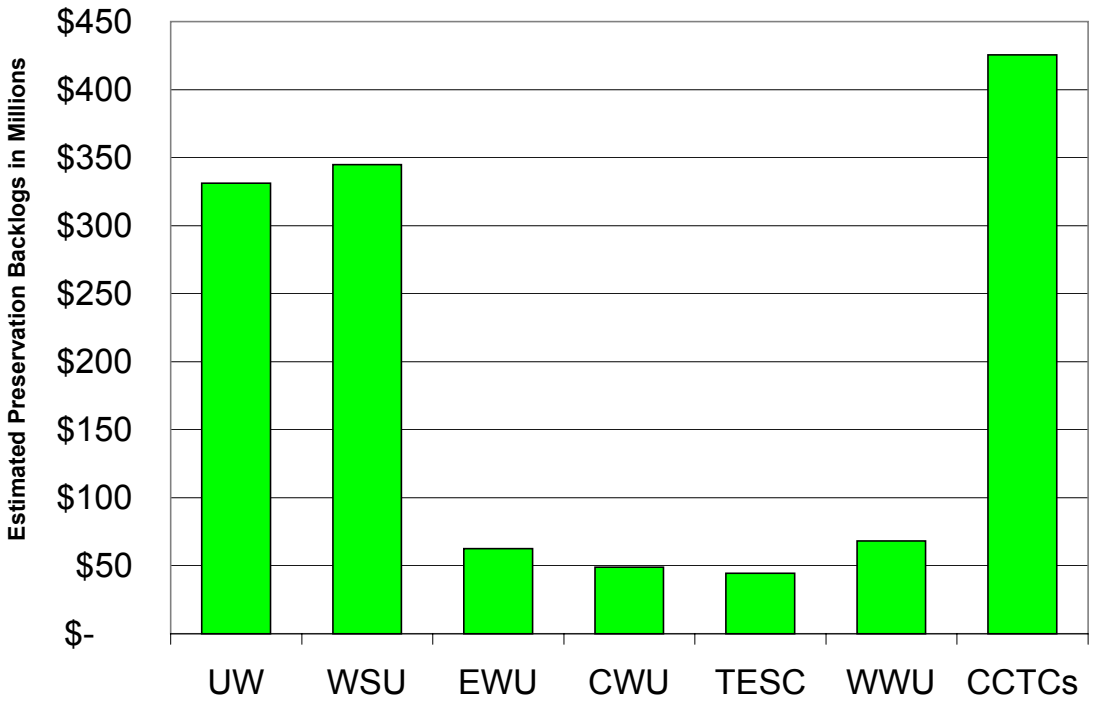
PRESERVATION BACKLOGS IN PUBLIC HIGHER EDUCATION BUILDINGS

(State and Mixed Supported Buildings Over 1,999 GSF)

* ***Estimated preservation backlogs for all buildings in all condition classes at all institutions total $1.3 billion. ****

* ***The Community & Technical Colleges have the largest estimated preservation backlog ($426 million), followed by WSU ($345 million) and UW ($331 million).***

Community & Technical Colleges, WSU, and UW Have the Largest Estimated Preservation Backlogs



INSTITUTION	ESTIMATED PRESERVATION BACKLOG *	
UW	$	331,302,347
WSU	$	344,961,454
EWU	$	62,658,426
CWU	$	48,956,524
TESC	$	44,468,284
SIRTI	$	1,050,653
WWU	$	68,286,674
CCTCs	$	425,539,392
TOTAL	**$**	**1,327,223,754**

*** Using Midpoint FCI's**

Summary 4-6

FACILITY CONDITION INDEX (FCI)

(State and Mixed Supported Buildings Over 1,999 GSF)

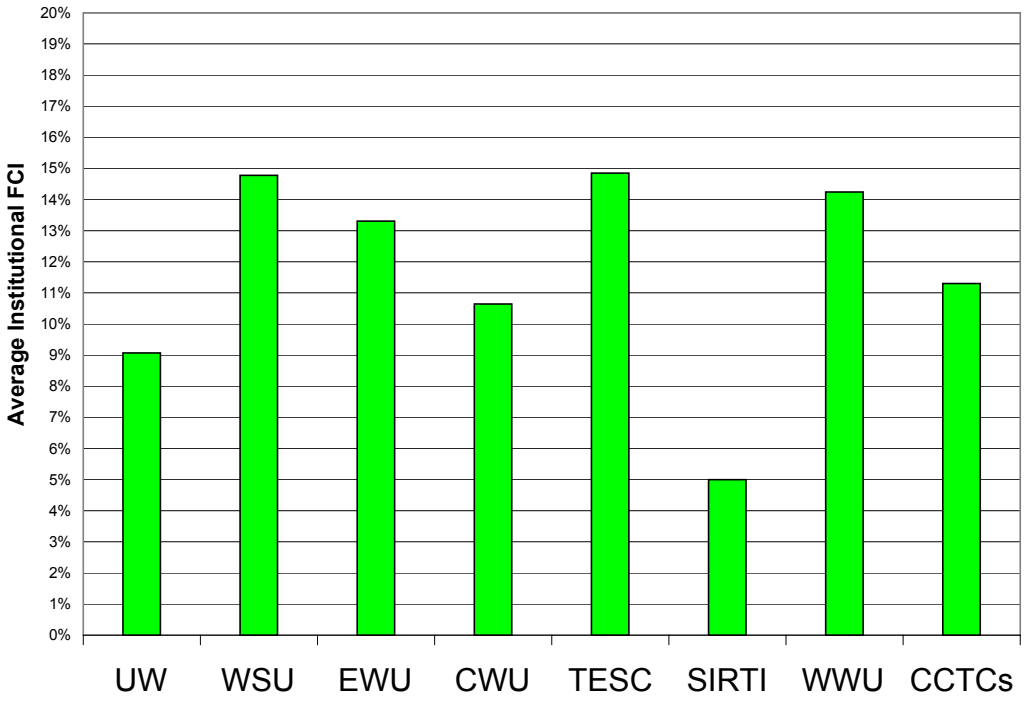
* ***The Facility Condition Index (FCI) is a performance measure that accounts for differences in the type and quality of higher education buildings. The FCI can be monitored over time to track average building conditions at the institution level.***

* ***The FCI is calculated as the ratio of preservation backlogs over current replacement value, expressed as a percentage.***

Lower FCI = Better Overall Condition	***Higher FCI = Worse Overall Condition***

* ***Over time, effective preservation should result in decreasing FCI's.***

TESC, WSU, and WWU Currently Have the Highest FCI's.



INSTITUTION	ESTIMATED PRESERVATION BACKLOG *	CURRENT REPLACEMENT VALUE	FACILITY CONDITION INDEX
UW	$ 331,302,347	$ 3,654,061,058	9.07%
WSU	$ 344,961,454	$ 2,334,529,813	14.78%
EWU	$ 62,658,426	$ 470,783,181	13.31%
CWU	$ 48,956,524	$ 459,981,937	10.64%
TESC	$ 44,468,284	$ 299,525,667	14.85%
SIRTI	$ 1,050,653	$ 21,012,860	5.00%
WWU	$ 68,286,674	$ 479,342,563	14.25%
CCTCs	$ 425,539,392	$ 3,764,349,818	11.30%
TOTAL	**$ 1,327,223,754**	**$ 11,483,586,896**	11.56%

*** Using Midpoint FCI's**

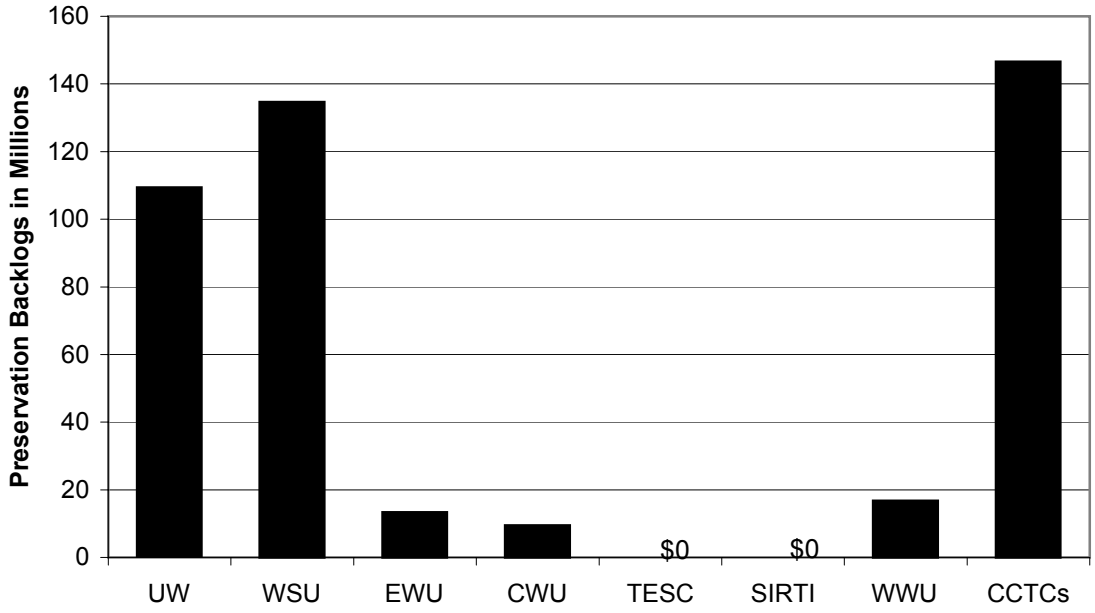
Summary 4-7

PRESERVATION BACKLOGS IN BUILDINGS NEEDING IMMEDIATE IMPROVEMENT

(State and Mixed Supported Buildings Over 1,999 GSF)

* ***The buildings in the worst condition often draw the most attention during the budgeting process.***
* ***About 10% of buildings fall in Condition Classes 4 and 5, potentially impacting the functionality of the buildings.***
* ***Estimated preservation backlogs for these buildings total <u>$430 million</u> out of the $1.3 billion total backlog.****

Estimated Backlogs in Buildings of Condition Classes 4 & 5



INSTITUTION	Estimated Preservation Backlog of Buildings in Condition Classes 4 & 5 *	
UW	$	109,333,673
WSU	$	134,669,414
EWU	$	13,332,786
CWU	$	9,474,974
TESC	$	-
SIRTI	$	-
WWU	$	16,762,955
CCTCs	$	146,533,667
TOTAL	**$**	**430,107,469**

* Using Midpoint FCIs.

APPENDIX 5 – INSTITUTIONAL PROFILES

- University of Washington
- Washington State University
- Eastern Washington University
- Central Washington University
- The Evergreen State College
- Spokane Intercollegiate Research and Technology Institute
- Western Washington University
- Community and Technical College System

Institution Profile: University of Washington

SUMMARY	
Total Number of Owned Buildings	340
Total Amount of Owned Space (Gross Square Feet - GSF)	16,405,308
Total Number of State Capital-Supported Buildings over 1,999 GSF	198
Total Amount of State Capital-Supported Space over 1,999 GSF	11,030,795
State Capital-Supported Space as % of Total Space	67%
Estimated Current Replacement Value (CRV) *	$3,654,061,058
Average Building Age *	43 years
Average Building Condition Score *	2.08
Estimated Total Preservation Backlog *	$331,302,347
Facility Condition Index (FCI) *	9.07%

MAJOR CAMPUSES & SITES				
	TOTAL		STATE CAPITAL-SUPPORTED BUILDINGS OVER 1,999 GSF	
Campus or Site Name	# Bldgs	GSF	# Bldgs	GSF
Seattle	259	15,768,199	171	10,450,961
Tacoma	9	195,494	7	192,394
Bothell	2	61,055	2	61,055
Friday Harbor	63	86,207	12	48,193
Other	7	294,353	6	278,192
TOTAL	340	16,405,308	198	11,030,795

BUILDING USES*		
Building Use	# Bldgs	GSF
Teaching and Study	46	3,814,321
Research	66	5,188,115
Office	50	1,099,578
Other	36	928,781
TOTAL	198	11,030,795

BUILDING CONSTRUCTION TYPES *		
Const. Type	# Bldgs	GSF
Heavy	48	5,563,262
Medium	82	4,589,140
Light	68	878,393
Temporary	0	0
TOTAL	198	11,030,795

BUILDING CONDITIONS & PRESERVATION BACKLOGS *				
Condition Category	# Bldgs	GSF	% of Total GSF	Estimated Preservation Backlog
1 - Superior	56	4,048,942	36.7%	$13,772,721
2 - Adequate	75	3,063,462	27.8%	$50,376,145
3 - Fair	33	2,976,291	27.0%	$157,819,807
4 - Needs Improvement - Limited Functionality	33	918,880	8.3%	$105,250,086
5 - Needs Improvement - Marginal Functionality	1	23,220	0.2%	$4,083,588
TOTAL	198	11,030,795	100.0%	$331,302,347

* State Capital-Supported Buildings Over 1,999 GSF

Institution Profile: Washington State University

SUMMARY	
Total Number of Owned Buildings	852
Total Amount of Owned Space (Gross Square Feet - GSF)	11,438,919
Total Number of State Capital-Supported Buildings over 1,999 GSF	320
Total Amount of State Capital-Supported Space over 1,999 GSF	8,336,317
State Capital-Supported Space as % of Total Space	73%
Estimated Current Replacement Value (CRV) *	$2,334,529,813
Average Building Age *	37 years
Average Building Condition Score *	2.64
Estimated Total Preservation Backlog *	$344,961,454
Facility Condition Index (FCI) *	14.78%

MAJOR CAMPUSES & SITES				
	TOTAL		STATE CAPITAL-SUPPORTED BUILDINGS OVER 1,999 GSF	
Campus or Site Name	# Bldgs	GSF	# Bldgs	GSF
Pullman	450	9,821,374	190	6,946,140
Spokane	4	265,203	2	265,201
Tri-Cities	9	224,559	5	224,555
Vancouver	12	167,810	5	163,763
Other Sites	377	959,973	118	736,658
TOTAL	852	11,438,919	320	8,336,317

BUILDING USES*		
Building Use	# Bldgs	GSF
Teaching and Study	55	4,418,050
Research	41	1,029,440
Office	5	237,451
Other	219	2,651,376
TOTAL	320	8,336,317

BUILDING CONSTRUCTION TYPES *		
Const. Type	# Bldgs	GSF
Heavy	21	587,413
Medium	130	6,707,400
Light	169	1,041,504
Temporary	0	0
TOTAL	320	8,336,317

BUILDING CONDITIONS & PRESERVATION BACKLOGS *				
Condition Category	# Bldgs	GSF	% of Total GSF	Estimated Preservation Backlog
1 - Superior	22	1,023,781	12.3%	$2,727,842
2 - Adequate	69	2,122,744	25.5%	$30,124,244
3 - Fair	190	4,031,528	48.4%	$177,439,954
4 - Needs Improvement - Limited Functionality	36	1,136,912	13.6%	$131,174,379
5 - Needs Improvement - Marginal Functionality	3	21,352	0.3%	$3,495,035
TOTAL	320	8,336,317	100.0%	$344,961,454

* State Capital-Supported Buildings Over 1,999 GSF

Institution Profile: Eastern Washington University

SUMMARY	
Total Number of Owned Buildings	72
Total Amount of Owned Space (Gross Square Feet - GSF)	2,419,868
Total Number of State Capital-Supported Buildings over 1,999 GSF	43
Total Amount of State Capital-Supported Space over 1,999 GSF	1,807,503
State Capital-Supported Space as % of Total Space	75%
Estimated Current Replacement Value (CRV) *	$470,783,181
Average Building Age *	42 years
Average Building Condition Score *	2.56
Estimated Total Preservation Backlog *	$62,658,426
Facility Condition Index (FCI) *	13.31%

MAJOR CAMPUSES & SITES				
	TOTAL		STATE CAPITAL-SUPPORTED BUILDINGS OVER 1,999 GSF	
Campus or Site Name	# Bldgs	GSF	# Bldgs	GSF
Cheney	72	2,419,868	43	1,807,503
TOTAL	72	2,419,868	43	1,807,503

BUILDING USES*		
Building Use	# Bldgs	GSF
Teaching and Study	15	897,664
Research	1	5,008
Office	1	88,408
Other	26	816,423
TOTAL	43	1,807,503

BUILDING CONSTRUCTION TYPES *		
Const. Type	# Bldgs	GSF
Heavy	21	1,076,674
Medium	17	683,489
Light	5	47,340
Temporary	0	0
TOTAL	43	1,807,503

BUILDING CONDITIONS & PRESERVATION BACKLOGS *				
Condition Category	# Bldgs	GSF	% of Total GSF	Estimated Preservation Backlog
1 - Superior	6	300,590	16.6%	$687,853
2 - Adequate	6	327,423	18.1%	$4,576,392
3 - Fair	27	1,043,838	57.8%	$44,061,394
4 - Needs Improvement - Limited Functionality	4	135,652	7.5%	$13,332,787
5 - Needs Improvement - Marginal Functionality	0	0	0.0%	$0
TOTAL	43	1,807,503	100.0%	$62,658,426

* State Capital-Supported Buildings Over 1,999 GSF

Institution Profile: Central Washington University

SUMMARY	
Total Number of Owned Buildings	91
Total Amount of Owned Space (Gross Square Feet - GSF)	2,846,377
Total Number of State Capital-Supported Buildings over 1,999 GSF	46
Total Amount of State Capital-Supported Space over 1,999 GSF	1,752,327
State Capital-Supported Space as % of Total Space	62%
Estimated Current Replacement Value (CRV) *	$459,981,937
Average Building Age *	34 years
Average Building Condition Score *	2.36
Estimated Total Preservation Backlog *	$48,956,524
Facility Condition Index (FCI) *	10.64%

MAJOR CAMPUSES & SITES				
	TOTAL		STATE CAPITAL-SUPPORTED BUILDINGS OVER 1,999 GSF	
Campus or Site Name	# Bldgs	GSF	# Bldgs	GSF
Ellensburg	91	2,846,377	46	1,752,327
TOTAL	91	2,846,377	46	1,752,327

BUILDING USES*		
Building Use	# Bldgs	GSF
Teaching and Study	17	1,020,662
Research	2	90,509
Office	7	205,691
Other	20	435,465
TOTAL	46	1,752,327

BUILDING CONSTRUCTION TYPES *		
Const. Type	# Bldgs	GSF
Heavy	15	992,219
Medium	19	657,836
Light	11	96,728
Temporary	1	5,544
TOTAL	46	1,752,327

BUILDING CONDITIONS & PRESERVATION BACKLOGS *				
Condition Category	# Bldgs	GSF	% of Total GSF	Estimated Preservation Backlog
1 - Superior	4	272,271	15.5%	$766,012
2 - Adequate	24	659,223	37.6%	$8,470,868
3 - Fair	16	736,830	42.0%	$30,244,669
4 - Needs Improvement - Limited Functionality	2	84,003	4.8%	$9,474,974
5 - Needs Improvement - Marginal Functionality	0	0	0.0%	$0
TOTAL	46	1,752,327	100.0%	$48,956,523

* State Capital-Supported Buildings Over 1,999 GSF

Institution Profile: The Evergreen State College

SUMMARY	
Total Number of Owned Buildings	72
Total Amount of Owned Space (Gross Square Feet - GSF)	1,378,813
Total Number of State Capital-Supported Buildings over 1,999 GSF	20
Total Amount of State Capital-Supported Space over 1,999 GSF	1,097,288
State Capital-Supported Space as % of Total Space	80%
Estimated Current Replacement Value (CRV) *	$299,525,667
Average Building Age *	29
Average Building Condition Score *	2.87
Estimated Total Preservation Backlog *	$44,468,284
Facility Condition Index (FCI) *	14.85%

MAJOR CAMPUSES & SITES

	TOTAL		STATE CAPITAL-SUPPORTED BUILDINGS OVER 1,999 GSF	
Campus or Site Name	# Bldgs	GSF	# Bldgs	GSF
Olympia	72	1,378,813	20	1,097,288
TOTAL	72	1,378,813	20	1,097,288

BUILDING USES*

Building Use	# Bldgs	GSF
Teaching and Study	9	753,508
Research	0	0
Office	0	0
Other	11	343,780
TOTAL	20	1,097,288

BUILDING CONSTRUCTION TYPES *

Const. Type	# Bldgs	GSF
Heavy	11	1,030,819
Medium	17	28,357
Light	5	38,112
Temporary	0	0
TOTAL	33	1,097,288

BUILDING CONDITIONS & PRESERVATION BACKLOGS *

Condition Category	# Bldgs	GSF	% of Total GSF	Estimated Preservation Backlog
1 - Superior	2	23,359	2.1%	$49,912
2 - Adequate	7	95,214	8.7%	$1,230,519
3 - Fair	11	978,715	89.2%	$43,187,852
4 - Needs Improvement - Limited Functionality	0	0	0.0%	$0
5 - Needs Improvement - Marginal Functionality	0	0	0.0%	$0
TOTAL	20	1,097,288	100.0%	$44,468,283

* State Capital-Supported Buildings Over 1,999 GSF

Institution Profile: Spokane Intercollegiate Research & Technology Institute

SUMMARY	
Total Number of Owned Buildings	1
Total Amount of Owned Space (Gross Square Feet - GSF)	59,322
Total Number of State Capital-Supported Buildings over 1,999 GSF	1
Total Amount of State Capital-Supported Space over 1,999 GSF	59,322
State Capital-Supported Space as % of Total Space	100%
Estimated Current Replacement Value (CRV) *	$21,012,860
Average Building Age *	7
Average Building Condition Score *	2.00
Estimated Total Preservation Backlog *	$1,050,643
Facility Condition Index (FCI) *	5.00%

MAJOR CAMPUSES & SITES				
	TOTAL		STATE CAPITAL-SUPPORTED BUILDINGS OVER 1,999 GSF	
Campus or Site Name	# Bldgs	GSF	# Bldgs	GSF
Spokane	1	59,322	1	59,322
TOTAL	1	59,322	1	59,322

BUILDING USES*		
Building Use	# Bldgs	GSF
Teaching and Study	0	0
Research	1	59,322
Office	0	0
Other	0	0
TOTAL	1	59,322

BUILDING CONSTRUCTION TYPES *		
Const. Type	# Bldgs	GSF
Heavy	0	0
Medium	1	59,322
Light	0	0
Temporary	0	0
TOTAL	1	59,322

BUILDING CONDITIONS & PRESERVATION BACKLOGS *				
Condition Category	# Bldgs	GSF	% of Total GSF	Estimated Preservation Backlog
1 - Superior	0	0	0.0%	$0
2 - Adequate	1	59,322	100.0%	$0
3 - Fair	0	0	0.0%	$0
4 - Needs Improvement - Limited Functionality	0	0	0.0%	$0
5 - Needs Improvement - Marginal Functionality	0	0	0.0%	$0
TOTAL	1	59,322	100.0%	$0

* State Capital-Supported Buildings Over 1,999 GSF

Institution Profile: Western Washington University

SUMMARY	
Total Number of Owned Buildings	103
Total Amount of Owned Space (Gross Square Feet - GSF)	2,876,874
Total Number of State Capital-Supported Buildings over 1,999 GSF	41
Total Amount of State Capital-Supported Space over 1,999 GSF	1,759,742
State Capital-Supported Space as % of Total Space	61%
Estimated Current Replacement Value (CRV) *	$479,342,563
Average Building Age *	47
Average Building Condition Score *	2.64
Estimated Total Preservation Backlog *	$68,286,674
Facility Condition Index (FCI) *	14.25%

MAJOR CAMPUSES & SITES				
	TOTAL		STATE CAPITAL-SUPPORTED BUILDINGS OVER 1,999 GSF	
Campus or Site Name	# Bldgs	GSF	# Bldgs	GSF
Bellingham	90	2,806,723	33	1,700,248
Other Sites	13	70,151	8	59,494
TOTAL	103	2,876,874	41	1,759,742

BUILDING USES*		
Building Use	# Bldgs	GSF
Teaching and Study	20	1,339,571
Research	0	0
Office	2	39,953
Other	19	380,218
TOTAL	41	1,759,742

BUILDING CONSTRUCTION TYPES *		
Const. Type	# Bldgs	GSF
Heavy	7	567,400
Medium	21	1,140,338
Light	13	52,004
Temporary	0	0
TOTAL	41	1,759,742

BUILDING CONDITIONS & PRESERVATION BACKLOGS *				
Condition Category	# Bldgs	GSF	% of Total GSF	Estimated Preservation Backlog
1 - Superior	8	271,377	15.4%	$699,930
2 - Adequate	9	241,527	13.7%	$3,460,936
3 - Fair	22	1,102,351	62.6%	$47,362,853
4 - Needs Improvement - Limited Functionality	2	144,487	8.2%	$16,762,955
5 - Needs Improvement - Marginal Functionality	0	0	0.0%	$0
TOTAL	41	1,759,742	100.0%	$68,286,674

* State Capital-Supported Buildings Over 1,999 GSF

Institution Profile: Community and Technical College System

(College Detail on Following Page)

SUMMARY	
Total Number of Owned Buildings	932
Total Amount of Owned Space (Gross Square Feet - GSF)	14,780,836
Total Number of State Capital-Supported Buildings over 1,999 GSF	674
Total Amount of State Capital-Supported Space over 1,999 GSF	14,253,591
State Capital-Supported Space as % of Total Space	96%
Estimated Current Replacement Value (CRV) *	$3,764,349,818
Average Building Age *	29
Average Building Condition Score *	2.43
Estimated Total Preservation Backlog *	$425,539,392
Facility Condition Index (FCI) *	11.30%

BUILDING USES*		
Building Use	# Bldgs	GSF
Teaching and Study	395	9,174,171
Research	17	303,471
Office	71	1,326,270
Other	191	3,449,679
TOTAL	674	14,253,591

BUILDING CONSTRUCTION TYPES *		
Const. Type	# Bldgs	GSF
Heavy	64	2,686,816
Medium	357	8,735,388
Light	225	2,673,452
Temporary	28	157,935
TOTAL	674	14,253,591

BUILDING CONDITIONS & PRESERVATION BACKLOGS *				
Condition Category	# Bldgs	GSF	% of Total GSF	Estimated Preservation Backlog
1 - Superior	41	773,171	5.4%	$1,898,735
2 - Adequate	379	8,001,577	56.1%	$106,608,427
3 - Fair	190	4,134,653	29.0%	$170,498,563
4 - Needs Improvement - Limited Functionality	58	1,303,744	9.1%	$138,986,477
5 - Needs Improvement - Marginal Functionality	6	40,446	0.3%	$7,547,190
TOTAL	674	14,253,591	100.0%	$425,539,392

* State Capital-Supported Buildings Over 1,999 GSF

Institution Profile: Community and Technical College System

COLLEGE DETAIL				
	TOTAL		STATE CAPITAL-SUPPORTED BUILDINGS OVER 1,999 GSF	
College Name	# Bldgs	GSF	# Bldgs	GSF
Bellevue	30	588,499	25	554,725
Bellingham	26	189,218	18	179,244
Big Bend	26	402,430	24	356,285
Cascadia	3	240,500	3	240,500
Centralia	28	290,696	21	281,466
Clark	43	586,828	33	578,141
Clover Park	36	502,182	24	490,898
Columbia Basin	31	455,486	26	449,609
Edmonds	30	471,326	25	464,208
Everett	23	447,720	21	445,200
Grays Harbor	20	219,660	15	213,936
Green River	29	454,497	23	447,095
Highline	38	457,650	33	451,724
L.H. Bates	17	578,014	11	567,886
Lake Washington	27	352,534	5	332,234
Lower Columbia	31	361,839	20	351,983
North Seattle	8	791,474	8	791,474
Olympic	29	432,156	22	423,993
Peninsula	33	189,615	26	181,104
Pierce	21	440,853	13	427,953
Renton	16	381,036	12	377,916
So. Puget Sound	23	269,181	15	257,727
Seattle Central	25	963,994	17	802,359
Seattle Voc. Institute	1	114,000	1	114,000
Shoreline	27	443,154	23	412,576
Skagit	54	441,420	38	423,552
South Seattle	50	523,423	34	500,969
Spokane	53	941,592	21	924,243
Spokane Falls	33	528,125	21	520,066
Tacoma	36	332,453	27	323,023
Walla Walla	26	465,877	23	461,633
Wenatchee	17	250,236	13	245,477
Whatcom	7	246,196	7	246,196
Yakima	34	386,254	25	373,478
Center for Information Services (St. Board)	1	40,718	1	40,718
TOTAL	932	14,780,836	674	14,253,591

APPENDIX 6 – BUDGET AND EXPENDITURE ANALYSIS: DATA AND METHODS

JLARC's Budget and Expenditure Analysis assessed the following areas:

- Revenue sources available for facility preservation;
- Whether the state budgeting process creates incentives and/or disincentives for cost-effective facility stewardship;
- Historical trends in operating and capital budget expenditures;
- Comparisons of facility preservation expenditures among Washington's higher education institutions; and
- Comparisons of facility preservation expenditures with national benchmarks.

This Technical Appendix discusses the data and methodology used in this analysis in more detail than is provided in the text of the report. Additionally, it provides additional description of Washington's operating budgeting processes for higher education and historical trends in those processes.

The State's Budgeting Process for Higher Education

The analysis found that there is a potential unintended incentive for higher education institutions to underfund facility preservation in their operating budgets. This finding is based on the differences in funding sources and policies between the operating and capital budget as described in Chapter 3. JLARC's understanding of budget policies is based on interviews with legislative fiscal staff, OFM budget staff, and review of documents related to the budget process, including appropriations acts, legislative budget notes, and the Higher Education Coordinating Board's (HECB) Higher Education Cost Study. The documents we reviewed also included a historical analysis of the higher education budget process, prepared by Jack Daray, former higher education Fiscal Analyst with the House Office of Program Research, as a consultant to JLARC.

Additional Description Regarding Earmarking of Appropriated Operating Budget Funds

In the 1970s and early 1980s, a detailed formula was used to develop operating budgets for higher education institutions. The formula identified budget "drivers" including plant operations and maintenance costs, and provided specific formula entitlements for these costs. Most of the higher education budget calculation was based on the formula calculations, and the appropriations acts referenced specific percentages of "formula entitlements."

Current budget development for institutional operating budgets is not nearly as detailed. Currently authorized expenditure levels form the core of the appropriation for subsequent biennia. Incremental additions to the current expenditure level related to student enrollment growth are based on the amount of additional enrollment the Legislature decides to fund, and the per student cost of that incremental enrollment. The per student cost of incremental enrollment is referenced to the Annual Cost Disclosure Report which is an annual update to the Education Cost Study that is conducted every four years by the HECB.

The Higher Education Cost Study and its annual updates identify the average cost of educating students at the various levels of institution (i.e., Research Universities, Comprehensive Universities, Community and Technical Colleges). This average cost is then used to help determine the amount of additional funding needed for the incremental enrollment authorized. The average cost identified by these HECB Education Cost Studies includes the costs of operating and maintaining facilities. Therefore, when the Legislature funds incremental enrollment increases, there is an implied (but not earmarked or targeted) incremental funding increase for facilities maintenance.

The Legislature may target certain other incremental budget increases or decreases for specific purposes. For example, the Legislature may target a specific funding increase for faculty salaries, or it may target a funding decrease to "administration." However, these incremental legislative "targets" are usually not earmarked or provisoed in the budget document, and therefore, do not carry the force of law. In subsequent budgets, these targeted amounts become part of the currently authorized expenditure level, which is also not targeted or earmarked by the Legislature. Additionally, the amount of funds targeted in any biennial budget is a small percentage of total appropriated funds, which are less than half of total operating funds available to institutions.

The current budget development process does not identify specific funding amounts generated for specific purposes (e.g., plant operations and maintenance) as did previous budget processes. Nor does the Legislature otherwise earmark or proviso operating funds to any great degree. Therefore, institutions have significantly more flexibility over their appropriated operating budgets now than they had been previously.

Historical Trends And Comparisons Among Institutions

Available Data and its Limitations: JLARC used several sets of data in its analysis of historical trends in operating and capital budget expenditures. We first obtained operating and capital expenditure data that is maintained by the Legislative Efficiency and Accountability Program Committee (LEAP), which maintains a database of expenditure data that is periodically recast for historical comparability. Additionally, we obtained historical operating and capital expenditure data from the state's Agency Financial Reporting System (AFRS) accounting system to supplement the LEAP data.

Neither LEAP nor AFRS data were sufficiently detailed for the purposes of this study. The state's accounting system requires higher education institutions to report expenditure detail by functional area (program). There is a program called Plant Operations and Maintenance (Program 090) in the operating budget, and there is also a program (Program 900) for capital

expenditures. However, neither of these programs collects data that is detailed enough to segregate expenditures for facility preservation from other facility operations, maintenance, and capital expenditures.

For example, operating budget expenditures within Plant Operations and Maintenance (Program 090) include several categories of expenditures (e.g., custodial, grounds keeping, utilities, security, waste disposal) that have little or nothing to do with facility maintenance and preservation. Capital budget expenditures are not segregated into categories (e.g., new construction, renovation, repairs) that allow for the identification of expenditures for facility preservation. Additionally, the state does not maintain reliable data on the amount of or value of facilities in order to provide a context (e.g., expenditures per square foot) for expenditure data. These shortcomings in the expenditure and facilities data collected by the state make it difficult for the state to compare expenditures for facility preservation among Washington's higher education institutions, or to compare such expenditures with external benchmarks.

Expenditure Data Requested From Institutions

In light of these shortcomings, JLARC requested Washington's four-year institutions and the State Board for Community and Technical Colleges to provide more detailed historical expenditure information. Institutions were requested to segregate operating budget expenditures within Program 090 into four categories, which are the same four categories that the HECB uses when collecting data for its Higher Education Cost Study. These categories are:

- Utilities and Fixed Costs
- Building Maintenance
- Custodial and Grounds
- Physical Plant Administration

Institutions were also requested to segregate capital expenditures into five categories. These categories are:

- Minor Works – Facility Preservation
- Minor Works – Other
- Renovation and Replacement
- Other Facility Preservation
- Other Capital Expenditures

The purpose of this categorization was to have the institutions identify how much of their 1992-2001 capital expenditures were for facility preservation versus other purposes. We asked the institutions to do this because AFRS expenditure data does not categorize expenditures into functional purposes, and project appropriation data does not always allow for such a categorization.

In our comparisons of the amount of capital expenditures for facility preservation among Washington's higher education institutions and for our comparisons of these expenditures with benchmarks, *we did not count major renovation expenditures as preservation*, even though some portion of renovation expenditures are for the preservation of facilities. We excluded major renovation expenditures from this analysis because it is common for the cost of major renovations to be substantially driven by program needs.

Square Footage Data Requested from Institutions

We also requested that institutions provide separate expenditure and square footage data for state-supported facilities and non state-supported facilities, rather than all facilities. We requested this segregation because we learned that the AFRS data for Program 090 (Plant Operations and Maintenance) only includes expenditures for state-supported facilities. Because we wanted the institution-provided data (in which we requested more detail than reported in AFRS) to reconcile with AFRS, we needed to ask institutions to separately provide expenditure data for state-supported and non state-supported facilities (note: while all institutions were able to provide the detailed expenditure information we requested for state-supported facilities, some were unable to provide separate expenditure data for non state-supported facilities).

Other Data Used

In addition, JLARC used enrollment data from HECB and inflation data from the Office of the Forecast Council for the expenditure trend analysis and the comparisons of expenditures among Washington's higher education institutions. The following table summarizes the data used in the analysis.

Source	Data Provided
AFRS Accounting Data	Historical Total Operating Expenditures
Expenditure Data Provided by Institutions	Historical Detailed Facility Maintenance Operating Expenditures Historical Capital Expenditures by Category (e.g., preservation versus new construction)
Square Footage Data Provided by Institutions	Combined with expenditure data, allows for comparisons of expenditures per gross square foot of space
Enrollment Data from HECB	Combined with expenditure data, allows for comparisons of expenditures per student
Inflation Data (Implicit Price Deflator) from Office of the Forecast Council	Implicit price deflator data was used to adjust historical expenditure data into 2001 dollars

Comparisons Of Facility Preservation Expenditures Among Washington Institutions and With National Benchmarks

Selection of Benchmarks: JLARC conducted an extensive search for benchmarks to compare to the facility preservation expenditures of Washington's higher education institutions. Our goal was to identify relevant, comparable, and credible benchmarks for higher education facility preservation expenditures to compare with expenditures at Washington's higher education institutions. A source is relevant if it provides a comparison with other higher education facilities, rather than other types of facilities. A source is comparable if the types of expenditures within the benchmark are similar to the expenditure data we have for Washington's higher education institutions. A source is credible if there is documentation of how the benchmark is derived, and the derivation is judged to be methodologically sound. We attempted to identify benchmarks for both operating and capital expenditures for facility preservation purposes.

In order to identify candidates for benchmarks, we conducted a literature review, and talked to higher education facilities experts in Washington and elsewhere. Through these efforts, we identified several potential sources for benchmarks to compare with Washington's higher education institutions.

For each source of benchmark data considered, we attempted to answer the following questions:

- What is the benchmark (e.g., expenditures per square foot, square foot per employee, etc.)?
- What types of expenditures are included in the benchmark (e.g., expenditures strictly for facility preservation purposes, or are other types of expenditures included)?
- How was the benchmark derived (e.g., survey of actual expenditures vs. rule of thumb vs. analytical model)?

For some of the potential benchmarks considered, the answers to these questions were readily available. For others, the answers were not readily available and we tried to ascertain the answers by talking to people who were knowledgeable about the benchmark.

For each potential benchmark considered, we made a judgment concerning whether to include it in our analysis based on several factors. For example, if we were unable to ascertain exactly what types of costs were included in the benchmark, we excluded it because we could not determine how comparable it would be to the expenditure data we collected from Washington's institutions. Alternatively, if we knew what costs were included in the benchmark, but we weren't sure how the benchmark was derived (e.g., based on a survey of actual costs, a predictive model, or a rule of thumb), we were less confident of its credibility than if we knew the basis for how it was derived.

Among the potential sources of benchmark data we considered and rejected are:

- National higher education expenditure data from the National Center for Education Statistics (NCES). This data was judged to lack comparability in that it only includes a very broad measure of plant operations and maintenance expenditures that includes several categories of

expenditures (e.g., custodial, grounds keeping, etc.) that are not closely related to facility preservation. We wanted to conduct a more narrow comparison of facility preservation expenditures for the benchmark analysis.

- A widely known benchmark originally published by the National Research Council. This benchmark is a rule of thumb that 2 to 4 percent of the current replacement value of facilities should be spent each year for facility preservation. We rejected this potential benchmark for several reasons, including: (1) there is no actual calculation supporting the benchmark, it is based on what a committee of experts concluded should be spent for facility preservation; (2) its comparability is suspect in that it is not completely clear exactly what types of costs should be included within the benchmark; and (3) the benchmark lacks precision (i.e., the amount of expenditures could vary by 100 percent and still be within the benchmark).

Based on JLARC's review of potential benchmarks against the criteria listed above, we did not find what we would consider to be a perfect source for benchmark comparisons (i.e., no single source of benchmark data was considered to be perfectly relevant, comparable, and credible). Therefore, we selected several benchmarks for both operating and capital expenditures that we considered to be among the most relevant, comparable, and credible. We then averaged the benchmarks to develop a JLARC benchmark average for both operating and capital preservation expenditures. The average of the benchmarks is used to compare to expenditures of Washington's higher education institutions.

Information on the benchmarks that are used is presented in the following table:

Benchmark	Type of Benchmark	Amount	Assumptions/Comments
Operating Budget Benchmarks Average		**$1.39/gsf**	Average of JLARC's benchmarks for operating budget expenditures for facility maintenance.
Association of Higher Education Facilities Officers (APPA) FY 2001 Comprehensive Cost and Staffing Survey (CCAS)	APPA members provide actual cost data in a biennial survey	$1.25/gsf	Average expenditures for facility maintenance purposes as reported by participating APPA members. Relevance and comparability judged to be high. Credibility judged to be fair, because a survey of actual expenditures identifies what is actually spent rather than what should be spent.
Building Owners and Managers Association (BOMA) Experience Exchange Report 2000 (EER)	BOMA members provide actual cost data in an annual survey	$1.24/gsf	Average expenditures for facility maintenance of governmental facilities. The total amount of expenditures for facility maintenance and repairs was $2.21 per GSF. JLARC allocated this amount between operating and capital budget expenditures based on percentages from an analysis by Whitestone Research, a facilities management consulting firm. Comparability, relevance, and credibility are all judged to be fair.
APPA Facilities Management Evaluation Program (FMEP) Audit of WWU	Rule of thumb	$1.50/gsf	This is a rule of thumb cited by APPA experts in the 2001 FMEP audit of WWU. Relevance and comparability judged to be high. Credibility is judged to be fair.
APPA Strategic Assessment Model (SAM)	Survey	$1.57/gsf	Based on a survey of over 300 higher education institutions. Comparability and relevance judged to be high. Credibility judged to be fair.
Capital Budget Benchmarks Average		**$1.48/gsf**	Average of JLARC's benchmarks for capital budget facility preservation expenditures.
APPA Strategic Assessment Model SAM	Based on a survey of higher education institutions	$2.55/gsf	Relevance and comparability judged to be high, credibility judged to be fair. (Note: the benchmark is actually enumerated as .89 percent of current replacement value (CRV). We translated this amount into $/gsf by multiplying .89 percent times the $286 average replacement value of Washington's higher education facilities as calculated by the Comparable Framework Analysis.
BOMA 2002 EER	BOMA members provide actual cost data in an annual survey	$0.97/gsf	The total amount of expenditures for facility maintenance and repairs was $2.21 per gsf. JLARC allocated this amount between operating and capital budget expenditures based on percentages from an analysis by Whitestone Research. Comparability, relevance, and credibility are all judged to be fair.
King County Major Maintenance Reserve Fund	Based on an analytical life-cycle cost model developed by King County for the purposes of setting aside funds for major cyclical repairs of county facilities	$1.57/gsf	Comparability and credibility judged to be high. Relevance judged to be fair.
JLARC Office Building Life-Cycle Cost Analysis	Based on an analytical life-cycle cost model developed by JLARC for a 1995 Capital Planning and Budgeting Study	$1.69/gsf	Comparability and credibility judged to be high. Relevance judged to be fair.

In the comparisons of the operating and capital expenditures of Washington's higher education institutions with each other and with the benchmarks, the following cost elements were included in the comparison:

Operating Budget Facility Maintenance Expenditures Elements

Entity	Expenditures Used in Comparison
Washington's Higher Education Institutions	Subprogram 092 (Building Maintenance) Expenditures / GSF
APPA FY 2000 CCAS	Maintenance Expenditures / GSF
BOMA 2000 EER	Total Facility Maintenance and Repair Costs (which include both operating and capital expenditures) of $2.21/GSF were allocated between operating and capital based on the percentages cited in a report by Whitestone Research, a facilities management consulting firm.
APPA's WWU FMEP Facilities Audit	Building and System Maintenance Costs
APPA SAM	Used 48 percent of "Annual Facility Operating Budget" of $3.27/GSF. We did not use the entire $3.27 of "Facility Operating Costs" because it includes custodial and grounds costs while our comparison does not. The 48 percent of Facility Operating Costs was selected because in Washington's institutions, maintenance costs average to be 48 percent of the total of maintenance costs plus custodial and grounds costs.

Capital Budget Preservation Elements

Entity	Expenditures Used in Comparison
Washington's Higher Education Institutions	Minor Works – Preservation and Other Preservation Expenditures
APPA SAM	Annual Capital Renewal and Renovation/Modernization Expenditures/CRV of .89 was multiplied by $191/gsf, which was the average CRV for Washington's higher education institutions as identified in the Comparable Framework Analysis.
BOMA 2000 EER	Total Facility Maintenance and Repair Costs (which include both operating and capital expenditures) of $2.21/GSF were allocated between operating and capital based on the percentages cited in the Whitestone Report referenced above.
King County Major Maintenance Reserve Fund	Annual costs for major cyclical repairs and replacements of building systems.
JLARC Life-Cycle Cost Analysis	Annual costs for major cyclical repairs and replacements of building systems.

APPENDIX 7 – MEMBERS OF THE TECHNICAL REVIEW PANEL

Members Of The Technical Review Panel	
University of Washington	Eric Hausman, Bruce Abe
Washington State University	Deborah Carlson, Ev Davis
Eastern Washington University	Mike Irish
Central Washington University	Bill Vertrees, Mickey Parker
The Evergreen State College	Michel George
Western Washington University	Bill Managan
Pierce College	Al Spence
State Board for Community & Technical Colleges	Tom Henderson
Higher Education Coordinating Board	Jim Reed
Office of Financial Management	Marziah Kiehn-Sanford

APPENDIX 8 – COUNCIL OF PRESIDENTS' OFFICE COMMENTS

State of Washington
Joint Legislative Audit and Review Committee (JLARC)

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December 30, 2002

TO: Members of the Joint Legislative Audit and Review Committee

FROM: Tom Sykes, Legislative Auditor
Karl Herzog, Research Analyst
Larry Brubaker, Research Analyst

SUBJECT: **Auditor Response to the Council of Presidents' Comments on the Higher Education Facility Preservation Study**

As part of the Higher Education Facilities Preservation Study, we requested formal comments from the three agencies that have state-level responsibility for higher education (Office of Financial Management, Higher Education Coordinating Board, and State Board for Community and Technical Colleges). These formal comments, as well as responses to the comments, are included as Appendix 2 and 2a, respectively, in the proposed final report. The Council of Presidents' Office (COP), representing the six state baccalaureate institutions, has also prepared comments on the study, which are attached. The COP comments, which contain significant factual errors, are in contrast to the collaborative contributions we received from individual institutions during the course of the study. Our response to the COP comments follows.

- COP takes issue with the study's focus on preservation, as opposed to facility modernization and program improvements. However, the Legislature **directed** JLARC to focus on preservation. This legislative mandate reflected the fact that higher education institutions were specifically asking for funding to address a backlog of preservation projects. Additionally, JLARC's report explicitly lays the groundwork for future examination of modernization and programmatic changes to facilities, should the Legislature choose to do so, by establishing an accurate and comprehensive inventory of facilities, their conditions, and their uses.

- COP asserts that much of the information produced by the study already resides at the Office of Financial Management (OFM) and the Higher Education Coordinating Board (HECB). While OFM and HECB currently maintain **some** facility information, during the course of this study JLARC found that much of it is incomplete, inaccurate, inconsistent, and not comparable across institutions. Higher education institutions, HECB, and OFM were well aware of the limitations of existing centrally maintained data when the study began and as it progressed. Moreover, one initiative for a study similar to this JLARC study originated in a HECB budget decision package for 2001-03, reflecting the Board's desire for improved preservation information.

- COP asserts that the study does not recognize differences between higher education institutions. This is a familiar COP comment on any comparisons made among Washington's higher education institutions. In fact, JLARC's study **does** recognize the following differences in facilities across institutions: facility size, use, type of construction, quality, and location. Though we sought to factor in differences in facility system age into our analysis, individual institutions could not provide this information to JLARC. Our recommendations address this limitation.

- COP expresses concern that the comparable framework does not include infrastructure, and cannot be used to evaluate specific projects. JLARC attempted to include infrastructure in the comparable framework, but could not do so because institutions do not currently maintain the needed data. We also want to be clear that the study was intentionally designed to provide comparable measures of condition at the campus and institutional levels, rather than to evaluate specific projects. As there are over 2,400 higher education buildings across the state, attempting to build a project-specific evaluation tool for use in legislative policy and budget formulation is unrealistic.

- COP asserts that development of minimum funding thresholds (Recommendation 2 of the preliminary report) is premature and inappropriate. Our research revealed that preventive and ongoing facility maintenance funded in institutions' operating budgets can help prevent and mitigate preservation backlogs, and that current budget structures create an unintended incentive for institutions to underfund facility maintenance. State appropriations represent only **one of many** sources of funding available to institutions to maintain buildings, and maintenance currently makes up **less than two percent** of institutions' total educational and general expenditures. The recommendation to establish minimum spending thresholds is a tiny but important step to ensure that our citizens' investments in higher education buildings, valued at $11.5 billion, are adequately maintained.

- COP implies that there is a national model that outlines policies for funding of research facilities, and that JLARC is recommending that the state should not invest in research facilities. OFM's September 2002 report on Higher Education Capital Funding Guidelines revealed no such "national model." JLARC's report makes no recommendations or inferences that the state should not invest in research or research facilities.

- COP asserts that existing processes provide sufficient information and comparable data to the Legislature for budget prioritization. However, dissatisfaction with existing information—and concern about the absence of comparable data—is what led to the legislative mandate for the JLARC study. The scope and direction of the study was set within the parameters of that mandate.

In summary, much of the COP comments appear to misrepresent the JLARC study. We look forward to a more productive dialogue should the COP advance ideas to address the Legislature's clearly expressed desire for improved facility stewardship accountability.

Attachment

Council of Presidents' Office

Representing Washington's public baccalaureate institutions

Terry Teale, Executive Director

December 20, 2002

Thomas Sykes, Legislative Auditor
Joint Legislative Audit and Review Committee
P.O. Box 40910
Olympia, Washington 98504-0910

Dear Mr. Sykes,

Thank you for agreeing to consider formal comments offered on behalf of the Council of Presidents' Interinstitutional Committee of Business Officers in response to the JLARC Preservation Study. We trust that you will forward the attached specific comments along with those offered by OFM, the HECB and the SBCTC to committee members.

As context for our submission responding to the specific recommendations we would like to offer these general observations:

- The JLARC Preservation Study focuses on preservation, and ignores modification and program improvements, as well as code related and required upgrades, (i.e. ADA, seismic, UBC, etc.). While this distinction might make sense for collecting data, it is not appropriate for informing policy and budget decisions. Capital projects often combine preservation, modification and program improvements. Decisions that attempt to separate them are bound to be sub optimal.

- Because the study focuses solely on preservation, we trust that policy makers will recognize that it is not a complete analysis of higher education institutions' capital requirements, nor is it a thorough picture of maintenance and operations needs and requirements.

- We ask that consideration be given to avoiding passing rules that generate administrative burden both in Olympia and at our institutions ~ especially if those rules do not produce significant improvements in end services. We are often asked by legislators to identify restrictions that would allow us to become more efficient. While restrictions begin as well meaning, they can have costs that exceed their benefit.

- The JLARC study does not recognize the significant differences between higher education institutions, their missions and programs.

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- The OFM study on Higher Education Capital Funding Guidelines recommendation that the state not invest in research facilities is counter to the national model for research funding, and if followed, would make Washington State no longer competitive for sponsored research.

With these observations in mind, we have submitted specific responses to each of the four recommendations contained in the Preservation study.

We look forward to continued participation in the discussions that this report evokes.

The Council of Presidents looks forward to working with you and the higher education community as further work is conducted to assess capital facilities needs and issues.

Sincerely,

Terry Teale

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Council of Presidents' Office

Representing Washington's public baccalaureate institutions

Terry Teale, Executive Director

SUMMARY OF PUBLIC BACCALAUREATE RESPONSE TO JLARC PRESERVATION STUDY

December 20, 2002

Submitted by the Council of Presidents' Interinstitutional Committee of Business Officers (ICBO)

Recommendation 1: ***The Legislature should designate an agency to sustain and expand the Comparable Framework to assemble information needed to support facilities-related budget and policy development for the 2005-2007 and 2007-2009 biennia.***

COP Position: Partially Concur

- **COP agrees with the goal to develop a statewide framework of comparable information for state facilities.**
  - Developing the comparable framework should be a collaborative effort that includes, at a minimum, representatives from the institutions, the SBCTC, HECB, OFM, and legislative staff.
  - The comparable framework, as it is currently defined, includes buildings, only, and does not represent all capital facilities that need modernization or preservation (i.e. infrastructure such as boilers, chillers, roads, sidewalks, fiber and copper telecommunication systems, etc.)
  - The comparable framework, as it is currently defined, may provide a general impression of condition, but does not provide the necessary context to evaluate specific projects, or for determining at a project level, which projects are more critical than others.
  - Needs for facilities modernization should be an integral part of the evaluation of the facilities condition. Information regarding the programmatic suitability of institutional facilities and their ability to meet modern teaching and learning, research and other needs must be a factor in the comparable framework.
- **The costs associated with accomplishing this project should be considered further.**
  - Much of the information and the authority necessary to accomplish this project already reside in either OFM or with the HECB.
  - Refining, updating and maintaining the comparable framework will require individual institutions to incur substantial costs for resources, staffing and system changes.

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Recommendation 2: ***The Office of Financial Management, in consultation with legislative fiscal committees and higher education institutions, should develop (a) minimum thresholds for higher education operating and capital budget facility preservation expenditure, and (b) procedures for consistent reporting of preservation expenditure to the state.***

COP Position: Does Not Concur with (a)
Partially Concurs with (b)

- **Developing minimum thresholds with funding implications is premature and inappropriate.**
  - Establishing this formula as an absolute does not recognize the need to balance preservation and program expenditures, nor does it take into account differences in building types, geographic variations in costs, the judgment of the institutions, and institutional priorities for overall facilities investments.
  - Higher education institutions allocate available funding based on strategic planning processes and cannot balance resource allocations if portions of the state appropriation are set-aside for only one segment of their operations.
  - Historically, the legislature has expressed an interest in protecting academic instruction when budgets cuts have been imposed. Mandating expenditure of a certain level to the facility maintenance area, for example, means making deeper cuts in other areas, such as instruction, libraries, student services, etc.

- **While tracking of statewide trends in expenditures and facilities conditions might be useful at a policy level, the establishment of rigid formulas for facilities preservation expenditures is not likely to work toward the common goal of reducing the backlog of facilities preservation projects.**

- **Any additional funds determined to be necessary to achieve these guidelines must be additive to institutions'existing budget; otherwise the result is a cost shift that does not recognize the core issue of under funding.**
  - Neglecting to pay for inflation and basing funding on a square footage cost that is inadequate to cover operating costs exacerbates the under funding of preservation.

- **COP agrees that operating and capital preservation expenditures should be reported using clearly defined sub-programs.**
  - Subprograms differ across institutions and would need to be standardized, but that would still not address cost variances arising from geographic market differences. (The maintenance funding formula developed by the higher education institutions in the 1970's addressed variations in facility types but was ultimately abandoned because it was not possible to keep pace with the funding needs and benchmarks recommended by the formula.)

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Recommendation 3: *The Office of Financial Management (OFM) should develop operating and capital budget funding policies governing the distribution of higher education facility preservation costs between appropriated and non-appropriated funds. At a minimum, the funding policies should: (a) restrict institutions from using state general fund resources to subsidize facility preservation costs that should be paid from non-general fund sources; (b) Require institutions to disclose all funding sources available for maintaining buildings when requesting additional state funding for this purpose. When developing these funding policies, OFM should take into consideration the directions articulated in its September 2002 report on Higher Education Capital Funding Guidelines.*

COP Position: Partially Concur

- COP concurs with the MGT of America, Inc. recommendation addressing revenue generating enterprise units.
    - The recommendation states that revenue generating enterprise units such as housing, dining and parking should bear operating and maintenance costs for their facilities. This is currently the practice, so additional regulations are unnecessary.
- Policies need to encourage institutions to seek funds from outside entities to contribute non-state funding to higher education institutions.
- It may also be in the state's interest to provide some state support for buildings constructed with non-state funds or for activities that add value and benefits to Washington's citizens.
- COP does not concur with the recommendation that the state should not invest in the support of space for research. Research programs are integral to the instructional environment at a research university and provide significant benefit to the state. The national model for sponsored research assumes local benefit and local investment as an acknowledgement of the benefit. This policy would make Washington State no longer competitive for sponsored research.

Recommendation # 4: *The Legislature should consider examining options for a centrally administered higher education preservation backlog reduction funding process within the capital budget that creates incentives for public higher education institutions to improve and sustain their facility preservation efforts. Potential options could include, but not be limited to, the following: (a) Designating a state agency to design and operate a pilot project, and associated processes, for partially funding backlog reduction in the 2003-2005 biennium; (b) Considering eligibility criteria that would give priority to those higher education institutions that are in compliance with minimum preservation expenditure thresholds; (c) Distributing funding through the use of criteria assembled through the development of the Comparable Framework in this JLARC study; and (d) Developing targeting criteria for backlog reduction resources that would be in line with overall state higher education policies.*

COP Position: Do Not Concur

- **The Council of Presidents' does not support any recommendation that creates a secondary budget allocation process.**
  - Capital budgeting is a collaborative process involving competing needs for program improvements, renovation, and access and must be assessed on an on-going basis taking into consideration the mission, strategic planning and priorities established by institutional governing boards charged with these responsibilities.
  - Existing and proposed processes should provide sufficient information and comparable data to the legislative process to enable an effective legislative budget process.
  - This recommendation would establish a second process that would likely result in added conflict and delay rather than in more straightforward budget prioritization.
- **Establishing a pool for preservation would require additional processes and delay while ignoring the need to address critical repair, renovation and replacement projects that must be balanced through institutional planning.**