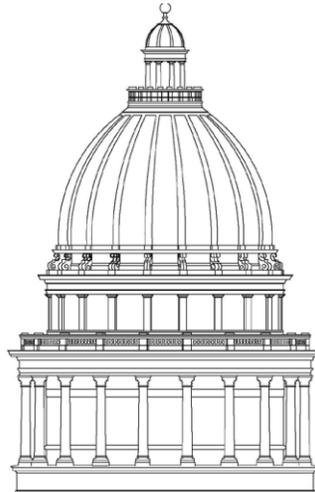


REPORT TO THE  
**UTAH LEGISLATURE**

Number 2019-07



**A Performance Audit of State and  
Higher Education Building Costs**

August 2019

Office of the  
**LEGISLATIVE AUDITOR GENERAL**  
State of Utah





STATE OF UTAH

# Office of the Legislative Auditor General

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## Audit Subcommittee of the Legislative Management Committee

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Senator Karen Mayne • Senator Evan J. Vickers • Representative Brian S. King • Representative Francis D. Gibson

KADE R. MINCHEY, CIA, CFE  
AUDITOR GENERAL

August 20, 2019

TO: THE UTAH STATE LEGISLATURE

Transmitted herewith is our report, **A Performance Audit of State and Higher Education Building Costs** (Report #2019-07). A digest is found on the blue pages located at the front of the report. The objectives and scope of the audit are explained in the Introduction.

We will be happy to meet with appropriate legislative committees, individual legislators, and other state officials to discuss any item contained in the report in order to facilitate the implementation of the recommendations.

Sincerely,

A handwritten signature in black ink that reads "Kade minchey".

Kade R. Minchey, CIA, CFE  
Auditor General



# **Digest of A Performance Audit of State and Higher Education Building Costs**

The former chairs of the Infrastructure and General Government (IGG) Appropriations Subcommittee requested an audit of the oversight and control of state building costs, with a primary focus on higher education.

In addition to our review of the actual cost of construction, our focus on how building costs can be controlled led us to examine the process by which buildings are proposed, reviewed, and funded. It is at this point, early in the process, that good information and analysis can exert the greatest influence over the scope and cost of a project. A good building evaluation process can confirm that buildings are truly needed and are neither too large nor too small to satisfy the underlying need.

## **Current Building Evaluation Process Lacks Good Information**

Our audit found that the State Building Board (SBB) is not collecting, vetting, or reporting building proposal information as directed in statute. This could be partially due to a lack of fully developed information by state entities. To ensure good information is available sooner, the Legislature could consider requiring earlier analysis of all building proposals.

Also, the Board of Regents for Higher Education are required in statute to perform a review of higher education buildings similar to that done by the SBB. We believe they should collect clear information and coordinate with the SBB to reduce duplication of effort.

## **State Building Board and Regents Should Improve Their Building Evaluation Process**

Our review of the frameworks used to evaluate new state and higher education buildings found that the State Building Board (SBB) and the Utah State Board of Regents (Regents) could improve the criteria for assessing building proposals. The SBB is not fulfilling its legal responsibility to review building proposals and should revise its building review and scoring methodology to improve consistency, objectivity, and compliance with legal requirements. Also, the Regents should adjust their building need assessment to avoid inflating higher

education space needs. Specifically, enrollment counts, space standards, and space utilization data should all be refined.

## **Improved Cost Data Allows for Better Building Estimates and Comparisons**

Better data and analysis of state building projects can aid decision making on future building requests. The Division of Facilities Construction and Management (DFCM) has started to develop a database of project cost data and could provide better data to other stakeholders to support better project analysis.

Under unique circumstances, some buildings have grown in size after receiving Legislative funding, which may dilute operations and maintenance (O&M) funding. The Legislature should consider controls to ensure such projects are managed consistently and responsibly.

# REPORT TO THE UTAH LEGISLATURE

Report No. 2019-07

## **A Performance Audit of State and Higher Education Building Costs**

August 2019

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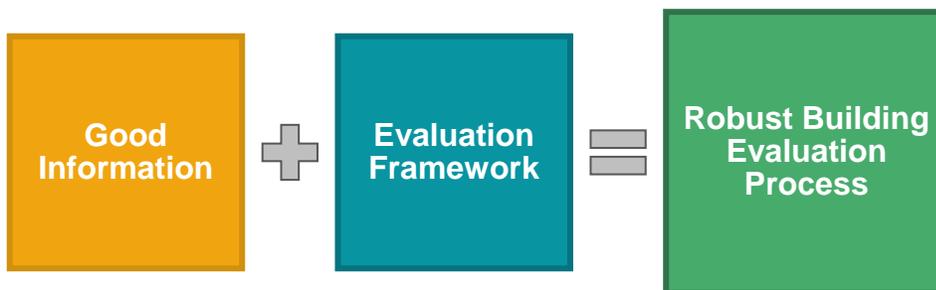
# Chapter I Introduction

The former chairs of the Infrastructure and General Government (IGG) Appropriations Subcommittee requested an audit of the oversight and control of state building costs, with a primary focus on higher education.

In addition to our review of the actual cost of construction, our focus on how building costs can be controlled led us to examine the process by which buildings are proposed, reviewed, and funded. It is at this point, early in the process, that good information and analysis can exert the greatest influence over the scope and cost of a project. A good building evaluation process can confirm that buildings are truly needed and are neither too large nor too small to satisfy the underlying need.

Reviewing this process both in Utah and elsewhere, we found that, broadly speaking, a robust building evaluation process has two elements:

- High quality, relevant **information** to support the need, scope, cost, and design of proposed projects
- A clear **framework** with benchmarks that can be used as the basis for objective project assessment and comparison



Our assessment of Utah’s process is that both elements above could be improved. Because each building proposal is highly unique and complex, we believe that an improved process will lead to better-informed policy discussions and decisions.

Senate Bill 102, passed during the 2019 Legislative General Session, restructured the process by which higher education buildings

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**Our review of building costs led us to review the process by which buildings are proposed, reviewed, and funded.**

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**A robust building evaluation process has good information and a clear evaluation framework.**

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are reviewed and funded. Though the new process is significantly different, there are still parts of the new process that are similar to areas we reviewed in the former process. We have therefore applied certain audit observations to the new process as items for policymakers to consider as the new law is executed in the coming years.

## **Audit Scope and Objectives**

Questions from the former IGG Appropriations Subcommittee chairs included concerns regarding how the costs for buildings are overseen and controlled with a special focus on higher education.

Chapters II and III of this report consider both building evaluation process elements described in this chapter. Chapter IV of the report then considers actual construction costs and some specific questions from the audit request about scope changes and construction budget management.

## Chapter II

# Current Building Evaluation Process Lacks Good Information

As discussed in Chapter I, the best time to shape building requests and control costs is during the initial building request evaluation process. A robust building evaluation process has two elements:

- High quality, relevant information to support the need, scope, cost, and design of proposed projects
- A clear framework with benchmarks that can be used as the basis for objective project assessment and comparison

This chapter will focus on the first element: How good information can help drive good policy discussions and decisions.

Our audit found that the State Building Board (SBB) is not collecting, vetting, or reporting building proposal information as directed in statute. This could be partially due to a lack of fully developed information by state entities. To ensure good information is available sooner, the Legislature could consider requiring earlier analysis of all building proposals.

Also, the Board of Regents for Higher Education (Regents) are required in statute to perform a review of higher education buildings similar to that done by the SBB. We believe they should collect clear information and coordinate with the SBB to reduce duplication of effort.

### State Building Board Is Not Collecting or Reporting Information as Directed in Statute

*Utah Code* requires the SBB to collect information to assess the need for and appropriateness of the size and scope of proposed state buildings. We do not believe the SBB is doing so adequately. Given the statutory oversight role of the SBB and the large amount of public funds used to construct buildings, the SBB should function as a strong voice of accountability in the state building review and approval process.



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**Statute requires the State Building Board to collect information to assess the need and size of proposed state buildings.**

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## **Statute Requires SBB to Collect Information About Building Need and Scope**

*Utah Code* 63A-5-104(2) requires all state agencies, including higher education institutions, to submit both a project request and a feasibility study to the SBB. The project request and feasibility study must include information regarding several items but this report focuses on the following parts of the analysis: the need for the proposed building and the appropriateness of its proposed scope and size.

These elements are critical because the underlying need for the building forms the basis for its size, which has the largest impact on cost. Once need and size are established, consideration of other factors like construction costs, ongoing costs, alternative funding, and economic impact can be properly considered.

In both the project request and feasibility study submitted to the SBB, statute and rule require information about need and scope, including the proposed square footage.<sup>1</sup> Statute also requires the SBB to verify the completeness and accuracy of this information.<sup>2</sup> After the information is vetted, statute requires the SBB to submit to the Legislature and Governor a report that contains, among other things, "...substantiating data to support the adequacy of any projected plans."<sup>3</sup>

## **SBB Is Not Collecting the Information Needed to Fulfill Its Legal Mandate**

Despite SBB's legal mandate, we believe that the information the SBB requires in its project request forms is insufficient to determine whether buildings are necessary and appropriately sized. That is not to say that the projects' need and scope are not justified. Conversations with multiple higher education institutions found that the institutions could produce more detailed information for the requests. Instead, the building request documents lack quality information because the SBB has not been requiring it.

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<sup>1</sup> *Utah Code* 63A-5-104(2)(b), *Administrative Rule* R23-3-10(1)

<sup>2</sup> *Utah Code* 63A-5-104(2)(c)

<sup>3</sup> *Utah Code* 63A-5-103(6)(a)(iii)

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**Quantifying the need for a building and the appropriateness of its proposed size are critical steps in analyzing proposals.**

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**Higher education institutions could produce better information than what the SBB requests.**

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Buildings are typically requested because of safety concerns, enrollment/program growth, or because current space lacks needed functionality. We would therefore expect to see a clear connection between those driving factors and the square footage requested in proposed buildings. However, most applications provide data like broad demographic information, enrollment trends expressed in percentages, unquantified references to student demand, or campus-wide headcount enrollment numbers.<sup>4</sup> This information does not articulate or quantify the specific factors that support the need and scope of the proposed buildings.

To clearly see why a building is needed and how large it should be, you would expect to see information like the following:

- The number of full-time equivalent (FTE) students projected to use the building
- The type and amount of space those FTE students will need to receive required courses
- Details for how the new building will provide the assignable square feet needed to satisfy student demand and program needs
- Specific numbers showing how many FTE students are affected by inadequate space to complete necessary courses, with information about the space required to fix the problem
- Projected enrollment growth related to the requested building
- The ratio of assignable and net square feet to gross square feet

Figure 2.1 highlights the lack of information required by the SBB compared to the information an institution had at its disposal.

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**Better data should be used to drive and support building requests.**

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<sup>4</sup> Headcount enrollment does not measure the number of classes taken and does not adjust for online and concurrent enrollment classes.

**Figure 2.1 One Project Request Highlights the Disparity Between the SBB Requirements and What the School Could Have Provided.** The school had much more specific information about the building being requested.

One university had much better data than what was requested in the SBB building request form.

Information in SBB Project Request	Information the Institution Had Available
<b>Need</b>	
<ul style="list-style-type: none"> <li>Request for 180,000 square foot building.</li> <li>Old building “can no longer support the students enrolled in the various programs offered.” No numbers provided.</li> <li>Nearly one-third of all Americans work in marketing-related jobs.</li> <li>“...business skills are always in demand.”</li> </ul>	<ul style="list-style-type: none"> <li>Utilization of current business classrooms in Spring 2018 was 53 hours/week. This exceeds USHE 33.75 hour utilization standard.</li> <li>Number of FTE students in business programs. Projected growth and space needs.</li> <li>Number of faculty and staff. Projected growth and space needs.</li> </ul>
<b>Size / Scope</b>	
<ul style="list-style-type: none"> <li>Student population will reach 41,000 by the year 2020.</li> <li>According to the Utah Foundation, population in the state will grow by 1.5 million people by the year 2050.</li> <li>The new building will provide the spaces needed to train future industry leaders.</li> </ul>	<ul style="list-style-type: none"> <li>Classroom space will double from 720 to 1,407 seats with an assumption of 23 hours/week of scheduled class time.</li> <li>The new building will include three times the current study space and more than four times the “student academic support and work space.”</li> <li>The amount of classroom space per student will increase from 23 sf/FTE student to 25.6 sf/FTE student.</li> <li>Space for faculty will increase 165%.</li> <li>The project also includes a 9,800 square feet suite for the university president and other administration, adjacent to the requested building.</li> </ul>

*Source: SBB Project Request, Institution’s architectural program, USHE utilization data*

Figure 2.1 clearly highlights the lack of useful information required by the SBB. The details about the 9,800 square feet university administration suite were not included in either the SBB project request or the verbal presentation to the SBB. Additional examples are helpful to understand the breadth of the problem.

One project request from the 2019 SBB process states multiple times that the current space does not meet student demand and that enrollment in the relevant program is "...up by 20% for fall 2017" without providing data showing the actual amount of demand or growth that 20% represents. The request also cites campus-wide enrollment growth and county population growth from 1963 to the present. None of this information clearly supports the need for or size of the proposed building. This institution had a full architectural analysis that could have been used to provide much better information, had the SBB asked for it.

One institution provided an FTE enrollment forecast in its project request with the specific number of square feet necessary to satisfy student demand over the next several years. However, the building detailed in the project request was clearly too small to meet that demand. Later in the process, the day before the SBB prioritized building projects, the institution verbally described the full plan that included three buildings. The need and scope for the requested building was unsupported by the information in the SBB project request.

Because the law states that the SBB shall require information that demonstrates the need and appropriateness of the scope of a proposed building project, the SBB should revise both its request form and feasibility study requirements so that state agencies and institutions of higher education are required to clearly support the need and requested size of projects with consistent, objective measures. It may also be appropriate for the Department of Administrative Services to identify ways the Division of Facilities Construction and Management (DFCM) can provide staff support and expertise for the SBB. This concept is discussed in greater detail in Chapter III.

### **SBB Report Lacks Information That Could Help Legislators Make Decisions**

The SBB is legally required to prepare an annual report for Legislative appropriations subcommittees and the Governor's office. *Utah Code* 63A-5-103(6) outlines the information that is required in that report. While the report is well organized and includes most of the information required in law, we believe the report lacks what the

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**The SBB building request form does not require applicants to quantify exactly why buildings are needed.**

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**The annual SBB report does not provide enough information to substantiate building requests.**

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law calls “substantiating data [supporting] the adequacy of (...) projected [building] plans.”<sup>5</sup>

A review of the state-funded projects listed in the SBB’s most recent Five-Year Building Program reports finds very little substantiating data that would support the adequacy of these building proposals. To illustrate, Figure 2.2 shows a page from the 2019 Five-Year Building Program.

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<sup>5</sup> See *Utah Code* 63A-5-103(6)(iii)

**Figure 2.2 The SBB Report Lacks Substantiating Data to Support the Adequacy of Proposed Plans.** The SBB should include more data about the specific factors driving the need for, and scope of, the proposed building. This example is not meant to critique DSU’s request, but the SBB’s reporting practices.

COST ESTIMATE	
Construction	\$45,301,324
Design Fees	\$3,852,549
Property Purchase	\$0
Furnishings & Equip.	\$2,944,586
Utah Arts	\$453,013
Other	\$5,345,666
<b>Total Est. Cost</b>	<b>\$57,897,138</b>
Previous Funding	\$0
Other Funding	\$0
1.1% Capital Improv.	\$636,869
Increased State O&M	\$821,276
<b>Total Cost of Ownership</b>	<b>\$136,689,219</b>
Total Est. Cost	\$57,897,138
Capital Renewal	\$36,241,059
Infrastructure	\$1,487,222
Total O&M	\$41,063,800

ADDITIONAL INFO	
Request Type	Design/Const.
Est. Start Date	Jun-20
Est. Completion Date	Jul-21
Project Cost	\$482.48/sqft.
Construction Cost	\$377.51/sqft.
New Sqft.	120,000
Existing Sqft.	52,014
New FTE Required	3
Added Program Cost	\$0
Programming	Complete
Systems Replacement	\$36,241,059
Estimated Bldg. Life	50 Years

**PROJECT OVERVIEW**

Dixie State is in need of a new science building. Currently, the lab capacity in the building, especially for Anatomy and Physiology, is inadequate. A primary priority of the institution is to facilitate growth in the sciences and health sciences. The new Science Building is an important missing piece to increase the number of graduates needed to meet critical workforce needs. The proposal is to build a modern science facility in an optimal location by demolishing two old buildings, the Education building and Music building. The project also includes replacing an existing building with additional surface parking.

**Dixie State University**  
Science Building

**FY20 Request \$57,897,138**

PRIORITY **3**



Source: State Building Board – 2019 Five-Year Building Program

Figure 2.2 shows the page from the SBB Five-Year Building Program that details Dixie State University’s fiscal year 2020 request for a science building. The Project Overview section (yellow arrow) cites inadequate lab space for anatomy and physiology but the SBB does not quantify the shortage or describe the type or amount of lab

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**The SBB should report clearer data to support the need and size of requested buildings.**

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space that would solve the problem. The SBB then cites DSU's goal to grow its science and health science programs and help satisfy critical workforce needs. However, the overview lacks numbers to describe the anticipated or desired growth in enrollment or to quantify how workforce demand impacts space needs. This pattern is repeated across multiple projects in the report. Ideally, the SBB would report numbers that justify the construction of a new building such as the number of students, faculty, and staff anticipated to use the new building and the amount of space those individuals need.

Given the gaps in information illustrated above, we do not believe the 2019 Five-Year Building Program fully satisfies the legal requirement to provide substantiating data supporting the adequacy of building proposals. This data insufficiency in the report seems to be connected to deficiencies in the information-gathering process described earlier in this chapter.

**Cost Estimates in the SBB Report Could Provide Additional Detail.** The Cost Estimate section in Figure 2.2 (red arrow) could improve to better address legislators' concerns about project costs. For example, this information, based on the DFCM's Capital Budget Estimates, could further break down the cost per square foot of each project to show the specific impact of site preparation and infrastructure improvements. This data would allow legislators to see the unique cost structure of each project more clearly and make better-informed funding decisions. Chapter IV discusses project costs in further detail.

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**More detailed cost information in SBB reports could better address legislators' concerns.**

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Additionally, the Cost Estimate section of Figure 2.2 shows the proposed size of the project. The new square footage for this project is listed as 120,000 and the existing square footage is listed as 52,014. This is misleading because the 52,014 square feet is to be demolished. This also occurs with the project size numbers reported by the SBB for Snow College, Utah State University, and Weber State University. Confusingly, that same information on the Utah Valley University and University of Utah pages of the SBB report reflects square footage to be retained and renovated, not demolished.

As the SBB works to revise the request, feasibility, and scoring process according to the other findings in this section, we recommend they improve the information reported about individual projects in their annual report to the Legislature. Improvements to the SBB

report could include information regarding the need and scope of projects, specific numbers regarding the anticipated users of the building, current square footage, and more detailed cost information.

## State Board of Regents Should Substantiate Building Need

Under new requirements in law, the Board of Regents must review proposed buildings in a process like that of the SBB. Specifically, newly enacted *Utah Code* 53B-22-204 requires the Regents to review proposals for all higher education projects to ensure the proposal “...is cost effective and an efficient use of resources...and fulfills a critical institutional facility need.” Although Chapter III will discuss the actual review of proposals, we will briefly discuss the collection of information needed to accomplish what the law now requires.

Although this section of statute is new, the Regents have been gathering information and evaluating higher education building proposals for several years. Compared to the SBB process, the Regents collect more raw information, such as:

- Current and projected institution-wide FTE enrollment
- Current and projected institution-wide FTE faculty and staff<sup>6</sup>
- Current higher education square footage by institution and space type (classroom, class lab, office, library/study, physical education, etc.)
- Proposed new, renovated, and demolished square footage by space type
- Building condition information

In recent years, the Regents have also been collecting space utilization information for classrooms and class laboratories. This information shows the number of hours the space is used and the percentage of seats occupied during that time.

As with the SBB, we believe the Regents can do more to collect information justifying the need and scope of proposed projects. For example, even with details regarding proposed square footage, no

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<sup>6</sup> This number is adjusted to reflect only those FTE associated with the specific types of space under review by the Regents. In other words, the FTE data used by the Regents does not include all employees in the Utah System of Higher Education.

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**New statutory requirements direct the Board of Regents to review higher education building proposals.**

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**We believe the Regents can do more to justify the need and scope of proposed projects.**

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information is gathered about the FTE students, faculty, and staff that would occupy the new space. Information about anticipated users is needed to enable an evaluation of whether the proposed space is well suited to the need.

Similarly, if one of the claims supporting a building request is that students are unable to complete needed classes because of a space shortage, it would make sense to require specific course information and enrollment data that could be reviewed as part of the building proposal process.

While there are many variables that could be required, simply requiring data to substantiate enrollment and program growth would greatly enhance the Regents' ability to meet their new statutory obligations to ensure proposals fulfill critical building needs in an efficient and effective way.

### **SBB and Regents Should Coordinate the Collection of Proposal-Related Information**

With both the SBB and Regents tasked with answering some of the same fundamental questions, collaboration between the two entities could reduce duplication of effort. In conjunction with our recommendations regarding the proposal evaluation process in Chapter III, the SBB and Regents should work to identify information that can be jointly collected and used in both processes. Much of this information could be obtained through a pre-design review process that quantifies the factors driving the need and size of the proposed building.

### **Other States Require Pre-Design Analysis In Their Building Review Processes**

We recognize that when building projects are proposed they may be in early stages of development and lack fully refined information that would satisfy the SBB's statutory requirements. We found that some states require a thorough review of projects as a precondition to being considered for design and construction funding and believe that the Legislature should consider a similar approach.

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**The Regents should collect specific information about the space needs of each individual building proposal.**

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**Given similar mandates, the SBB and Regents should coordinate information collection.**

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For example, the Building Commission in Wisconsin requires each agency requesting funding for construction to submit a detailed analysis for review and recommendation for final approval.

Washington's Office of Financial Management (OFM) is required by law to review building projects at the "pre-design stage." As explained in the current OFM Pre-design Manual:

A pre-design is one step in a comprehensive review and funding process. The intent of a pre-design is to explore alternatives for proposed capital projects. The pre-design should assess which alternative best addresses the problem, opportunity or program requirement and at what cost. Decision makers in the Governor's Office, OFM and the Legislature use this information to determine whether the project should proceed toward design and construction.

The manual goes on to explain that design and construction appropriations may not be made until OFM has reviewed and approved an agency's pre-design. We also found that Idaho, Arizona, and Nevada have limits on design and construction until elements of planning are complete.

Better information obtained earlier in the process could more fully support the need, scope, cost, and design of proposed projects and improve decision-making. In Utah, this approach is already taking place on an informal basis. It is not uncommon to see architectural programming (i.e., planning or pre-design) funded separately prior to construction. However, the Legislature may wish to consider requiring some form of planning, programming, or pre-design analysis as a prerequisite for all construction funding requests. Going forward, higher education institutions will have funding allocated to them each year specifically for new buildings. A portion of this funding could be used for pre-design analysis.

### **Regents Could Provide Data and Expertise When the SBB Assesses Economic and Education Measures**

Finally, law also requires the SBB to evaluate how proposed higher education projects will do the following:

- Help meet demand for jobs now and in the future

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**Some state processes require early analysis of projects before final project funding is awarded.**

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**Better information obtained earlier in the process could more fully support the need, scope, cost, and design of state buildings.**

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**The SBB could collaborate with the Regents and USTC trustees to assess economic and education-related metrics.**

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- Help meet commitments made by the Governor’s Office of Economic Development related to training and incentives
- Respond to changing needs in the economy
- Respond to demand for online or in-class instruction<sup>7</sup>

A significant portion of the material provided in SBB project requests relates to these economic and education-related metrics.

The Regents are legally responsible to track institutions’ responsiveness to workforce needs,<sup>8</sup> provide system leadership regarding online learning options,<sup>9</sup> and coordinate education services with the Governor’s Office of Economic Development (GOED).<sup>10</sup> In addition, the trustees for the Utah System of Technical Colleges (USTC) are required to collaborate with GOED and the Department of Workforce Services.<sup>11</sup> In fact, the GOED director (or the director’s designee) is a member of the USTC Board of Trustees.<sup>12</sup>

Given the efforts and expertise of both the Regents and USTC trustees, we recommend the SBB find ways to collaborate with them to collect better information to fulfill its legal mandate to assess economic and education-related metrics.

## **Recommendations**

1. We recommend that the State Building Board revise both its request form and feasibility study requirements so that state entities are required to clearly support the need and requested size of proposed buildings.
2. We recommend that the State Board of Regents improve its information gathering to ensure that collected data clearly supports the need and requested size of proposed buildings.

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<sup>7</sup> See *Utah Code* 63A-5-104(2)(d)

<sup>8</sup> See *Utah Code* 53B-1-103(3)(a) and (h)(vi), 53B-7-706

<sup>9</sup> See *Utah Code* 53B-1-103(3)(h)(ii)

<sup>10</sup> See *Utah Code* 53B-1-114, 53B-10-203

<sup>11</sup> See *Utah Code* 53B-2a-104(2)(m) and 53B-2a-110(1)(c)

<sup>12</sup> See *Utah Code* 53B-2a-103(2)(h)

3. We recommend that the State Building Board include substantiating data supporting the adequacy of projects in the annual Five-Year Building Program reports to the Legislature.
4. We recommend that the State Building Board and the Board of Regents coordinate the collection of data to minimize duplication of effort.
5. We recommend that the Legislature consider requiring some form of planning, programming, or predesign analysis for all building proposals.
6. We recommend that the State Building Board find ways to collaborate with both the Regents and USTC trustees to collect better information to fulfill its legal mandate to assess economic and education-related metrics.



# Chapter III

## State Building Board and Regents Should Improve Their Building Evaluation Processes

This chapter focuses on the second element of a robust building evaluation process, which is a clear evaluation framework with benchmarks to be used as the basis for objective project assessment and comparison.

Our review of the frameworks used to evaluate new state and higher education buildings found that the State Building Board (SBB) and the Utah State Board of Regents (Regents) could improve the criteria for assessing building proposals. The SBB is not fulfilling its legal responsibility to review building proposals and should revise its building review and scoring methodology to improve consistency, objectivity, and compliance with legal requirements. Also, the Regents should adjust their building need assessment to avoid inflating higher education space needs. Specifically, enrollment counts, space standards, and space utilization data should all be refined.

### Changes to Statute Present an Opportunity to Coordinate

Senate Bill (S.B.) 102, passed during the 2019 Legislative General Session, made changes to the way higher education buildings are funded and reviewed. The most significant change in S.B. 102 was the creation of an ongoing funding source for higher education buildings. In addition, the bill gave the Regents and the Utah System of Technical Colleges' (USTC) Board of Trustees (Trustees) more prominent roles in analyzing building proposals and added requirements to independently report to the Legislature and Governor. Figure 3.1 provides a basic outline of this new process.

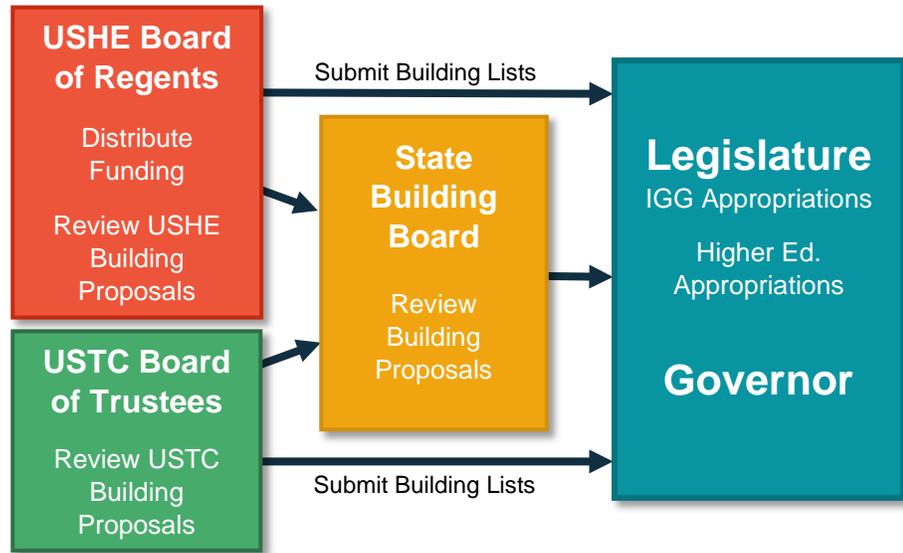


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**The process for reviewing state building requests was changed by S.B. 102 in the 2019 Legislative General Session.**

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**Figure 3.1 Diagram of New Funding and Review Process Under S.B. 102.** The USHE Regents and USTC Trustees simultaneously submit lists to the Legislature, Governor, and the SBB for further review.



Source: Senate Bill 102, 2019 Legislative General Session, **Utah Code** 63A-5-103

With the new process came new building proposal evaluation criteria for the Regents. Though they have had a building proposal review process in place for several years, this is the first time specific requirements have been included in statute. The new criteria include requirements for the Regents to verify that proposed buildings are cost effective and efficient and that they fulfill critical institutional facility needs.

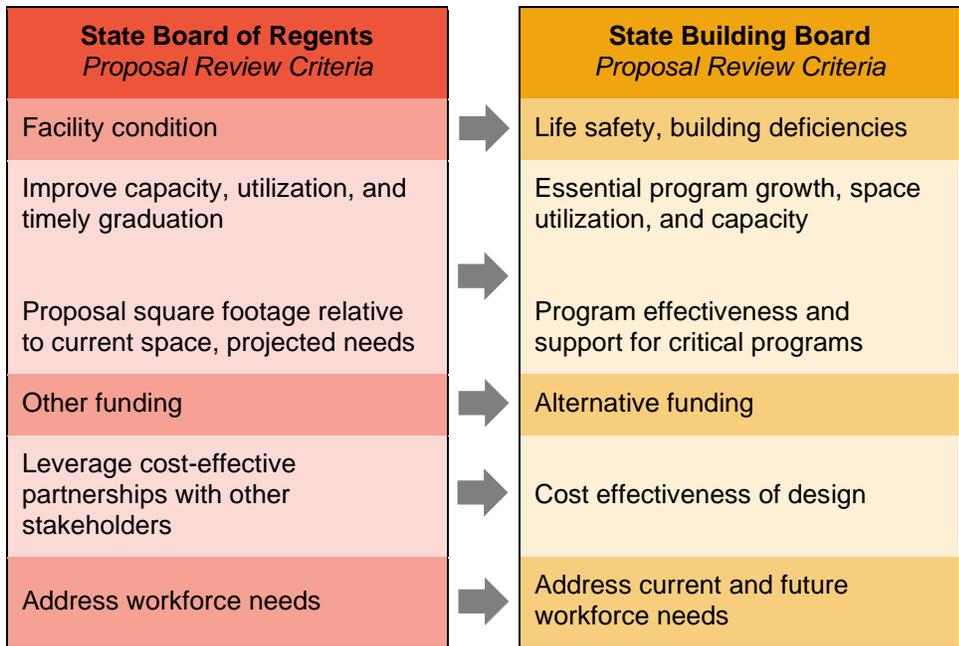
In addition to the review of building proposals, S.B. 102 tasked the Regents with creating a formula to distribute a dedicated stream of building funding among the eight institutions of higher education. This statutory formula is based on some of the same elements that would inform the building proposal review process, namely, enrollment, projected student growth, existing square footage per full-time equivalent (FTE) student, facility age and condition, and space utilization. Specific details regarding these new requirements for the Regents, SBB, and Trustees can be found in Appendix A.

With the evaluation criteria in mind, we now turn to the actual building evaluation processes and methodologies used by the SBB and Regents. In the processes used to analyze and rank building proposals, we found redundancy in the criteria evaluated by both entities. Figure

**New, specific criteria for building review and funding were recently added to statute.**

3.2 details the specific elements or criteria that have comprised each entity’s building proposal scoring process. The criteria have been lined up in the figure to highlight the similarities.

**Figure 3.2 The SBB and Regents Have Historically Reviewed Many of the Same Elements in Their Proposal Scoring Processes.** Better coordination could reduce the duplication of effort.



*Source: Utah State Board of Regents' Capital Development Prioritization (CDP) 2019-2020 Priority Guidelines and CDP Policy R741; State Building Board 2019 Five-Year Building Program – Evaluation Guide*

Figure 3.2 shows that both the Regents and the SBB have reviewed higher education building proposals for the same things in different ways before presentation to the Legislature. We believe the changes in S.B. 102 present an opportunity to take a fresh look at coordinating these redundant efforts.

For example, because both entities are working to evaluate facility condition and safety risks, it could make sense to develop a joint method based on objective data to use as a basis for project approval or prioritization.

Chapter II recommended that both entities coordinate the collection of information. In addition, because both entities are reviewing many of the same questions, it would make sense for the SBB and Regents to collaborate and develop a more unified set of evaluation criteria. This would also help determine the types of

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**The SBB and Regents review many of the same elements in their separate building review processes.**

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**The SBB and Regents should coordinate their reviews of many of the same questions.**

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information that will be required to satisfy those criteria. The Legislature may also wish to clarify in law how the State Building Board and the Board of Regents should coordinate similar efforts during the building proposal review process.

## **State Building Board Project Review Process Should Be Improved**

We do not believe the SBB has been reviewing building proposals adequately. To improve accountability, as we believe the statute requires, we recommend the SBB perform a comprehensive revision of its building review process, scoring objectives, and criteria to improve consistency, objectivity, and compliance with legal requirements. Improving the project review process would also provide a good starting point for the revision of the project request form and feasibility study discussed in Chapter II.

### **Inconsistent Scoring Recommendations Create Questionable Scoring Outcomes**

The current SBB scoring process contains inconsistencies and redundancies that lead to questionable scoring outcomes. The SBB has historically used five scoring objectives to assess and prioritize building proposals. Specific details about some scoring objectives illustrate how the SBB evaluation process falls short of the rigorous evaluation process described in statute.<sup>13</sup>

For example, scoring objective number two in the SBB Evaluation Guide is meant to score building proposals based on how well the project will satisfy essential program growth, space utilization, and capacity requirements. Scoring objective number four is meant to assess program effectiveness, capacity, and the degree to which a building will support critical programs. In essence, the fourth objective is nearly identical to objective number two.

In the fiscal year 2020 scoring process, the SBB created recommended scores for objectives two and four based on the Regents' ranked list of higher education building proposals. SBB members then used the recommended scores as a starting point for individual member scoring. However, the SBB did not produce

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**The current SBB scoring process contains inconsistencies and redundancies that lead to questionable scoring outcomes.**

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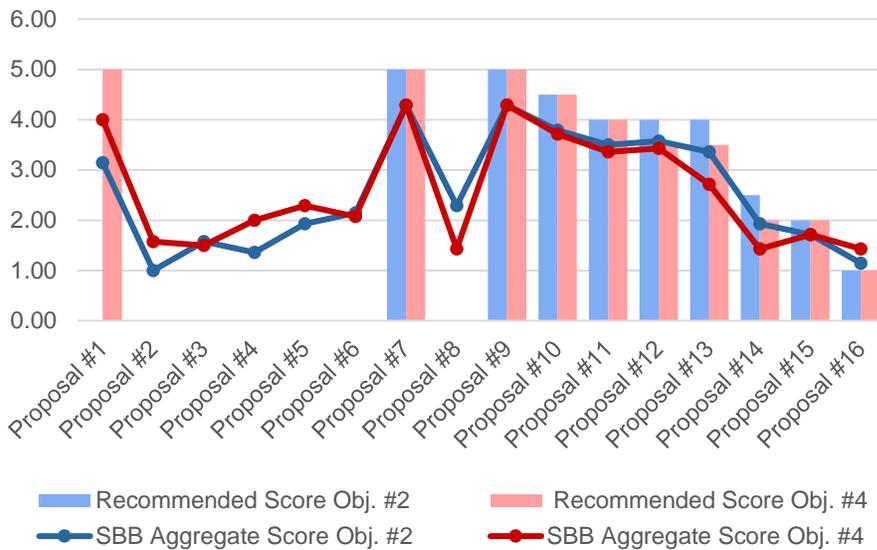
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<sup>13</sup> See *Utah Code* 63A-5-103(6) and 63A-5-104(2).

recommended scores for most of the non-higher education building proposals. Because these scores were left blank, this looked to SBB members like a recommended score of zero. Not surprisingly, projects without recommended scores were ranked lower than the others in final scoring. In discussions with the SBB, no clear reason emerged for not giving a recommended score for the non-higher education projects.

Figure 3.3 shows both the recommended scores (the bars) and final aggregate SBB member scores (the lines) for all 16 proposals and for both scoring objectives. The scoring recommendations clearly had a large impact on SBB members' scores.

**Figure 3.3 Projects Without Recommended Scores Were Scored Lower.** The scoring recommendations had a large impact on SBB members' scores.



Source: SBB Fiscal Year 2020 Scoring Data

As Figure 3.3 illustrates, scoring recommendations should be done in a more consistent, systematic way. We believe statute sets a higher standard for SBB project evaluation that involves more objective data and criteria.<sup>14</sup> We recommend the SBB create a more rigorous method to assess and score the need for proposed buildings. This should include consolidating redundant objectives.

<sup>14</sup> Specifically, *Utah Code* 63A-5-104(2)(b) and (c)

**Inconsistent SBB scoring recommendations had a large impact on SBB scores.**

**The SBB should create a more rigorous method to assess and score the need for proposed buildings.**

## **SBB Assessment of Cost Effectiveness Could Be Improved**

The third SBB scoring objective assesses the cost effectiveness of the proposed building on a six-point scale (zero to five). More cost-effective designs receive higher scores. The SBB evaluation guide states the following:

All projects with a standard design and construction approach appropriate to the facility need should receive a score of 3....Only projects with a less costly design/construction approach or bargain opportunity should receive scores higher than 3 and only projects with more costly design/construction should [receive] less than 3.

SBB guidelines also state, "...[cost effectiveness] will be evaluated to assure validity." Despite the appearance of a systematic approach, discussions with the SBB director and board members found that projects' cost effectiveness is scored based on members' own understanding and opinions. Unlike the previous example, no recommended scores are provided for this objective.

In light of the guidance given for this scoring objective, we would expect to see fairly consistent scoring. However, Figure 3.4 shows wide variability in individual SBB members' scores for the 16 projects considered for fiscal year 2020.

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**Project cost is inconsistently evaluated based on SBB members' understanding and opinions.**

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**Figure 3.4 SBB Members’ Assessment of FY 2020 Project Cost Effectiveness Was Quite Variable.** Guidelines state that most buildings should receive a score of three. It is not clear why so much scoring variability occurred.

Board Members	SBB Member Scores for Objective Three					
	#1	#2	#3	#4	#5	#6
Project #1	5	4	5	3	4	3
Project #2	0	3	0	0	0	3
Project #3	0	3	3.5	0	0	4
Project #4	0	3	5	0	0	5
Project #5	5	4	5	0	0	3
Project #6	4	4	0	0	1	3
Project #7	5	5	5	0	5	3
Project #8	0	3	5	0	1	3
Project #9	2	4	0	3	5	5
Project #10	2	4.5	5	0	2	3
Project #11	2	2.5	0	2.5	1	3
Project #12	1	4	2	3	3	3
Project #13	0	3.5	0	0	0	3
Project #14	0	1	0	0	1	3
Project #15	0	3	0	0	1	3
Project #16	0	3	5	0	1	3

Source: SBB Fiscal Year 2020 Scoring Results Spreadsheet

Figure 3.4 shows that SBB members’ assessments of cost effectiveness were highly variable. For example, projects 8, 9, and 10 each received scores distributed across the entire six-point range. For such an objective question, we think a single cost analysis would lead to more consistent, meaningful conclusions.

In combination with our recommendation from the previous section, we recommend the SBB perform a comprehensive revision of its building review process, scoring objectives, and criteria to improve consistency, objectivity, and compliance with legal requirements.

**Space Standards Would Inform Clear, Consistent Analysis**

In addition to cost measures, standards for building proposals could include efficiency measures such as the ratio of assignable square feet (ASF) to gross square feet (GSF). In basic terms, an efficiency ratio would measure the percentage of the building that could be used

**The SBB should revise its building review process to improve consistency, objectivity, and compliance with legal requirements.**

for classrooms, laboratories, offices, and study space. Areas such as hallways and mechanical spaces are not included in ASF.

For example, building efficiency guidelines from the State of Washington show a building standard of 55 to 60 percent ASF/GSF. Virginia Tech University has a range of what they call “building efficiency ratios” for different types of educational space that range from 65 to 90 percent ASF/GSF. By comparison, Figure 3.5 shows the ASF/GSF of some state buildings in Utah.

**Figure 3.5 A Standard Is Needed to Measure Building Design.** The list here shows the ASF/GSF percentage of various state and higher education buildings.

**Building design standards could be an effective tool to assess building proposals.**

Agency/Institution	Building	ASF/GSF
Utah State University	Huntsman Hall (Business)	40%
Utah State University	Center for Clinical Excellence	51%
Utah State University	Central Instructional Building, Price campus	44%
Utah State University	Brigham City campus	51%
Weber State University	Tracy Hall Science Building	59%
Weber State University	Elizabeth Hall Communications Building	52%
University of Utah	Eccles Business Building	53%
University of Utah	Gardner Commons	62%
University of Utah	Quinney College of Law	60%
University of Utah	Sorenson Arts and Education	55%
Dixie State University	Taylor Health Science	64%
Dixie State University	Eccles Fine Arts Center	56%
Dixie State University	Holland Centennial Commons	62%
Snow College	Graham Science Building	53%
Snow College	Karen Huntsman Library	63%
Multi-Agency State Office Building (MASOB)		59%
Calvin R. Rampton Complex		59%
Department of Corrections Administration Building		65%
Utah State Tax Commission		65%
Cannon Health Building		71%

*Source: Space inventory data provided by the Utah System of Higher Education, individual higher education institutions, and the Division of Facilities Construction and Management (DFCM).*

Creating design standards that could be used to evaluate projects would directly address SBB’s legal responsibility to assess the need and appropriateness of the scope of building projects.<sup>15</sup> As in some systems, deviations from these standards do not necessarily need to be

<sup>15</sup> See *Utah Code* 63A-5-104(2)(b)

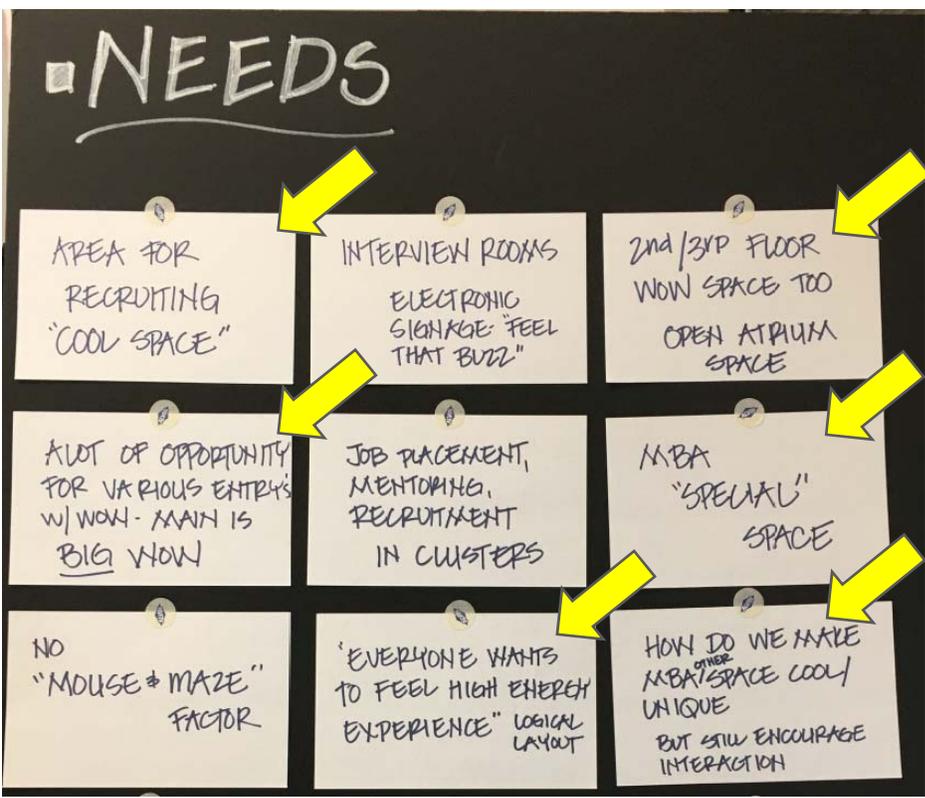
prohibited. Instead, agencies and schools would have to provide clear reasons for deviating to win SBB approval.

We believe the Regents bear responsibility to create these standards, as will be discussed in greater detail later in this chapter.

### Standards Are Needed to Measure And Judge Less Tangible Goals

Beyond basic utility and function, there are valid goals that might lead to buildings with impressive entries, more open floorplans, or deluxe finishes. Figure 3.6 gives examples of these less tangible goals.

**Figure 3.6 UVU's Proposed School of Business Seeks Impressive Space.** There is value in nice buildings to the extent that things like recruitment, interaction, and ambiance are improved.



Source: UVU School of Business Building Architectural Programming Document

There are valid goals beyond basic utility and function that might lead to more impressive buildings.

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**There are intangible benefits to impressive building space. Our concern is not with that space but with the SBB's lack of evaluation criteria for that space.**

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We do not want to minimize the intangible benefits that come from impressive buildings as described in Figure 3.6. They accomplish goals that are harder to measure, like providing an enjoyable working and learning environment and giving a sense of pride to staff, students, and donors. However, nothing in the SBB evaluation process appears to measure or judge the value of, for example, an impressive classroom compared to a more ordinary, purely functional classroom. This also speaks directly to our concern about the SBB's legal responsibility to assess the need and appropriateness of building projects' scope.

It seems clear that these less-tangible goals that can add costs to buildings should be independently checked against building standards and policy priorities. Standards for space and design would enable a clearer, more consistent analysis across varied project proposals. The SBB should work to create such standards.

In sum, we believe the SBB can improve its analysis of building requests in accordance with statute. To improve accountability and legal compliance, we recommend the SBB perform a comprehensive revision of its building review process, scoring objectives, and criteria to improve consistency, objectivity, and compliance with legal requirements.

Statute requires the Department of Administrative Services (DAS) to provide administrative and staff services for the SBB.<sup>16</sup> Specifically, statute directs the SBB to make use of the expertise available in the Division of Facilities Construction and Management (DFCM) to address some of the main points raised in this chapter.<sup>17</sup> We recommend that DAS work with the SBB to identify ways DFCM can provide staff support and expertise for the SBB.

## **Regents' Space Needs Analysis Should Be Improved**

The Regents have a process to analyze and compare building proposals within the system of higher education. Their process assesses requests relative to quantified space needs, donations and other non-state funding, and Regents' statewide policy priorities. The Regents'

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<sup>16</sup> See *Utah Code* 63A-5-101.5(8)

<sup>17</sup> See *Utah Code* 63A-5-103(3)(a)

should improve their review methodology for higher education buildings for the following reasons.

- Enrollment data, one of the main drivers of the Regents' analysis, includes online and concurrent enrollment students whose need for physical buildings is far less than on-campus students' need. The quantified need for university buildings is thus inflated.
- Space standards used in the Regents' building need analysis are outdated and, in the case of teaching labs, library/study space, and physical education facilities, likely overstate the need for space.
- Recent efforts to measure classroom and class lab utilization show that most campuses fall below USHE standards. When buildings are requested, this excess capacity is not fully considered or measured.

A more refined, rigorous methodology could lead to different decisions regarding what buildings should be built and in what order. The following sections will discuss some observations about the Regents' methodology and how it should be improved as the Regents work to implement S.B. 102.

### **Regents' Method Inflates Building Need Because Enrollment Data Includes Off-Campus Students**

Enrollment numbers used in the Regents' building need analysis include online and concurrent enrollment students whose need for physical campus space is less than that of on-campus students. This is a problem because five-year enrollment projections are a main driver used to calculate the space each university needs. If enrollment numbers include students who do not need physical buildings to receive instruction, new buildings could be approved for campuses that do not need them. These enrollment projections could also help explain why most USHE institutions are not satisfying space utilization standards, which is discussed later in this chapter.

The effect of these numbers is significant. Figure 3.7 shows enrollment with and without online and concurrent enrollment students at the end of fall term 2017.

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**Some elements of the Regents' space need assessment inflate the apparent need for physical space.**

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**Enrollment numbers used in the Regents' building need analysis include off-campus students who have a lesser need for physical buildings.**

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**Figure 3.7 Online and Concurrent Enrollment Students Comprise a Significant Portion of FTE Enrollment Data.**

Removing all or most of these off-campus FTEs from space needs assessment numbers would better reflect actual building needs.

	Fall 3rd Week Enrollment FTEs (2017 End-of-Term)	Online FTE	Concurrent Enrollment FTE	Adjusted Enrollment	% Decrease
U of U	28,188	3,456		24,732	(12%)
USU	22,813	3,297	1,007	18,509	(19%)
WSU	17,221	3,395	3,476	10,349	(40%)
SUU	7,761	1,142		6,619	(15%)
Snow	4,097	267	612	3,218	(22%)
DSU	7,398	864	510	6,024	(19%)
UVU	25,198	3,558	3,379	18,260	(28%)
SLCC	16,297	3,216	2,238	10,843	(33%)

Source: Board of Regents' building need assessment data tables.

Figure 3.7 shows that online and concurrent enrollment students, calculated on an FTE basis, comprise a significant portion of enrollment totals. We understand that some physical space is needed to educate off-campus students, but it seems clear that the Regents should adjust their analysis to avoid creating university buildings sized for students who are not actually on campus. A consultant hired by the Regents in 2011 recommended that the same adjustment be made for key teaching spaces. Regents' staff report that they are looking to make such adjustments in the fiscal year 2021 building budget cycle.

**USHE Space Standards Are Likely Overstating Need for Some Space**

The space standards used in the Regents' building need analysis are outdated and out-of-line with how higher education institutions design and allocate building space. Specifically, in the case of teaching labs, library and study space, and physical education facilities, the use of USHE standards in the Regents' needs analysis very likely overstates the need for space.

For example, USHE space standards for teaching labs state that campuses need 16 to 22 square feet per FTE student. However, a consultant in 2011 recommended to USHE that this standard should instead range from 11 to 16 square feet per FTE student. The consultant also made a point that this space should only be calculated using enrollment numbers for on-campus students.

**The Regents should adjust enrollment numbers in their space need analysis to avoid creating buildings sized for students who are not on campus.**

**Some space standards used by the Regents are outdated and overstate the need for physical space.**

Similarly, USHE library space standards are based on a 1988 study and bear little resemblance to the way libraries are built and managed in 2019. In 2011, the same consultant recommended that USHE’s library space standard be reduced.

In addition to the standards that are high, the Regents’ classroom standard of 18 to 19.5 square feet per station does not reflect the wide range of classroom designs that can range from 7 to 51 square feet per station in actual classrooms throughout the state. For example, the amount of space per station in a large auditorium will be much less than in one with individual seats or group seating around tables.

Classroom space standards used by other universities around the country have wider ranges of classroom standards that enable more precise analysis depending on classroom type and capacity. Figure 3.8 shows some examples compared to USHE’s classroom standards.

**Figure 3.8 Classroom Space Standards in Other University Systems Tend to Have a Wider Range Than in Utah.** A wider range of standards can enable more accurate analysis of different types of classroom space across campuses.

State/Entity	Classroom Space Standards
<b>Utah System of Higher Education</b>	<b>18-19.5 ASF per station</b>
Idaho State University	10-26 ASF per station
State of Washington	12-26 ASF per station
University of Connecticut	12-30 ASF per station
Minnesota State Colleges and Universities	12-40 ASF per station
Cornell University	10-35 ASF per station
Commonwealth of Virginia	3-20 ASF per station

*Source: Space planning reports and policies from various systems and universities.*

Classroom space standards in other states, like those shown in Figure 3.8, better match the actual spaces found on campuses. In conjunction with space utilization data, more refined classroom standards could provide a much more precise calculation of the classroom space each campus needs.

We believe that space standards for higher education should be refined and used by all stakeholders as buildings are proposed and designed. While statute gives the Regents responsibility to control, manage, and supervise higher education in Utah, including the development of facilities and the establishment of capital funding practices, statute also gives broad oversight of space standards to the

**The Regents should refine higher education space standards for use by all stakeholders.**

SBB.<sup>18</sup> The Legislature may therefore wish to modify statute to clarify who is responsible to create and enforce higher education space standards.

However, as it currently stands, the Regents clearly bear legal responsibility to create unified practices for building development. We therefore recommend that the Regents update space standards in a way that will give all stakeholders a consistent basis to analyze higher education buildings.

### **Regents Should Ensure Utilization Data Is Incorporated When Assessing Building Need**

Although the Regents have worked to gather and analyze space utilization data, it has not been a part of the building need analysis. A method to measure the impact of actual utilization, in conjunction with adjusted enrollment data and improved space standards, is a critical element to determine building need. We recommend the Regents work to incorporate space utilization into its building review process.

Utilization data for classrooms and teaching laboratories show that nearly all higher education institutions are falling short of the USHE standards. The USHE utilization standards include both the hours a space is used and the percentage of seats occupied. For classrooms, the USHE utilization standard is 33.75 hours per week (75 percent of a 45-hour week) with 66.7 percent of seats filled. Figure 3.9 shows where institutions fell relative to classroom and class laboratory standards in the Spring 2018 semester.

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**Space utilization data should be incorporated into the Regents' space need analysis to better reflect true need.**

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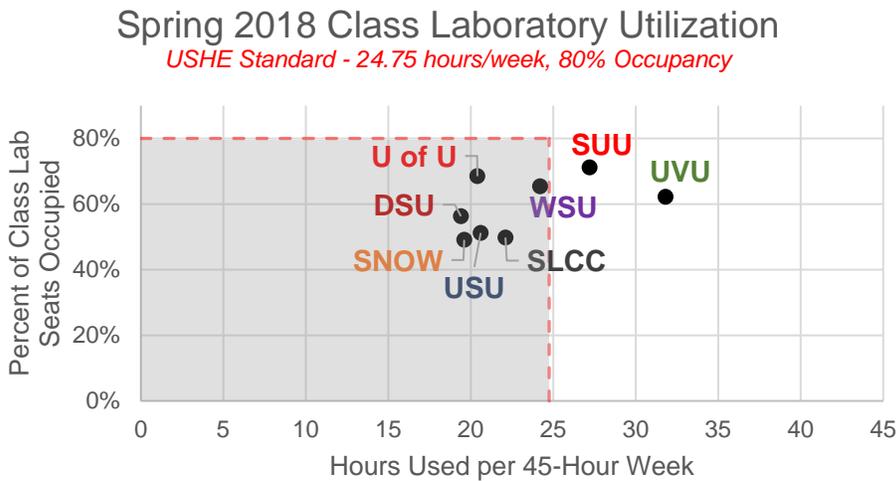
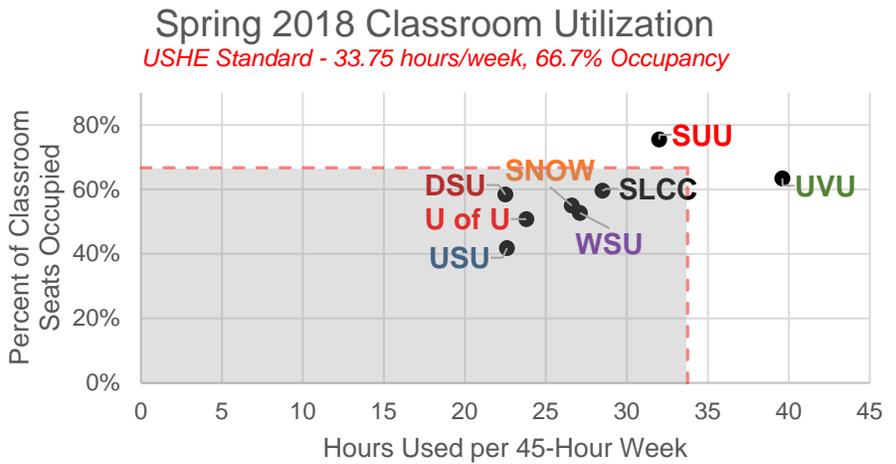
**Most USHE institutions fall short of space utilization standards.**

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<sup>18</sup> See *Utah Code* 63A-5-103(3)(a).

**Figure 3.9 Most USHE Institutions Fall Short of System Classroom Utilization Standards.** The dotted lines show USHE’s utilization standards for classrooms and class laboratories. Most institutions, shown in the shaded boxes, are falling short of USHE standards.



Source: USHE Space Utilization Report 2017-18

Figure 3.9 shows that most USHE institutions fall below both the hour and occupancy utilization standards for classrooms and teaching laboratories. In the context of a building need analysis, this is problematic because the USHE process has analyzed current university space against the space standard, not against actual usage. Thus, this method makes it appear that some classrooms and laboratories are being used in accordance with all standards when they may not be.

An interactive version of this figure can be found in the online report at <https://public.tableau.com/profile/utah.legislative.auditor.general.s.of.lice#!/>

**In addition to better space standards, incorporating utilization data would provide a better assessment of building need.**

In addition to our recommendations for adjusted enrollment data and clearer space standards, the Regents should incorporate utilization data into their building proposal approval process.

## **Recommendations**

1. We recommend that the State Building Board and the State Board of Regents work to reduce duplication of effort by identifying areas of overlap in their mandates to review building proposals and developing a more unified set of evaluation criteria.
2. We recommend that the Legislature consider clarifying in statute how the State Building Board and the Board of Regents should coordinate similar efforts during the building proposal review process.
3. We recommend that the State Building Board create a more rigorous method to assess and score the need and size for proposed buildings. This method should include consolidating redundant objectives.
4. We recommend that the State Building Board perform a comprehensive revision of its building review process, scoring objectives, and criteria to improve consistency, objectivity, and compliance with legal requirements.
5. We recommend that the Department of Administrative Services work with the State Building Board to identify ways the Division of Facilities Construction and Management can provide staff support and expertise for the SBB.
6. We recommend that the State Board of Regents change how enrollment data is used to assess building need to avoid creating university buildings sized for students who are not actually on campus.
7. We recommend that the State Board of Regents update and refine higher education space standards for use in building proposals and designs.

8. We recommend that the State Board of Regents work to incorporate actual space utilization data into the building proposal review process.



## Chapter IV

# Improved Cost Data Allows for Better Building Estimates and Comparisons

Better data and analysis of state building projects can aid decision making on future building requests. The Division of Facilities Construction and Management (DFCM) has started to develop a database of project cost data and could provide better data to other stakeholders to support better project analysis.

Under unique circumstances, some buildings have grown in size after receiving Legislative funding, which may dilute operations and maintenance (O&M) funding. The Legislature should consider controls to ensure such projects are managed consistently and responsibly.

### **DFCM Cost Data Allows for Comparison and Benchmarking on Cost-Per-Square-Foot Basis**

Building costs can be evaluated using historical project data from DFCM. In 2018, DFCM was given funding to hire an employee to gather and analyze project cost data. Although these efforts are in their early stages, the data is already yielding useful insights into project details and costs. We believe this information could be refined for use by all stakeholders involved in the state building review and funding process.

One standard method for high-level comparison is to examine projects on a cost-per-square-foot basis. An analysis of approximately 110 projects collected so far in the DFCM project database shows that the cost-per-square-foot for individual projects ranges significantly depending on the type of space being built.

Figure 4.1 shows 108 DFCM construction projects completed in 2004 to 2018 with cost-per-square-foot by project type. To compare projects from different time periods, DFCM's uses cost adjustment factors (or escalators) that are applied to the projects. All projects are shown with costs escalated through calendar year 2018.

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**DFCM is currently developing a project cost database that could improve future project analysis.**

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Because of the variability in project type, construction market conditions, material and labor costs, and bidding processes, the numbers in this figure are not meant to predict future project costs. Instead, the figure illustrates the wide variability in project cost among different types of buildings.

**Figure 4.1 A Wide Array of State Building Projects Cost from \$71 to \$864 per square foot.** This data highlights the large differences in cost among many projects built between 2004 and 2018. Projects are shown in 2018 dollars.

Project Type	Number of Projects	Average C/SF
Museum	2	\$864
Research	3	788
Medical	6	542
Laboratory	3	539
Complex Classroom	8	527
Performing Arts	3	485
Classroom	13	467
Athletics	9	456
Specialty School	4	436
Justice	3	434
Student Health & Wellness	4	424
Miscellaneous*	5	411
Student Commons	2	411
Liquor Store	5	381
Office	7	351
Applied Technology	4	334
Student Housing	7	333
Fire Dispatch	2	280
Nursing Home	2	273
UDOT Maintenance	5	265
Classroom Remodel	2	185
Office Remodel	5	144
Parking Structure	4	\$71

*Source: DFCM Project Data for 108 construction projects completed from 2004-2018.  
\*Miscellaneous includes the Weber State University Public Safety Building, Eccles Wildlife Education Center, Duchesne County Events Center, Weber County Ice Sheet Addition, and a facility for the Utah State Developmental Center.*

The analysis shown in Figure 4.1 provides only an idea of the wide variability of project costs. Any future project would require much more rigorous cost analysis tailored to the project's specific attributes. As this data is refined and expanded, it is DFCM's intent that future

Different types of construction projects have widely variable costs.

project proposals will undergo a robust cost analysis. Such an analysis could also be used by the Legislature, State Building Board (SBB), and Utah State Board of Regents (Regents).

Costs shown in Figure 4.1 include the best data available regarding *soft costs*, which are any costs other than construction that are required to occupy and use a building. Soft costs can include costs for furnishings, equipment, inspections, information technology, art, moving expenses, and legal services. DFCM reported that data on soft costs will be improved.

This is the type of information that Chapter III recommended be included in the SBB's reports to the Legislature. As DFCM develops this project database, a comparative cost analysis could be developed for future projects. We believe that better information will give the Legislature and other stakeholders a clearer understanding of reasonable building project costs and assist in making well informed funding decisions.

## **DFCM Project Data Would Be A Useful Project Analysis Tool**

Because DFCM's efforts to assemble project information in a central database have just begun, details are lacking that would enable a more complete analysis of past projects. If the project data are to be used to answer questions outside of DFCM, as we believe it should, more time is needed to allow DFCM to refine its data collection efforts. To that end, we recommend that DFCM work to refine its project database. Specifically, a process should be designed to gather project information in a consistent, systematic way that would eliminate gaps and inconsistencies that occur when trying to piece together details of past projects.

During the audit, DFCM management reported that they are already considering options along these lines. For example, adopting a data template to attach to closing packages on all projects and developing a process to share data in a way that will protect DFCM's ability to competitively bid future projects.

**The Board of Regents Can Benefit from DFCM Data.** In addition to the building proposal evaluation process discussed at length in Chapter III, S.B. 102 enacted statute that requires the

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**Better cost analysis of future building proposals will assist in making well informed funding decisions.**

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**DFCM is working to expand and refine its project cost database.**

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Regents to review capital development projects, including the projects' costs and design, after they are completed.<sup>19</sup> As shown in the prior section, DFCM is already beginning to assemble project data that could support this new requirement. Coordinating with DFCM may provide the best way for the Regents to obtain the needed data and expertise for its new role.

**SBB Analysis Could Be Enhanced with DFCM Data.** In light of our findings in Chapters II and III, DFCM's historical project data could also be used as valuable input for the SBB building proposal evaluation process. The SBB building request form requires that agencies and institutions provide cost comparison information. We found that the project cost information provided in the SBB forms was inaccurate and typically lacked inflation adjustment. If the SBB relies on DFCM cost data, that will both relieve the burden on agencies and increase the quality of the information.

### **Some Buildings Expand Scope After Legislative Approval**

In response to a specific question in the request for this audit, we examined a handful of state building projects that exceeded the size approved and funded by the Legislature. Because the Legislature calculates O&M funding based on the approved building square footage, the additional square footage added later lacks state O&M funding.

Although such instances of scope change are relatively rare, the Legislature may wish to limit such changes to protect tax dollars (i.e., instead of expanding scope, money could be returned to the state) and ensure that O&M funding is sufficient for new buildings' needs. This section also describes how other states approach this problem.

### **Some University and Technical College Projects Grew Significantly After Receiving Legislative Funding**

Examples of projects in which square footage was increased include the Huntsman Hall business building addition at Utah State University (USU) and buildings at the Ogden-Weber Technical College (OTECH) and Mountainland Technical College (MTECH).

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<sup>19</sup> See *Utah Code* 53B-22-204(8)

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**SBB cost analysis could be improved through use of DFCM project cost data.**

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**The Legislature may wish to change statute to limit building project scope changes.**

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Figure 4.2 summarizes the relevant details of these three projects whose square footage increases ranged from 30 to 49 percent.

**Figure 4.2 Instances of State Buildings Expanding in Size During Construction.** These increases were driven by additional institutional funding or savings from lower-than-expected construction costs.

	USU Huntsman Hall	OTECH Health Science	MTECH Lehi Campus
Proposed sq. footage	100,000	65,000	75,000
Actual sq. footage	148,671	88,000	97,727
Difference	48,671	23,000	22,727
Percent increase	49%	35%	30%

*Source: SBB Five-Year Building Program, Space inventory data from institutions, DFCM project data*

**USU Huntsman Hall Business Building.** Early concepts for Huntsman Hall changed and evolved prior to the Legislature appropriating funds for construction. However, significant changes to the project’s budget and scope were also made during the building design and construction phases after the Legislature authorized the project. The majority of the changes were driven by USU’s desire for a larger, nicer building and additional funding raised throughout the project. Nearly all of the \$19.7 million increase in project budget was funded by USU through additional fundraising and institutional funds from the College of Business.

Although USU funded nearly all of the expanded scope, the fact remains that the building is significantly larger than what the Legislature approved. The most tangible impact of this expansion is the shortage of O&M funding discussed later in this chapter.

**Two Technical Colleges Expanded Scope Because of Cost Savings.** Also shown in Figure 4.2, the Ogden-Weber Technical College (OTECH) and the Mountainland Technical College (MTECH) increased the scope of two construction projects by about 23,000 square feet each. Despite this growth, the MTECH project budget remained unchanged while the OTECH project budget actually came in \$700,000 lower than anticipated. The ability to increase both buildings’ size resulted from cost savings in the bidding processes during a period of low construction costs.

**We identified three building projects that expanded square footage by 30-49 percent.**

**Scope changes impact state funding and can lead to a lack of O&M funding.**

The concerns here are the same as with Huntsman Hall. The buildings are larger than legislatively approved and the schools are not receiving O&M funding for the space added after the Legislature had determined O&M funding. Instead of expanding scope, money saved on the original building proposals could have been returned to the state. The Legislature could consider potential policy changes detailed at the end of this section to limit such project changes in the future.

### **Operation and Maintenance Is Diluted When Project Size Is Increased After Funding**

Our 2011 audit of higher education O&M funding expressed concern with the practice of adding space to campuses without identifying an O&M funding source.<sup>20</sup> The concern was that institutions might neglect necessary O&M expenditures or fund O&M with money meant for other buildings or student instruction. To mitigate the risk of this happening, our 2011 report recommended that O&M funding plans be in place before construction.

Figure 4.3 shows the amount of O&M that would have been necessary if actual square footage had been considered for Huntsman Hall and the MTECH and OTECH buildings. Unless additional O&M funding is provided during future legislative funding decisions, these institutions will need to find O&M funds internally or postpone O&M expenditures.

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**A past audit from our office recommended that O&M funding sources be identified before adding space to campuses.**

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<sup>20</sup> See the Legislative Auditor General's report number 2011-08, *A Performance Audit of Higher Education Operation and Maintenance Funding*, pp. 37-43

**Figure 4.3 Actual O&M Funding Falls Short of Estimated Needs.** Buildings were expanded after the Legislature had calculated and funded O&M.

	Proposed Sq. Footage	O&M Funding	Actual Sq. Footage	Actual O&M Needed	Estimated Annual Amount of O&M Lacking Due to Increased Bldg. Size
<b>MTECH</b>	75,000	\$513,800	97,727	\$ 669,495	(\$155,695)
<b>OTECH</b>	65,000	\$445,300	88,000	\$ 602,868	(\$157,568)
<b>USU Huntsman Hall</b>	100,000	\$796,718	148,671	\$1,184,489	(\$387,771)

*Source: SBB Five-Year Building Program, 2009 Appropriation Report, Auditor Analysis*

Figure 4.3 shows that a significant amount of ongoing O&M funding was not appropriated for these three buildings. To mitigate the effect of buildings changing scope after O&M funding is provided, the Legislature could consider statutory change as described below.

**Additional Statutory Language Could Provide Control Over Building Expansion**

We acknowledge that the preceding examples of project expansion follow a clear logic and do not necessarily seem unwise or inappropriate. Nevertheless, to improve control and accountability over public funds, and to avoid shortages in O&M funding, the Legislature may want to consider means to formally control such changes to project scope in the future. Statutory changes or direction to DFCM to manage such changes by policy or rule are possible remedies.

Other states have controls in place that Utah may wish to emulate. The Board of Regents for higher education in Arizona has a committee that reviews and approves phases of the capital development process. By Arizona Board of Regents policy, any increases in construction project costs require approval from the board.

Similarly, in Idaho, the State Board of Education requires institutions of higher education to seek additional approval if a project

**A shortage exists in ongoing O&M funding because buildings were changed after Legislative approval.**

**The Legislature may want to formally control future changes to project scope.**

budget increases by the lesser of 5 percent or \$500,000 above the board-authorized amount.

In Nevada, the administrator of its Division of Public Works (DPW) has authority for compliance and enforcement regarding design, construction, and repairs of state buildings. Nevada statute in NRS 341.145(1)(f) states:

The Administrator (...) Shall obtain prior approval from the Interim Finance Committee before authorizing any change in the scope of the design or construction of a project as that project was authorized by the Legislature, if the change increases or decreases the total square footage or cost of the project by 10 percent or more.

We recommend that the Legislature consider statutory language similar to Nevada's to provide an approval process for changes to the size and budget of building projects. The Legislature could also determine which entity should be authorized to grant such approval. With statutory support, DFCM could monitor and enforce the limits during project management and seek additional approval when needed.

In order to enforce policies like those described above, it would be beneficial for the Legislature to more clearly document the building budget, square footage, and O&M funding as approved by the Legislature at the time of building funding. Following past problems of construction scope changes, the Infrastructure and General Government Appropriations Subcommittee made a similar recommendation to the Executive Appropriations Committee in 2017 stating, "Each project should have its scope, cost and parameters approved by the Legislature" to control scope changes.

We had difficulty finding appropriate baseline numbers because square footage and budget numbers evolved from year to year leading up to legislative funding. We relied on documents from the SBB, DFCM, and presentation materials provided to legislative committees. In addition to any other controls put in place, the Legislature could consider including details about building size in appropriations committee vote summaries or intent language to provide a clear baseline for compliance purposes.

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**Other states have statute or policy limits on buildings' construction scope changes.**

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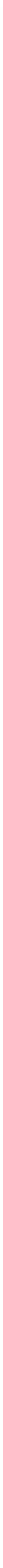
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**It could be beneficial to clearly document legislatively approved building budget, square footage, and O&M funding.**

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## Recommendations

1. We recommend that the Division of Facilities Construction and Management continue efforts to expand and refine its project cost database.
2. We recommend that the State Board of Regents work with the Division of Facilities Construction and Management to use DFCM's project data and expertise for the analysis of completed higher education buildings.
3. We recommend that the State Building Board work with the Division of Facilities Construction and Management to collect relevant, accurate cost data to be used in the State Building Board building proposal evaluation process.
4. We recommend that the Legislature consider statutory language to provide an approval process for changes to the size and budget of building projects and determine which entity should be authorized to grant such approval.
5. We recommend that the Legislature consider identifying buildings' square footage, budget, and O&M funding at the time legislative appropriations are awarded.



## **Appendices**



# **Appendix A**

## **Legal Requirements for the Review of Building Proposals**

This appendix seeks to summarize some of the new responsibilities created by Senate Bill (S.B.) 102 that was passed during the 2019 Legislative General Session.

Figure A.1 outlines legal criteria created for the Utah System of Higher Education's (USHE) Board of Regents. The first portion details the criteria to be used to allocate among higher education institutions the new, ongoing building funding the Legislature will be providing to USHE. The second portion of the figure details the new criteria that the Regents must use to evaluate building proposals.

**Figure A.1 Statute Now Requires Several Criteria to Be Used by the USHE Board of Regents in the Allocation of Building Funding and the Evaluation of Building Proposals.** The Regents have historically reviewed building proposals but have not done so according to explicit legal criteria.

<b>Board of Regents Utah System of Higher Education</b>	
<b>Criteria to be used in allocating higher education building funding among USHE institutions:</b>	<b>Utah Code</b>
<ul style="list-style-type: none"> <li>• Enrollment</li> <li>• Metrics in <b>Utah Code</b> 53B-7-706:               <ul style="list-style-type: none"> <li>• Completion of degrees/certificates</li> <li>• Completion by underserved students</li> <li>• Responsiveness to workforce needs</li> <li>• Institutional efficiency (degrees/certificates per FTE student)</li> <li>• For research universities, total research expenditures</li> </ul> </li> <li>• Projected growth in student population</li> <li>• Existing square feet per FTE student</li> <li>• Facility age and condition</li> <li>• Utilization of academic space, including off-campus facilities</li> </ul>	53B-22-203(1)

<b>Criteria to be used in evaluating building proposals:</b>	<b>Utah Code</b>
<b>Review and approve dedicated and nondedicated* project proposals based on:</b>	
<ul style="list-style-type: none"> <li>• Cost effectiveness and efficiency of proposal</li> <li>• Consistency with institution's mission and master plan</li> <li>• Fulfillment of critical institutional facility need</li> </ul>	53B-22-204(3)
<b>For nondedicated projects seeking additional legislative funding, the Regents must prioritize requests based on:</b>	
<ul style="list-style-type: none"> <li>• Capital facility need</li> <li>• Utilization of facilities</li> <li>• Maintenance and condition of facilities</li> <li>• Any other factor determined by the board</li> </ul>	53B-22-204(5)

Source: **Utah Code**, Senate Bill 102 (2019 Legislative General Session)

\*Dedicated projects use only the funds allocated specifically for higher education building construction. Nondedicated buildings are those for which additional legislative appropriations are requested. See **Utah Code** 55B-22-201

Figure A.2 details the legal criteria that has been used by the Utah State Building Board to evaluate building proposals for the past several years. S.B. 102 made modifications to how and when the State Building Board may *prioritize* or *recommend* higher education projects but the proposal evaluation criteria remained unchanged.

**Figure A.2 Legal Criteria Used by the State Building Board to Evaluate Building Proposals.** The SBB criteria have elements that are very similar to the new criteria created for the Regents.

State Building Board	Utah Code
<b>All project proposals must include a study that demonstrates project feasibility, including:</b>	
<ul style="list-style-type: none"> <li>• Need for the project</li> <li>• Appropriateness of project scope</li> <li>• Any private funding</li> <li>• Economic and community impacts of the project</li> </ul>	63A-5-104(2)(b)
<b>For higher ed. projects, proposals must demonstrate how the project will enable the institution to:</b>	
<ul style="list-style-type: none"> <li>• Offer courses or other resources to meet demand for jobs in current and projected job markets</li> <li>• Help meet GOED training and incentive commitments</li> <li>• Respond to demands for online or in-class instruction</li> </ul>	63A-5-104(2)(d)

Source: *Utah Code*

In addition, the Board of Trustees for the Utah System of Technical Colleges (USTC) saw some changes to their responsibilities. The criteria used to evaluate building requests was drawn from existing statute while the method of prioritizing certain building requests was created by S.B. 102. Figure A.3 summarizes these criteria.

**Figure A.3 Legal Criteria Used by the USTC Board of Trustees to Evaluate Building Proposals.**

Board of Trustees Utah System of Technical Colleges	Utah Code
<b>For both dedicated and nondedicated project proposals:</b>	
<ul style="list-style-type: none"> <li>• Avoid unnecessary duplication of career and tech. ed. facilities, programs, administration, and staff</li> <li>• Maximize the use of existing higher ed. facilities</li> </ul>	53B-2a-112(2) 53B-2a-112(4) & (5)
<b>For nondedicated projects seeking additional Legislative funding, the Trustees must prioritize requests based on:</b>	
<ul style="list-style-type: none"> <li>• Growth and Capacity</li> <li>• Effectiveness and support of critical programs</li> <li>• Cost effectiveness</li> <li>• Building deficiencies and life safety concerns</li> <li>• Alternative funding sources</li> </ul>	53B-2a-117(6)

Source: *Utah Code, Senate Bill 102 (2019 General Session)*



## **Agency Responses**





State of Utah

GARY R. HERBERT  
Governor

SPENCER J. COX  
Lieutenant Governor

## Department of Administrative Services

TANI PACK DOWNING  
Executive Director

KENNETH A. HANSEN  
Deputy Executive Director

MARILEE P. RICHINS  
Deputy Executive Director

June 6, 2019

Mr. Kade Minchey, CIA, CFE  
Legislative Auditor General  
W315 Utah State Capitol Complex  
Salt Lake City, Utah 84114-5315

Dear Mr. Minchey:

On behalf of the Department of Administrative Services, the Utah State Building Board, and the Division of the Facilities Construction and Management, we wish to express thanks to you and your staff for their efforts on this follow up audit, and appreciate the opportunity to review and comment on The Performance Audit of State and Higher Education Building Costs (Report No. 2019-07). We appreciate the opportunity to respond to the former chairs of the Infrastructure and General Government (IGG) Appropriations Subcommittee and to address questions concerning actual costs of construction, how building costs can be controlled, and the process by which buildings are proposed, reviewed and funded. We look forward to working with the former and current chairs, as we continue to research and address many of these ongoing important issues.

This response is to address the following key issues and recommendations:

### **Chapter II, Page 3 -- Current Building Evaluation Process Lacks Good Information**

**Recommendation #1:** *We recommend that the State Building Board revise both its request form and feasibility study requirements so that state entities are required to clearly support the need and requested size of proposed buildings.*

**Response:** The State Building Board (SBB) will work with DFCM to revise this process as outlined on response #1.

**Recommendation #2:** *We recommend that the State Board of Regents improve its information gathering to ensure that collected data clearly supports the need and requested size of proposed buildings: N/A*

Recommendation #3: *We recommend that the State Building Board include substantiating data supporting the adequacy of projects in the annual Five-Year Building Program reports to the Legislature.*

Response: The SBB will work with DFCM to revise this process as outlined on response #2.

Recommendation #4: *We recommend that the State Building Board and the Board of Regents coordinate the collection of data to minimize duplication of effort.*

Response: The SBB will work to coordinate the collection of data with the Board of Regents (BOR) and have the information validated by DFCM.

Recommendation #5: *We recommend that the Legislature consider requiring some form of planning, programming, or predesign analysis for all building proposals.*

Response: The SBB will work with DFCM to revise this process as outlined on response #1.

Recommendation #6: *We recommend that the State Building Board find ways to collaborate with both the Regents and USTC trustees to collect better information to fulfill its legal mandate to assess economic and education-related metrics.*

Response: The SBB will work with DFCM to revise this process as outlined on response #1.

### **Chapter III, Page 17 -- State Building Board and Regents Should Improve Their Building Evaluation Processes**

Recommendation #1: *We recommend that the State Building Board and the State Board of Regents work to reduce duplication of effort by identifying areas of overlap in their mandates to review building proposals and developing a more unified set of evaluation criteria.*

Response: The SBB will work with DFCM to revise this process as outlined on response #1.

Recommendation #2: *We recommend that the Legislature consider clarifying in statute how the State Building Board and the Board of Regents should coordinate similar efforts during the building proposal review process.*

Response: The SBB agrees with this recommendation.

Recommendation #3: *We recommend that the State Building Board create a more rigorous method to assess and score the needs and size for proposed buildings. This method should include consolidating redundant objectives.*

Response: The SBB will work with DFCM to revise this process as outlined on response #1.

Recommendation #4: *We recommend that the State Building Board perform a comprehensive revision of its building review process, scoring objectives and criteria to improve consistency, objectivity, and compliance with legal requirements.*

Response: The SBB agrees with this recommendation.

Recommendation #5: *We recommend that the Department of Administrative Services work with the State Building Board to identify ways the Division of Facilities Construction and Management can provide staff support and expertise for the SBB.*

Response: DAS will work together with the SBB and DFCM to revise this process as outlined on response #1.

Recommendation #6: *We recommend that the State Board of Regents change how enrollment data is used to assess building need to avoid creating university buildings sized for students who are not actually on campus. N/A*

Recommendation #7: *We recommend that the State Board of Regents update and refine higher education space standards for use in building proposals and designs. N/A*

Recommendation #8: *We recommend that the State Board of Regents work to incorporate actual space utilization data into the building proposal review process.*

Response: The SBB will work with DFCM to revise this process as outlined on response #1.

#### **Chapter IV, Page 35 -- Improved Cost Data Allows for Better Building Estimates and Comparisons**

Recommendations #1: *We recommend that the Division of Facilities Construction and Management continue efforts to expand and refine its project cost database.*

Response: see response #3.

Recommendation #2: *We recommend that the State Board of Regents work with the Division of Facilities Construction and Management to use DFCM's project data and expertise for the analysis of completed higher education buildings.*

Response: DFCM will work with BOR to share information and expertise as outlined on response #1.

Recommendation #3: *We recommend that the State Building Board work with the Division of Facilities and Construction Management to collect relevant, accurate cost data to be used in the SBB building proposal evaluation process.*

Response: DFCM will work with SBB to share information and expertise as outlined on response #1.

Recommendation #4: *We recommend that the Legislature consider statutory language to provide an approval process for changes to the size and budget of building projects and determine which entity should be authorized to grant such approval.*

Response: See response #4.

Recommendation #5: *We recommend that the Legislature consider identifying buildings' square footage, budget, and O&M funding at the time legislative appropriations are awarded.*

Response: See response #4.

### **Audit Responses:**

- 1) Recognizing that better data collected early in the process will provide for better decisions and oversight; DAS, SBB, and DFCM will develop a process to collect, evaluate and score more comprehensive and robust data prior to prioritization as follows:
  - a) Beginning with capital project requests for FY 2022 DFCM will work with the Institutions to gather the required information, evaluate, and then forward to the SBB, BOR, and USTC prior to August 1<sup>st</sup> of each ensuing year. This required information shall include but not be limited to the following:
    - i) **Feasibility Study** - DFCM will develop a standard for feasibility studies. After receiving a positive recommendation from the IGG committee, DFCM will submit the standard for feasibility study to the SBB for approval.
    - ii) **Capital Budget Estimate (CBE)** – DFCM will create a CBE based on the information provided in the feasibility study and scope statement.
    - iii) **Space Utilization Study** – DFCM will verify the Institutions compliance with the BOR Space Utilization Standard.
    - iv) **Need Statement** – DFCM will verify that the need statement provided by the SBB is provided.
    - v) **Scope Statement** – DFCM will work with the Institution to develop a scope statement that details the end user requirements, including justification for any unique elements or features considered to be out of the ordinary.
    - vi) **DFCM evaluation of Compliance** – DFCM will work with the SBB, BOR, and USTC to determine the necessary information and format required to address their respective criteria. Recognizing that SBB, BOR, and USTC may have individual scoring criteria relative to their respective missions, we will use our best efforts to unify and standardize information to the furthest extent possible.
- 2) The SBB and DFCM will work together to provide better substantiating data in the five-year book. The book should be retitled to “fiscal year Capital Project Recommendations” so the intent is clear and the information can be more focused and informative.
- 3) DFCM is continuing to refine and expand the newly created project cost database. It is available to our institutional partners at their request.

- 4) DFCM agrees there should be a guideline put in place for projects that exceed the legislatively approved cost and or size. We would propose as a starting point for discussion:
  - a) Capital Development Projects that include a state appropriation for funding, O&M, or future capital improvements.
    - i) If the project exceeds the approved cost by greater than 10% or size by greater than 5% shall be brought back to the Infrastructure and General Government Committee (IGG) for recommendation or approval.
  - b) Capital Development Projects that are completely non-state funded and do not receive state funded O&M or future capital improvements.
    - i) If the project exceeds the approved cost by greater than 30% or size by greater than 10% shall be brought back to the (IGG) for recommendation or approval.

Thank you for allowing us the opportunity to respond to this audit. If you have any additional questions, please do not hesitate to contact us.

Sincerely,

  
Joseph C Burgess (Jun 20, 2019)

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Joseph C. Burgess, Chair  
Utah State Building Board

  
Tani Pack Downing (Jun 19, 2019)

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Tani Pack Downing, Executive Director  
Department of Administrative Services

  
Jim Russell (Jun 19, 2019)

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James R. Russell, Director  
Division of Facilities Construction and Management

JRR: cn



June 7, 2019

Mr. Kade Minchey, CIA, CFE  
Legislative Auditor General  
W315 Utah State Capitol Complex  
Salt Lake City, Utah 84114-5315

Dear Mr. Minchey,

Thank you for the opportunity to respond to the audit report entitled "A Performance Audit of State and Higher Education Building Costs." We appreciate the auditors' work to identify areas for improvement in the criteria for assessing building proposals in the Utah System of Higher Education (USHE).

We agree with the seven recommendations made to the Board of Regents in the audit report and we are actively working to ensure all recommendations are fully implemented in a timely manner.

Sincerely,



David L. Buhler, Ph.D.  
Commissioner of Higher Education

## Chapter I

No recommendations made

## Chapter II

*Recommendation 2:*

*We recommend that the Board of Regents improve its information gathering to ensure that collected data clearly supports the need and requested size of proposed buildings.*

Response: We concur. The Commissioner's Office recognizes the importance of gathering meaningful, timely, and accurate information to allow the Board of Regents to prioritize higher education facilities needs within the system. The Commissioner's Office will continue to improve the data required of USHE institutions.

Implementation Date: Spring and Summer 2019 - We have implemented this recommendation with adjustments to the Regents' Capital Development Prioritization (CDP) process made in the May 17, 2019 Board of Regent meeting and will further implement this recommendation through a new Regent policy defining the data and metrics used in the funding formula required by Senate Bills 102 (2019) scheduled to be considered at the August 2, 2019 Board of Regents meeting.

*Recommendation 4:*

*We recommend that the State Building Board and the Board of Regents coordinate the collection of data to minimize duplication of effort.*

Response: We concur. The Commissioner's Office and the State Board of Regents will continue to reach out to and coordinate efforts with the State Building Board.

Implementation Date: Summer 2019 - The Commissioner's Office has already coordinated a joint State Building Board, Division of Facilities and Construction Management (DFCM), and Board of Regent capital calendar aligning deadlines and due dates for USHE and agency facility information. We will continue to work together to jointly collect data and minimize duplication of effort.

## Chapter III

*Recommendation 1:*

*We recommend that the State Building Board and the State Board of Regents work to reduce duplication of effort by identifying areas of overlap in their mandates to review building proposals and developing a more unified set of evaluation criteria.*

Response: We concur. The Commissioner's Office and the State Board of Regents will continue to reach out to and coordinate efforts with the State Building Board.

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Implementation Date: Summer 2019 - The Commissioner's Office already coordinates facility condition and non-appropriated funding information with the State Building Board and will further work with the State Building Board to align evaluation criteria and other areas where possible.

*Recommendation 6:*

*We recommend that the State Board of Regents change how enrollment data is used to assess building need to avoid creating university buildings sized for students who are not actually on campus.*

Response: We concur. Over the last several years, the Board of Regents has reviewed and improved the USHE capital development prioritization process. One of the items of discussion has been the definition of full-time equivalent students used to assess building needs in the system.

Implementation Date: Already implemented. The Regents' capital development process for the coming fiscal year excludes online and concurrent enrollment full-time equivalent students from the calculation of space need.

*Recommendation 7:*

*We recommend that the State Board of Regents update and refine higher education space standards for use in building proposals and designs.*

Response: We concur. As part of the ongoing process of continuous improvement, the State Board of Regents has reviewed higher education space standards and will continue to incorporate changes and refinements to the process.

Implementation Date: Summer 2019 through Spring 2020. The Board of Regents is exploring the revision of space standards for use in the capital development process and will work with the State Building Board and DFCM to explore how space standards could be better incorporated into the planning and design of higher education facilities.

*Recommendation 8:*

*We recommend that the State Board of Regents work to incorporate actual space utilization data into the building proposal review process.*

Response: We concur. The Board of Regents has proactively worked with USHE institutions to develop a classroom and laboratory space utilization standard and currently requires an annual utilization report from each USHE institution.

Implementation Date: Already implemented. The Board of Regents revised policy R741 in the May 2019 meeting to incorporate actual space utilization data into the Regents' CDP process.

#### Chapter IV

##### *Recommendation 2:*

*We recommend that the State Board of Regents work with the Division of Facilities Construction and Management to use DFCM's project data and expertise for the analysis of completed higher education buildings.*

Response: We concur. The Board of Regents currently works closely with DFCM and appreciates their project management expertise. Having a database of actual project information will provide the Board of Regents valuable information in the future.

Implementation Date: Summer 2019 and beyond. As DFCM collects and refines capital facilities construction cost data and information, the Commissioner's Office will work with DFCM to incorporate the information into the Board of Regents' capital processes.