

**FY2012**  
**State Funded Capital Development Project Request**  
**AND**  
**Five-Year Plan**

**Agency/Institution:**           **The University of Utah**

**Project Name:**           **Utility Distribution Infrastructure Replacement**  
                                  **(High Voltage / High Temperature Water)**

**Agency/Institution Priority:**                               **1**

**Preliminary Cost Estimate:**                               **\$99,000,000**

**Total Project Space (Gross Square Feet) 0**

      New Space (Gross Square Feet)                       0

      Remodeled Space (GSF)                               0

      Space to be Demolished (GSF)                       0

**Increase in State Funded O&M                               \$500,000**

As this project involves utility systems as opposed to building space, the typical approach for calculating O&M for higher education requests does not fit. We are requesting additional O&M based on similar concepts, but modified to fit a utility request. This is a major renovation/replacement of a major utility distribution system. Similar to the renovation/replacement of buildings, we request that the O&M funding level be updated for this system.

Through discussions with operators of similar systems and other sources, an appropriate funding level for maintaining the electrical distribution system is \$750,000. The University currently has \$250,000 in its budget for maintaining this system. We request that the gap be funded similar to how it would for a building request. This will allow us to perform maintenance routines that will extend the life of electrical system equipment (i.e. exercising switches) and also test system components to identify and repair or replace failing components before they cause an outage.

In addition to the to O&M noted above, the University would like to engage the state in discussions about how the renewal and replacement of utility systems can be funded in order to prevent future emergency conditions like the University currently faces.

**New Program Costs   \$0**

**New FTEs Required for O&M                                   0**

**New FTEs Required for Programs                             0**

**Other Sources of Funding                                       \$0**

**Previous State Funding**\$20,975,000

Capital Improvement Funding - Electrical Distribution - \$5,275,000

Capital Improvement Funding - High Temperature Water Distribution - \$15,700,000

**Electrical Distribution:** A total of \$5,275,000 has been allocated in FY09, FY10 and FY11 to address other critical aspects of the electrical distribution system. The work accomplished through this previous funding is not included in the scope of this project.

**HTW Distribution:** A total of \$15.7 million of capital improvement funds has been dedicated to the HTW system between FY07 and FY11. This includes the reallocation of \$3,550,000 of FY10 capital improvement funds originally dedicated to other needs that was reallocated per legislative direction in the 2010 session. These projects developed the basic design approach and selected the material and configuration approach best for the campus. These funds also addressed many, but not all, of the sections that were in the worst condition. Additionally, in FY2010, the University financed \$5 million to address failed piping needed to support USTAR facilities. The work accomplished through this previous funding is not included in the scope of this project.

**Existing Facility:**

Existing Space (square feet) Currently Occupied N/A

**Project Description:****Electrical Distribution:**

Our system, including the substation, is obsolete and no longer compatible with Rocky Mountain updated feed voltages, current industry practice, and current codes. All campus electrical distribution from the Rocky Mountain Power source feeds at the substations to each building service entry is being looked at for replacement. Only equipment that has insufficient capacity for current loads or is past their useful life is to be replaced. Additional equipment, feeders, and components that restore original design redundancy and reliability are included.

The project design includes provisions to accommodate the growth anticipated by the 2008 Campus Master Plan. Substations and duct banks will be designed to accommodate future loads and expansion needs. The existing distribution system includes three substations, distribution duct banks, wire, switch vaults, connection, transformers and related electrical distribution systems. Much of the system was installed in the 1950s and 1960s. Equipment is in poor and failing condition. Many of the switches are unsafe to operate under load. Electrical voltages vary. Balance of electrical loads and ability to operate system effectively has eroded over the decades. Growth on campus over the past 50 years has compromised the reliability and redundancy of the system. Loops feed too many buildings and main circuits are loaded to capacity. Existing equipment will be scrapped or salvaged.

**Project Scope for Electrical Distribution:**

- Replace or build new duct banks
- Replace all aged and failing cable & transformers
- Replace or install new electrical feeders and leaking terminations
- Convert electrical distribution system to one voltage, 12470 kV
- Replace oil switches as buildings are converted
- Replace stadium substation
- Install SCADA monitoring system

- Install centralized meter reading system
- Install capacitor banks and security system at all three substations
- Re-loop distribution feeders into smaller loops
- Restore redundancy and reliability to the system

In part, this project will replace the following list of equipment:

- 62 Transformers
- 128 Switches
- 89 Pad Vaults
- 47 Concrete Pads
- 41.1 miles Primary Cable
- 1.7 miles Secondary Cable
- 3.9 miles Concrete Duct bank
- 19 Manholes

**HTW Distribution:**

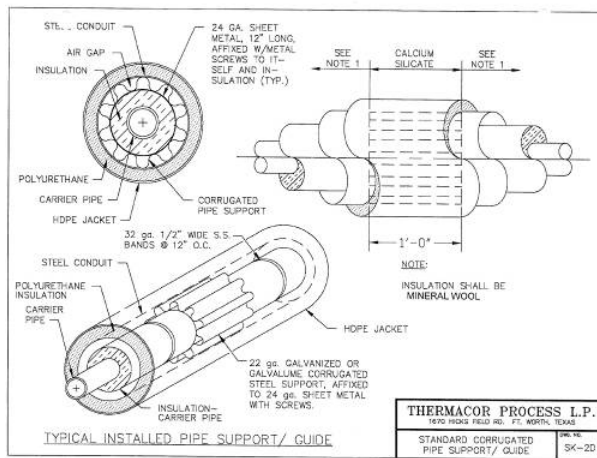
The HTW system provides heating and hot water needs for building temperature and for research processes across all of campus. The high temperature water is generated in two central plants then distributed throughout campus through the HTW distribution system. The existing distribution system is direct buried steel pipe in an insulated bed. Pipe life expectancy in this type of installation is about 20 years. It is for the most part over 30 years old. Corrosion from ground water and drainage has severely deteriorated the pipe from the outside in. The existing distribution pipe will be abandoned in place. This project will replace the oldest sections of pipe on both the Main and Health Sciences areas of campus.

New distribution piping will be installed in configurations known to last. Direct buried conveyance pipe will be avoided. Tunnels will be used where practical. Most of the system will be replaced with a pre-insulated and multi-lined pipe system. This project will address all but about 5% of the 17 miles of aged and deteriorated direct buried pipe that is remaining to be replaced.

**Project Scope for High Temperature Water:**

- Replace failed HTW lines
- Install new HTW lines to create loop system

**Photo & Guide of the pipe system selected:**



The proposed pipe system has a steel carrier pipe in the center which is surrounded with insulation. There is then an air gap that allows for the insulation and carrier pipe to remain dry and free from corrosion. The secondary pipe then is surrounded by additional foam insulation and a PVC pipe that provides a barrier from ground moisture. There is a tracer wire that runs along the inside of the pipe configuration that is used to test for moisture and detect and locate leaks if they should ever occur. The pipe size required for most of the distribution system ranges between six and twelve inches in diameter for the interior carrier pipe.

## **Project Justification:**

### **Electrical Distribution:**

The existing electrical distribution system is failing at an increasingly catastrophic rate. Many critical facility systems, operations, research studies and programs are affected by the availability and reliability of electricity. Equipment failures have resulted in explosions and fires. Electricity is critical to all programs and operations at the University. This project helps restore to campus a reliable electrical distribution system. This project provides for a system that will be efficient to operate and maintain in a reliable configuration. The impact to teaching and particularly research missions of the University are greatly hampered when electricity to buildings is interrupted.

Power outages occur as a result of failures in wire and equipment. In the past five years, the University has experienced an average of 30 unplanned outages per year with a total of 184 hours. This equates to 3,768 total lost customer hours (269 customers) occurring on an average of 14 hours of power outage per building per year. In the first half of 2010, the University experienced 9 unplanned outages with a total of 137 hours that equates to 4990 total customer hours (269 customers) occurring on an average of 18.6 hours of shut downs per building in just 6 months. In June an outage for two days cancelled continuing education classes and closed procurement functions. Interruptions to Research & education efforts have huge impact. Outages take long durations of time to locate (due to no monitoring control). It can be hours in most cases. Repairs can take even longer (due to obsolescent equipment or cable), taking days in some cases because obsolete parts are difficult to find or may need to be fabricated because they are no longer sold.

Everything is impacted by electricity shut downs. Heat and air circulation is off. People are sent home Classes are cancelled. The risks include: safety of occupants; safety of maintenance workers; financial losses in research; and damage to buildings in winter if heat is lost. There is an impact on mission of the institution for classes and research. Today's faculty, staff, and students expect reliable power 100% of the time. On average, every building on campus is without power 5 hrs every semester due to equipment failures (14.7 hrs per year)

### **HTW Distribution:**

Education and research missions require heated space to perform their work. Additionally many research programs require heat for steam and research processes. The existing HTW distribution is failing and the ability to provide reliable HTW to campus facilities is no longer possible. No additional system capacity will be provided, however, reliability and availability of HTW would be restored. All University programs will be enhanced with a reliable heat source for facilities and research.

HTW system failures have been increasing each year since the 1990's. The size and cost of each break are also increasing. The total amount spent to "repair" leaks over the last few years is over \$2 million. As much as 30,000 gals/day of heated and treated water has been lost from the system. Routinely this past year over 10,000 gal/day was lost at a cost of \$1000s/day in energy, chemicals, and water. Normal for this closed loop system would hundreds of gals/day or less. Last year (FY09) the University made 11 repairs. During the first half of 2010, four repairs have been necessary.

In the spring of 2008 a staff member was burned walking near a rupture. In January, 2010, a Plant Operations mechanic working in a vault was severely burned when a 35 yr old HTW valve cracked. Dave received 2nd degree burns over 50% of body (legs, arms, etc.) and did not return to work for months. Winter emergency heat shut downs require air systems in buildings to be shut down to avoid freezing building systems. Research and hazardous materials contained in fume hoods are compromised when fume hood fans are turned off.

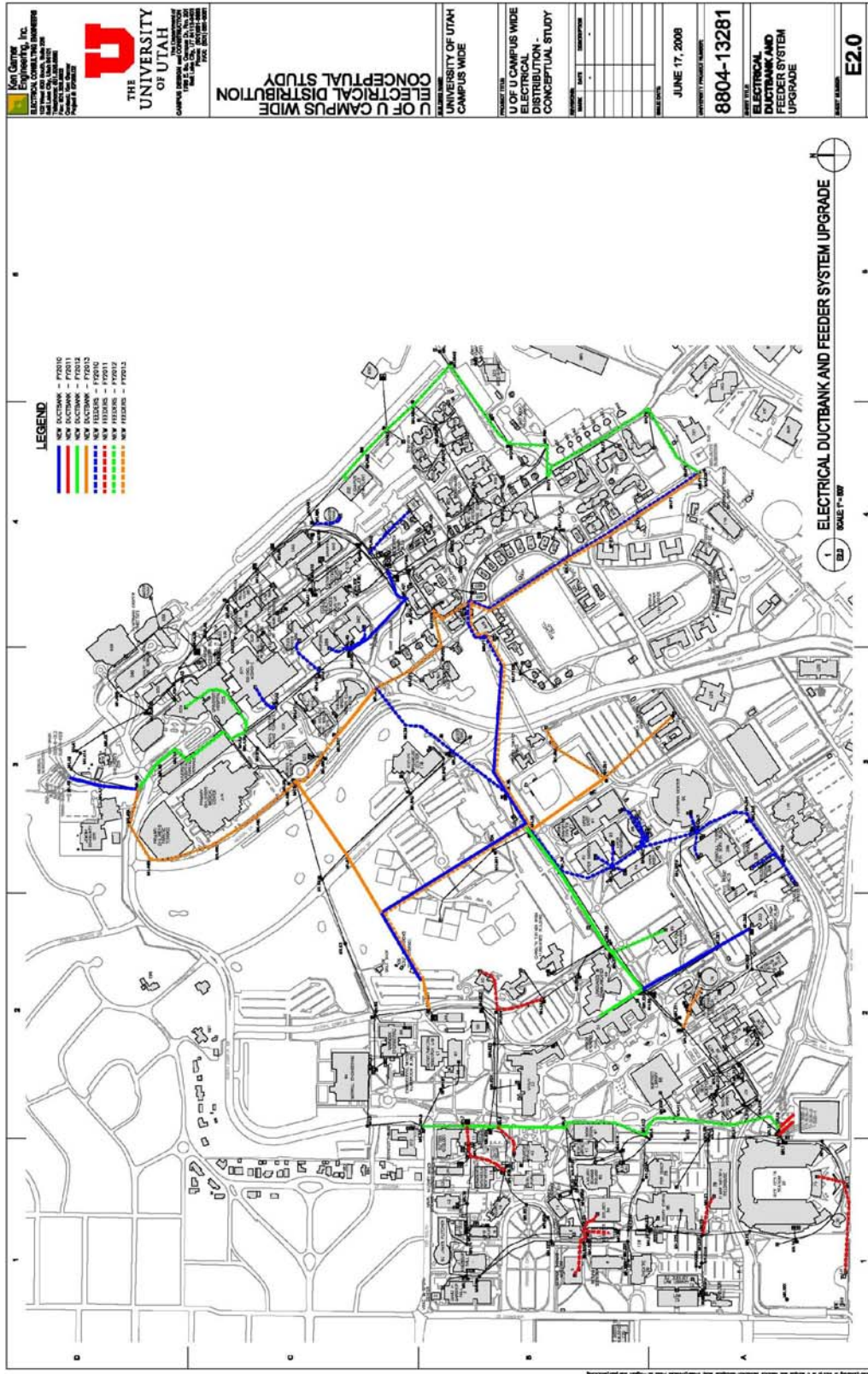
**Planning/Programming:**

A comprehensive programming plan of the electrical distribution system was completed in summer 2008. Multiple studies have been performed in past years to document the system shortfalls and failures. The HTW pipe system and selection has occurred as part of the previous capital improvement funded projects. Estimates are based on bids and estimates from previous projects. A program plan was prepared in early summer 2008 that fully describes the replacement project.

**Site and Infrastructure:**

Most of the existing University campus electrical distribution will be affected by this project. Several areas of both lower or main and upper existing University campus will be affected by the HTW portions of this project. No changes in the capacity or configuration of the HTW central plants are included.

**Photographs and Maps:**



## **Scoring Analysis for Building Board Request Evaluation Guide:**

### **1. Existing Building Deficiencies and Life Safety Concerns**

#### **Electrical Distribution:**

The existing electrical distribution system is failing. Many critical facility systems, operations, research studies and programs are affected by the availability and reliability of electricity. Equipment failures have resulted in explosions and fires. Though no personnel have been injured directly, there have been injuries to crews responding to emergency electrical outages. The potential for harm exists. Maintenance and operation of the aged system and its components expose workers and campus to increased risks. The system still operates various switches that were identified as unsafe and were recommended by the electrical industry to be replaced. The current electrical distribution is failing at an increasingly catastrophic rate. Major outages as a result of equipment or feeder failures are occurring more frequently and lasting longer. In the first half of 2010 alone there were 9 equipment failures resulting in 137 hours (almost 6 days) of electrical outages for some portion of campus (multiple buildings) as illustrated on the chart below. The impact to building occupants was that on average a building was without power for nearly 20 hours in the first half of 2010. Many critical and most non-critical operations are suspended until the repairs can be completed. Often parts for repairs are not available due system obsolescence and custom part solutions have to be built. The trend is for the equipment failures to occur more frequently, effect a larger portion of campus, and last longer. The impact to teaching and particularly research missions of the University are greatly hampered when electricity to buildings is interrupted.

#### **High Temperature Water Distribution:**

The existing distribution is failing. HTW distribution is high pressure (380 psi) and high temperature (400 °F). Line failures can be explosive pushing up rock and debris. Walking surfaces and landscaping can be destroyed in a failure. The HTW immediately turns to steam when released. The steam and hot water released can scald workers and passersby. Failures have caused personal injury to persons in the areas of the break. Unplanned shut down of heat to buildings also creates concerns for research work, occupants, and facility equipment. Critical research activities are threatened with each failure. Breaks are more frequent, more serious, take longer to repair, and cost more due to increasing sections that need to be removed to find good pipe to weld.

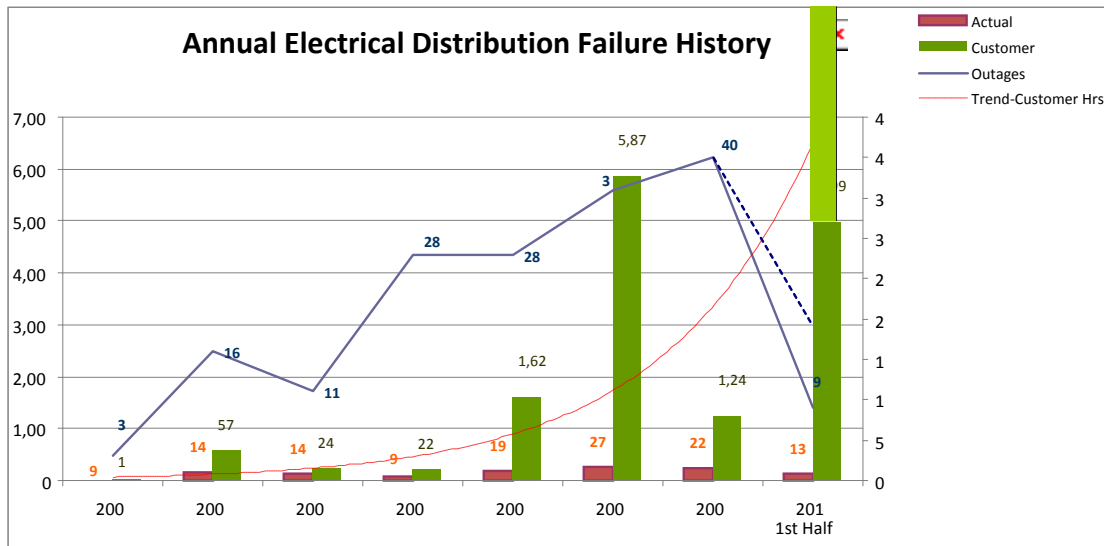
### **2. Essential Program Growth**

#### **Electrical Distribution:**

The project design includes provisions to accommodate the growth anticipated by the 2008 Campus Master Plan. Substations will be designed to accommodate future loads and expansion needs. Duct banks being replaced will be sized to accommodate future feeder wires. The project restores operational capacity to the existing load. It replaces existing failing distribution components to restore reliability to existing facilities. It will replace or add distribution system components that will provide a system that meets normal design configuration practices.



## System Repair History Chart



### Chart Comments:

- Blue Line indicates the number of failures annually from 2003 through the first half of 2010.
- Red Bars indicate duration of outages in hours.
- Green Bars indicate the customer hours impact, calculated as the duration of the outage multiplied by the number of buildings affected.

On Average over the past few years, every building on campus is without power for 15 hours each year due to equipment failures. Power outages occur as a result of failures in wire and equipment.

In June 2009 an outage for two days

- cancelled continuing education classes
- closed procurement functions
- Interruptions to research & education efforts are considerable.
- Outages take long durations of time to locate (due to no monitoring control) Hours in most cases.
- Repairs can take even longer (due to obsolescent equipment or cable) Days in some cases.

### High Temperature Water Distribution:

This project will not add any capacity to the HTW distribution. It will restore availability and reliability of heat to campus facilities.

## 3. Cost Effectiveness

### Electrical Distribution:

Current best practices in electrical distribution system design will be used. The renewed system will improve effectiveness of system operations primarily by restoring reliability and availability of electricity to campus buildings. Improvements in system operations and maintainability will also be gained. This request to replace major segments of the system through capital development funding is more cost effective than trying to replace it in small segments through capital improvement funding because the existing system will fail before it could be replaced in segments over a period of ten to fifteen years. The capital improvement approach may result in catastrophic failures that would be much more costly to address than the request to address the system now in a comprehensive manner. There are also substantial



inefficiencies associated with doing small segments as opposed to the efficiency of a large project that would benefit from economies of scale.

**High Temperature Water Distribution:**

The proposed multi-lined pipe configuration provides a life cycle cost that is half that of the system being replaced. The proposed replacement system has a life expectancy of many times (perhaps 5 times) longer than direct the buried pipe systems being replaced. The life expectancy of the proposed system is similar to pipe in tunnels. The proposed multi-lined pipe systems are nearly twice the price of direct bury but about 1/5<sup>th</sup> the price of a small tunnel configuration. Tunnels are preferred because of the proven life of HTW pipe in open air configurations. However the lack of existing tunnels on campus and the additional cost of tunnels is not practical in most areas. Tunnels will only used in locations where multiple utilities can share the tunnel, such as along HPER mall.

This request to replace major segments of the system through capital development funding is more cost effective than replacing it in small segments through capital improvement funding over a period of ten to fifteen years. This is due to the fact that the system will not last another 10 to 15 years. Anything left in the ground in just a few years will likely have a catastrophic, non-repairable failure. The University will then be forced under some emergency approach to put direct bury pipe back in the ground and then continue to fight this problem for the next 20 years and longer. In 2009, over \$600,000 was spent on emergency repairs to failed piping. The pipe will be replaced one way or another in the next 10 years. It is a matter of do we replace under an efficient plan with a system that may last 100 years or do we replace under a more expensive piece-meal approach that will again last less than 20 years.

**4. Project Need: Improved Program Effectiveness and Support of Critical Programs/Initiatives.**

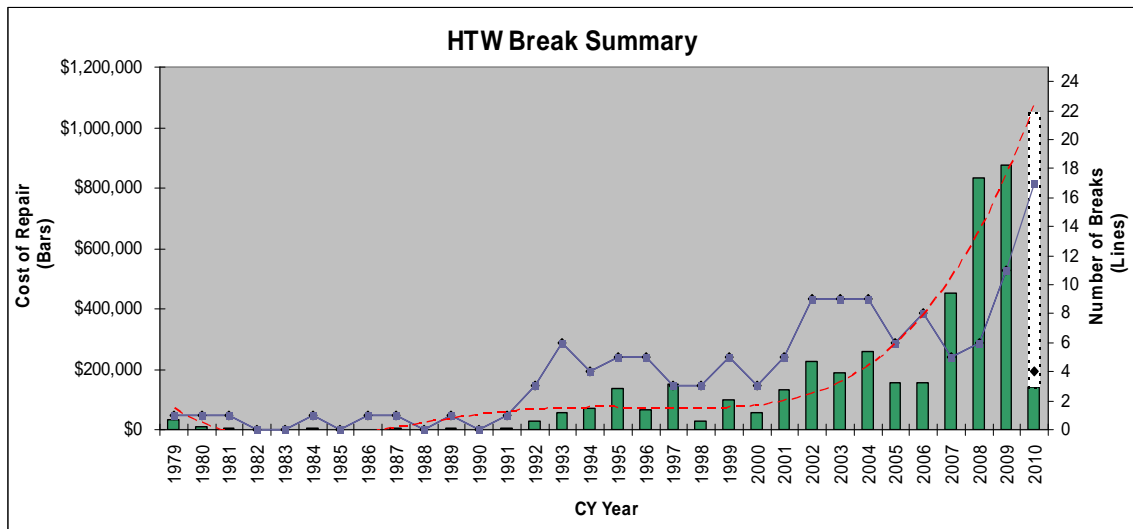
**Electrical Distribution:**

Electricity is critical to all programs and operations at the University. This project helps restore to campus a reliable electrical distribution system. This project provides for a system that will be efficient to operate and maintain in a reliable configuration. The current electrical distribution is failing at an increasingly catastrophic rate. Major outages as a result of equipment or feeder failures are occurring more frequently and lasting longer. The trend is for the equipment failures to occur more frequently, effect a larger portion of campus, and last longer. The impact to teaching and particularly research missions of the University are greatly hampered when electricity to buildings is interrupted.

**High Temperature Water Distribution:**

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## System Repair History Chart



### Chart Comments:

- Bars indicate the cost of repairs each year. Costs have been escalating primarily due to the scope of each repair expanding. Good pipe to weld new replacement sections to needs to be located. The distance needed on each side of the failure to find good pipe is increasing. Sometime the pipe is so eroded and thin that 50 feet or more must be removed and replaced. Repair costs also vary based on the nature of the area where the failure occurs. Repairs in areas that are highly congested cost far more than repairs in open space. The dashed line is a logarithmic fit on the repair costs.
- Lines indicate the number of breaks that occurred in the year.
- Most of the distribution pipe was installed in the 1960's. 25 years later (early 1990s) the life expectancy of the direct buried pipe system had been exceeded and failure frequencies and scope of repairs began to escalate.

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## **FY2010 Five-Year Plan**

**Agency/Institution: The University of Utah**

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### **Project #1 -- George Thomas Building Renovation**

The George Thomas Building holds a unique role in the history and evolution of the University of Utah. Located prominently on President's Circle, this building represents the front door of the campus and is a reminder of the early history of the University. Dedicated in 1935 as the main campus library, the building became a hub of activity, interaction and learning. The George Thomas Building currently houses the Utah Museum of Natural History. This building will need to be renovated prior to housing a new function when the museum moves to its new facility in the fall of 2011. Once renovated, the George Thomas Building will house College of Science Offices, Research Labs, Educational Labs, and Meeting Spaces to support the new math and science teaching initiative (an innovative educational process that requires fresh new thinking about teaching and research lab set up) and the Center for Cell and Genome Science. The project will include demolition of the unusable stacks area (13,200 GSF), renovation of the existing building (70,820 GSF), and new construction (39,230 GSF) for an estimated \$75,000,000.

### **Project #2 -- OSH Annex Renovation/Replacement**

The urgent life safety issues and deteriorating physical condition of both Orson Spencer Hall (OSH) and the Annex Building demand attention. OSH houses nearly one quarter of the general purpose classroom space on campus, but is currently inadequate to resist seismic loads based on modern earthquake knowledge and building codes. The Annex Building has far exceeded its useful life and obstructs master planned student housing. The goals of this project are to define a step by step process that will systematically vacate OSH for seismic upgrade and complete refurbishment. The study also shows a final step that vacates the Annex Building for demolition. When the project is complete; approximately 200,000 square feet of existing deteriorated campus educational building infrastructure will be replaced with 180,000 square feet of new and remodeled space at an estimated cost of \$53,000,000 that is energy efficient and efficiently organized.

### **Project #3 -- College of Science**

The College of Science is spread throughout some of the oldest buildings on the campus. Urgent life safety issues and the deteriorating physical conditions of some of the College of Science buildings have highlighted an acute need to do a college-wide facility plan that will define a step by step process for systematically improving the facilities used by the College of Science. This will include a review of the College of Science Strategic Academic Plan, current space allocations & conditions, and anticipated space needs for the next 5 to 10 years. The project or series of projects that this plan will inform may include complete building renovations, upgrades to mechanical, electrical and structural systems and new construction in order to resolve the documented needs. The GSF involved and a cost estimate are not currently available.

**Project #4 -- L.S. Skaggs Pharmacy Renovation**

The existing L.S. Skaggs Pharmacy Building was built in 1963 and the condition of the building reflects its 46 years of age and long service to the University. In order to extend the useful life of the building and to reinforce and support the Skaggs Institute and the College of Pharmacy, the building must undergo a major renovation to meet current codes as well as replace all major building systems. This will require the removal of existing internal partition systems and reconfigurations to meet the future needs of the College of Pharmacy. A Feasibility Plan concurrent with the new L.S. Skaggs Pharmacy Research Building Design Phase is underway and has identified 71,214 GSF of renovation at a cost of \$27,500,000. The functional obsolescence of the building and needed programmatic changes will be the key drivers for renovation. This project will also include the build-out of 48,283 GSF of unfinished space in the Skaggs Pharmacy Research Building at a cost of \$13,500,000. The total project consists of 119,497 GSF of renovated space at an estimated cost of \$40,900,000.

**FY2012**  
**State Funded Capital Development Project Request**  
**AND**  
**Five-Year Plan**

**Agency/Institution:** Utah State University  
**Project Name:** Business Building Addition / Remodel  
**Agency/Institution Priority:** 1

**Preliminary Cost Estimate:** \$60,000,000

<b>Total Project Space (Gross Square Feet)</b>	<b>179,646</b>
New Space (Gross Square Feet)	<b>100,000</b>
Remodeled Space (GSF)	<b>79,646</b>
Space to be Demolished (GSF)	<b>22,579</b>

**Increase in State Funded O&M** \$796,718

This number was developed using the LFA negotiated cost per square foot of \$7.66/SF for classrooms and offices and \$8.76/SF for labs. Existing O&M for the existing space has been subtracted out of the total. This number may shift as the program and design progress or as the utilities cost escalate.

**New Program Costs** NA

It is anticipated that the additional program costs will be funded by donations.

**New FTEs Required for O&M** 10

Additional O&M requirements will consist primarily of custodial staff and possibly a technician for crafts and trades. An estimated \$200,000 will be necessary to pay for utilities, 20% of the remainder for material costs - \$120,000, and dividing the remaining dollars by \$50,000 per person for salaries and benefits for 10 FTE.

**New FTEs Required for Programs** 10

It is assumed that the FTEs for programs will come from donated or tuition funds.

**Other Sources of Funding** \$20,000,000

The College of Business has pledged a minimum of \$20M towards this project from private donations, contingent on the receipt of the state funding.

**Previous State Funding** NA

**Existing Facility**

This high rise building was constructed in 1970 and has 6 stories on top of a three story base. It is in a prime location on central campus, near the historic quad and library. The existing business program has outgrown this building and has had to limit enrollment in their programs, despite increased funding and student interest. If this project is funded, the existing facility will be renovated to continue to serve its current functions, which consist primarily of classrooms,

offices, and study spaces.

Existing Space (square feet) Currently Occupied 79,646 GSF

### **Project Description**

The College of Business has outgrown its current space and is experiencing significant growth. The College recently received a \$25 million gift from Jon M. Huntsman, the largest gift in USU history, to support and expand its programs. The project consists of two phases: the new addition and, the remodel of the existing building.

The first phase consists of a 100,000 square-foot addition built to the south of the current Business building, and will rest where Lund Hall currently stands. This portion of the project is estimated to cost about \$40 M. It will be a five story structure, with one level below grade. There will also be a connector between the two buildings that will cover the first three floors, containing informal study areas for students.

The new building is slated to include new classrooms, faculty offices, graduate student spaces, student study spaces, a business library, and three new business centers. The spaces include a 300-seat auditorium and a 125-seat auditorium, two 80-seat tiered classrooms, six 40-seat tiered classrooms, nine team study rooms, 40-plus faculty offices. Three new centers will be designed to meet the three focuses of the college. A new dean's office suite is needed, and the school of accounting will be moved to the new building.

The second phase consists of a remodel of the existing building, and is estimated to cost about \$20 M. The basic systems of the current building are beyond their useful life. The building has seismic weaknesses that need to be corrected, as well as worn out mechanical and electrical systems that need to be upgraded. The building does not meet current fire & life safety codes, and improvements will include new fire sprinklers and elevator lobby smoke protection. The windows are single glazed and will be replaced with energy efficient glass. The building needs comprehensive asbestos abatement. Much of the interior is the original décor and does not adequately reflect the caliber of teaching and research housed in this building. Some renovation of the lower floors has been completed recently. Further renovation of the current facility will not be possible unless additional space is first built so that the existing spaces can be remodeled.

The Math and Statistics Department currently housed in Lund Hall will be displaced by this project. This department is currently planned to move to the Animal Science Building when this project is funded. This proposal includes funding for the remodel of space in the Animal Science Building for this group. It also includes funding for the temporary displacement of occupants of the Business Building during the renovation phase of the project. Lund Hall may be used as temporary surge space for occupants of the Business Building, but will be demolished prior to building the addition. Costs to demolish Lund Hall are included in this project.

### **Project Justification**

The justification for this project is twofold. First, the existing building systems are worn and in need of replacement. Seismic, fire, and life safety code upgrades are critical for this building, especially since it is the only high rise building on campus and additionally houses one of the largest assembly spaces. Second, the new addition is much needed space to house the rapidly

expanding programs that have received significant funding and support.

Over the next five years the college plans to hire ten new faculty, and expects a 20% increase in student enrollment. These numbers are expected to double in ten years. Additionally, the college has recently added new programs in entrepreneurship and international business. These programs are growing rapidly and support two of the formal initiatives, or pillars, upon which the Huntsman School is based. The College is moving forward with a significant revision of their finance and economics majors. They will develop a program in business analytics and finance which will support another pillar of the Huntsman School, Analytical Rigor. A fourth pillar of the Huntsman School of Business is Ethical Leadership. A new faculty member has recently been hired to lead scholarship in this area.

### **Planning/Programming**

There has been an initial feasibility study funded by a grant from the Eccles Foundation. A conceptual study has also been completed, including a rough space summary and a 3D model to help in fund raising efforts.

### **Site and Infrastructure**

It is estimated that the building addition will be about a 20,000 SF footprint. The site has been identified as the area currently occupied by Lund Hall. This project will extend the main utility tunnel to serve the existing business building and the new addition.

## **Scoring Analysis for Building Board Request Evaluation Guide**

### **1. Existing Building Deficiencies and Life Safety Concerns**

**Score: 5**

The needs of the existing building include fire/life safety and accessibility deficiencies, as well as upgrades for the HVAC and plumbing systems, interior finishes, and energy efficiency. Most of these needs are documented in the ISES report conducted by DFCM in 2001.

The building has the following critical life safety and ADA deficiencies, most of which will be required with the new building addition:

1. Fire Sprinkler System
2. Handrails/Guardrails
3. Wall and Floor ratings
4. Exit signage
5. Restroom ADA upgrades
6. Seismic upgrades
7. Assisted listening devices in classrooms
8. ADA service counter upgrades
9. Smoke protection at elevator lobbies
10. Asbestos removal
11. E-Power upgrade

The HVAC system has exceeded its life cycle and needs to be replaced with a new, modern VAV air distribution system. This will require full replacement of air handlers, ductwork,



VAVs, VFDs, DDCs, MCC, heat exchangers, pumps, piping, electrical connections, and demolition of existing equipment. The plumbing fixtures and piping need to be replaced. The supply piping need to be upgraded from galvanized to copper, and the waste piping with cast iron. Plumbing fixtures and components need to be upgraded from ceramic manual valves to automatic valves to save water and keep them sanitary.

Much of the interior finishes on the upper floors have not been replaced and are in need of carpet and paint. The lighting in many areas needs to be upgraded for increased energy efficiency. The exterior windows are single glazed and need to be replaced with an energy efficient, low-E double glazed system.

Since this building is considered a high rise, it is at greater risk due to its fire and life safety deficiencies, especially in a seismic or fire event. The large auditorium on the main level seats about 285 students and is one of the largest and most heavily scheduled classrooms on campus. Code upgrades will reduce the risks of these factors having catastrophic impacts on building users.

## 2. Essential Program Growth

**Score: 5**

The Jon Huntsman School of Business has a severe shortage of space for its academic programs, administrative offices, faculty offices, space for graduate students and student organizations, program centers, and seminar rooms and traditional classrooms. This shortage has come as the college nearly tripled in size from the time its current building was completed in 1970, to its peak in 2002 when the student faculty ratio exceeded 30 to 1. To accommodate the growth, space for graduate students and student organizations, program centers, and seminar rooms and traditional classrooms had to be carved up into faculty and staff offices to allow for the housing of additional faculty to meet the student demand. With no space to house additional faculty, an enrollment management plan was put in place that has reduced the student faculty ratio to about 23 to 1.

Pressure remains strong for the school's courses and majors, but the school is unable to accommodate all business and cross campus student demand because of space limitations. For example, because of space constraints, only high school graduates with a 3.5 GPA and ACT of at least 24 can enroll in business programs as freshmen. This discourages some students from enrolling at USU and others from measuring up to their ability their freshman year because of not being admitted into the major of their choice. Also, several degree programs on campus would like business courses to be more readily accessible to their students as part of their degree requirements, but the business school has had to put restrictions on this accessibility.

A new dean's suite is needed for the College. The original dean's office suite was converted to student space because no student lounge or informal meeting area existed in the building. The dean, two associate deans, development officers, and communications specialist are all located on different floors in the business building. One department head in the building is housed in regular faculty offices rather than an appropriate department administrative suite. Office space for faculty is totally occupied. We desire to expand our capability and capacity in high demand majors but are unable to do so because of faculty space limitations.

With the Huntsman naming gift money, the College is moving forward in the finance arena by adding a quantitative business analysis in the finance program, but space is inadequate to achieve the full potential of the program or any of the other existing programs. The College has major initiatives in the school to promote entrepreneurship, ethical leadership, and global vision, but lacks space to house these centers. Business school enrollment has been very strong for many years and the projections for the future remain strong. With the Huntsman naming gift and additional resources to foster cutting edge business programs, demand for business programs at USU is expected to remain very strong into the future.

3. Cost Effectiveness

**Score: 4**

The suggested construction for the new building is conventional concrete or steel frame with brick, glass, and metal panel finishes for the exterior. The approach will be for maximum energy efficiency and will promote sustainable building materials and methods. The value for these systems is not in the initial construction costs, but in the long term increase in efficiency and user comfort.

Renovation of the existing building conserves resources and reduces costs of new construction. It also will reduce energy and maintenance costs as old building systems are replaced with new, more efficient ones.

4. Project Need: Improved Program Effectiveness and Support of Critical Programs/Initiatives

**Score: 5**

The addition of the new building will substantially improve program effectiveness and support critical programs and initiatives. As presented above, the current shortage of space limits service to students including those of other majors within the university and those that are, or would like to major in business. The College would like to establish an entrepreneurship center to help foster entrepreneurship ventures throughout Utah, help promote USTAR initiatives, and support the incubator business initiatives of our innovative campus and regional campuses. The administrative offices of the dean, associate deans and their support staff need to be combined to better administer the activities of the school. New offices to support the international programs and ethical leadership initiatives are needed. Additional space for graduate programs, including student breakout space and administrative office space is also needed. Student organizations need space to handle their administrative needs. New classrooms that can be configured for a variety of teaching methods and class sizes are in demand. And most critically, faculty office space is needed to add additional personnel, faculty and staff. All of these needs are critical in order to deliver first rate programs and provide the range of experiences students should have to be as prepared as possible to enter the workforce and continue the quest of learning throughout their lives. The current constraint of physical space prevents the College from being competitive in providing the range of experiences available to students at leading business schools.

5. Alternative Funding Sources

**Score: 4**

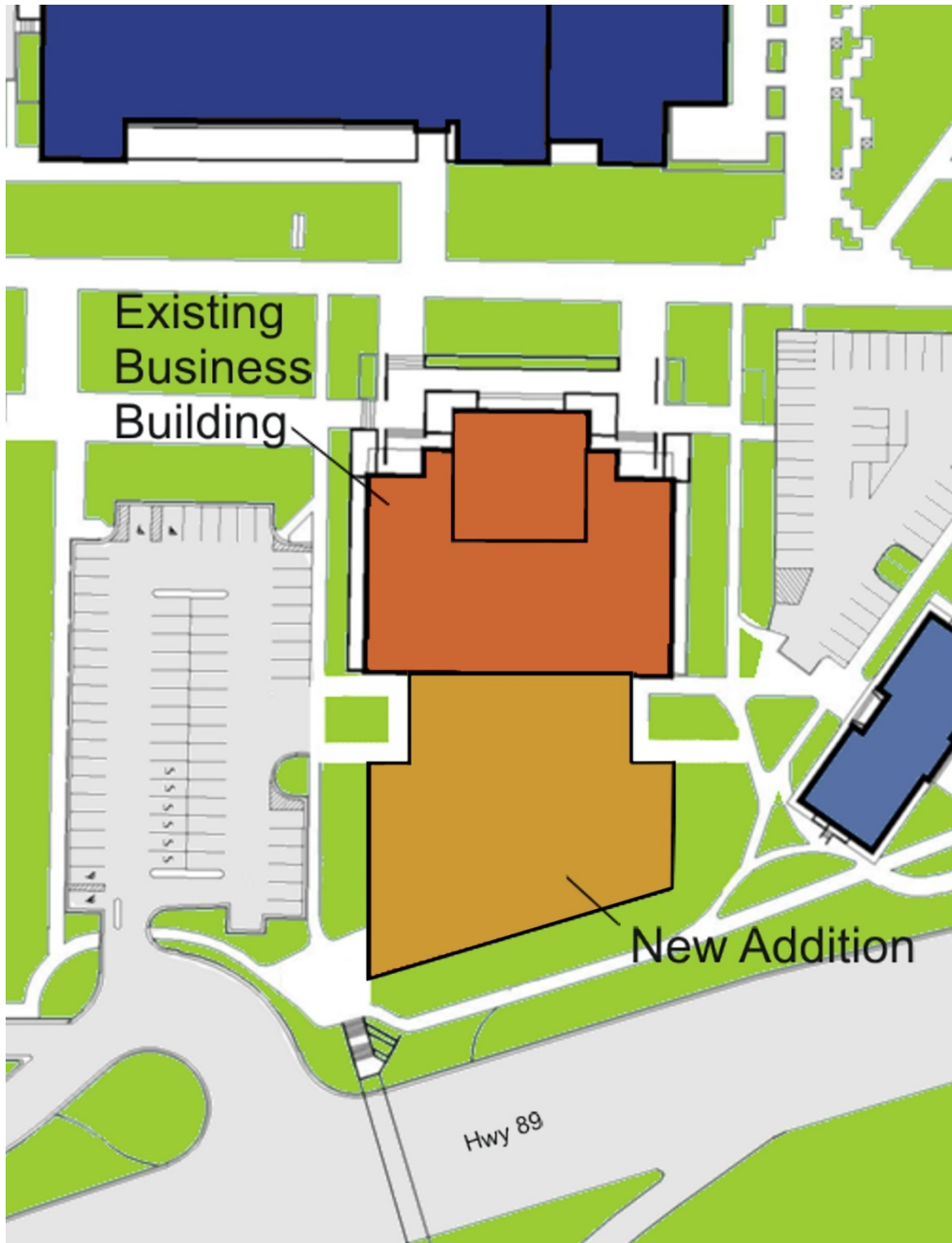
The President and the central advancement team have made the new business building a top

priority in fund raising at Utah State and a main component of our very successful, comprehensive campaign. Working together with the college advancement team, we have secured private funds of \$20 million toward the total cost of the project.

**Photographs and Maps:**



# Business Building Site Plan



**Utah State University  
Land Bank Requests  
As of June 18, 2010**

<b>ADJACENT TO LOGAN MAIN CAMPUS:</b>	<b>Approx Acres</b>	<b>Estimate d Value</b>
1. <u>Undeveloped, vacant land NE of Campus fronting 1400 N and 1200 E</u> This land could provide for growth or could possibly be exchanged for an existing property closer to campus. In the past, the owner has been reluctant to consider disposing of the land.	<b>20</b>	<b>\$1.2m</b>
2. <u>Undeveloped, vacant land adjoining Campus to the NE &amp; fronting 1200 E:</u> This land could provide for student housing expansion/upgrade opportunity. (The owner may prefer to sponsor or participate/partner in such development.)	<b>25</b>	<b>\$1.5m</b>
3. <u>Developed parcels NW of central campus on SW corner/light at 700 N and 800 E comprised mostly of rental units with various owners:</u> This land would provide very prominent and visible growth area for future expansion.	<b>5.5</b>	<b>\$11m</b>
4. <u>Developed parcels north of Campus along the NW corner of 700 N and 800 E that includes most of the Fraternity Row and the Newman Center:</u> The University currently owns and uses two former fraternity houses and one unused small, vacant lot in this area north of 800 North and further ownership on these blocks could provide area for effective campus expansion. (Note: satisfactory land and locations would need to be made available through some exchanges or purchases for most or all of these owners.)	<b>4.5</b>	<b>\$9.5m</b>

## FY 2011-2012

**The anticipated State Funded Capital Development projects planned for Utah State University over the next five years are listed below:**

**Project #1**     Jon M. Huntsman School of Business Addition/Renovation

This project supports the expansion of the Jon M. Huntsman School of Business and, of necessity, is in two phases. Phase I is the design and construction of a new addition located just south of the existing building. After construction is complete, the existing functions would relocate into the new addition and Phase II could begin. This is the renovation of the existing building. The phasing of this project is necessary due to the lack of space to relocate the existing Jon M. Huntsman School of Business functions during renovation.

Phase I of this project will consist of building a new structure on the site of the Lund Hall building. The department displaced by the new building will move to renovated space in the Animal Science Building. The new building will be approximately 100,000 GSF on three or four floors with a partial basement for utilities.

Phase II of this project is to renovate a building built in 1970 which has 6 stories on top of a three story base. There are problems with the design of the building that have some seismic weaknesses that need to be corrected, as well as worn out mechanical and electrical systems. The windows are single glazed and should be replaced with more energy efficient glass. Also the elevator lobby areas need to be screened to prevent smoke from entering the elevator chamber. The mechanical and electrical systems are past their useful life and need to be replaced. The electrical master panels have been replaced, but much of the remaining system needs to be updated and most branch circuits are at capacity. Much of the interior is the original décor and does not adequately reflect the caliber of teaching and research happening in the building.

Approximate Budget:                             \$60,000,000

**Project #2**     Fine Arts Complex Addition/Renovation

The Fine Arts Complex includes the Fine Arts Center (1967), the Fine Arts Visual (1980), and the Fine Arts Museum (1982). This project consists of a comprehensive renovation of the Fine Arts Center and the Fine Arts Visual buildings and does not include the Museum. Improvements to these buildings will improve life safety, functionality, maintenance, energy efficiency and aesthetics of the space in a significant way.

The renovation will include general improvements to both buildings, including asbestos abatement, the addition of a new sprinkler system, emergency lighting and generator, ADA upgrades for restrooms and elevators, and a new security system.

The Fine Arts Center includes two major venues, the Kent Concert Hall and the Morgan Theatre. The concert hall is a high-use classroom that seats over 2,000 people, and the Morgan seats over

600 people. Both have a number of systems that are at the end of their service life. The ceilings are suspended on wire hangers that are old and do not comply with current structural standards. The catwalk system is unsafe; in some locations depending on the ceiling for support and containing combustible materials. The house light fixtures are old and difficult to maintain because of lack of spare parts. The heating systems are inefficient because the entire building complex is served from one central system. The building controls no longer operate and need to be replaced. The stage lighting and shell needs to be replaced because of age and safety concerns.

The Fine Arts Visual renovations consist of the addition of air conditioning and other HVAC upgrades, new ceilings and lighting, and new power distribution system to handle increasing power loads.

Several small additions, including a scenery shop, elevator/restroom lobby, and black box theatre are needed to support both of the theatres in the building. The music and theatre programs will both be greatly enhanced by these improvements, and the entire campus and community will be served by increasing safety and quality of the venue.

Approximate Budget: \$ 20,300,000

### **Project #3**    HPER Renovation/Addition

The HPER building was constructed in 1972 and was projected to support a student population of 12,000. The main purpose for the facility is to serve the instructional needs of the Emma Eccles Jones College of Education and Human Services as it prepares students to serve in the areas of physical education, parks and recreation and other exercise careers. In addition it was intended to serve as a recreational facility for students at large. The present on-campus student population is approximately 17,000 and the existing facility is inadequate for the instructional needs of the university, let alone the recreational needs of its students. Class scheduling is limited by the space available and recreational use is crowded out by class time. This project would add approximately 80,000 square feet of new space for additional classrooms and labs for exercise physiology and cardiovascular research as well as gymnasias, ball courts, weight training and instructional space for rock climbing. In addition, a number of much-needed repairs and upgrades to the existing mechanical systems will be implemented. The swimming pools have rust stains around the edges of the pools indicating that the steel reinforcing in the concrete is corroding and there is public concern about the ability to maintain a sanitary environment for students and visitors.

Approximate Budget: \$45,000,000

### **Project #4**    Biology-Natural Resources Renovation/Addition

This project will renovate the existing Quinney Biology-Natural Resources building to address life safety concerns, replace heating ventilating and electrical systems, improve disability access



and improve energy efficiency. The addition of study spaces and labs are necessary to accommodate growth within both colleges housed in the building. A study was done a few years ago to identify all the needs and the College of Natural Resources is attempting to raise part of the necessary funding from private sources.

Approximate Budget: \$45,000,000

**Project #5** Animal Science Renovation

The existing Animal Science building located on the north side of the Quad is listed on the national register of historic buildings. It occupies a major presence on the Quad and has served a variety of functions throughout its life. The building is constructed of un-reinforced masonry and has concrete floors and a timber roof. The roof is structurally deficient and is not connected to the walls other than by gravity. The building has no air conditioning and occupants struggle during the summer months to keep computers operating. The open stairway is a life safety concern and needs to be addressed because in the event of a fire it would act as a chimney.

Approximate Budget: \$12,000,000

**Project #6** Ray B. West Renovation

This project will renovate the historic Ray B. West Building on the south side of the Quad. This three story building is listed on the national historic register, and houses classrooms, computer labs, and faculty offices. The walls are constructed with un-reinforced masonry and the roof is timber. There is a central stairway that will act as a chimney in the event of a fire, although there are other exit stairways in the building. The heating system is old and needs to be replaced.

Approximate Budget: \$12,000,000

**Project #7** Wind Turbine Generator

A feasibility study has been conducted to explore the possibility of developing a wind power project adjacent to USU's south electrical substation at the mouth of Logan Canyon. This area of the campus has long been considered as a possibility for a wind project because of the strong regular diurnal (cold air spilling from the mountains out the canyon from evening to mid morning) wind. This USU site is a good location for construction due to its close proximity to the USU substation, which will help the economics of project. The two year analysis of the site indicates that the average potential capacity is approximately 1.5 -2.0 megawatts of power.

More work is needed in negotiating power purchase agreements to determine the final economics of the project. The capacity factor for this project isn't high enough to justify a commercial project, but is still feasible. The wind power project offers a long-term protection from rising energy prices. The project has many other benefits for USU as well; such as marketing and

recruitment, education, research, reducing carbon footprint, and meeting the American College and University Presidents Climate Commitment. This study is complete and the project is ready to move to the next step.

Approximate Budget: \$4,000,000

**Project #8** Utility Tunnel Extension

This project will extend the existing tunnel system into the Quad to enable several buildings to connect to the Central Energy Plant. The benefit of this will be that the university will have a means of serving the Quad from a second direction and avoid the inconvenience and risk of a loss of heating and cooling at the wrong time of year. Last winter several buildings were without heat for an extended period of time and the university was at of property damage as a result of cold weather. This is part of the long range need that was identified by an infrastructure study completed in February 2000.

Approximate Budget: \$ 5,000,000

**Project #9** Tooele Regional Campus Utilities

This project would install major utility infrastructure along the edge of the new parcel of land. The first project on this site is a county building of education. The intent would be that the major utility systems would be installed during the construction of this facility.

Approximate Budget: \$5,000,000

**The anticipated Non-State Funded Capital Development projects planned for Utah State University over the next five years are listed below:**

**Project #10** Brigham City Campus Addition / Student Center

This project will include a partial renovation as well as an addition to the existing facility to develop a new student center for the Brigham City Regional Campus. The project will provide study spaces, gathering spaces, and food services for students. It will provide approximately 22,000 square feet of new space.

Approximate Budget: \$5,000,000

**Project #11** Regional Campuses and Distance Education Building

Utah State University's Regional Campuses and Distance Education (RCDE), in partnership with other university and state affiliated units, propose to construct a building on the USU Logan

campus. The building will be located at the site currently occupied by the Quonset Hut, across 1200 East from the NFS building. The Quonset Hut is in need of replacement, as it is in very poor condition and cannot fully meet the technical space requirements of the programs housed in the building. RCDE proposes to move quickly on the programming, design, and construction phases, with an anticipated completion date in 2012.

This building is anticipated to be roughly 25,000 - 30,000 square feet, 2-3 stories with/without a basement. The building will be funded by RCDE and Utah Public Radio (UPR).

Approximate Budget: \$10,000,000

**Project #12 Art Barn Renovation**

The existing Art Barn in the heart of campus has housed a number of activities over the years. The building has historical significance but is in need of some life safety upgrades. There is no fire suppression system, the heating system is inadequate, the stairways are a hazard because they are exterior and are not covered from the ice in winter, the uppermost floor has only one exit through a classroom, and the restrooms in the building are inadequate. The renovation will allow the building to remain a landmark on campus, but will provide safe accommodation for the teaching and research that takes place inside the building. It is hoped to secure private funds for the project.

Approximate Budget: \$2,500,000

**Project #13 Thermal Storage Tank**

In order to reduce the cost of energy and to provide redundancy for the central chilling plant, the University intends to construct a 2 million gallon underground cold water storage tank in the HPER recreational field. Once completed, the central chilling plant would produce chilled water at night when energy usage is low to fill this tank. During the day, when energy usage is high, we would use the stored chilled water for the campus reducing the energy load during peak usage periods. The funding is primarily from chilled water capacity fees collected from capital development projects.

Approximate Budget: \$3,000,000

**FY2012**  
**State Funded Capital Development Project Request**  
**AND**  
**Five-Year Plan**

**Agency/Institution:** Utah State University  
**Project Name:** Fine Arts Complex Addition / Renovation  
**Agency/Institution Priority:** 1

**Preliminary Cost Estimate:** \$20,300,000

**Total Project Space (Gross Square Feet)** 278,300  
New Space (Gross Square Feet) 13,500  
Remodeled Space (GSF) 264,800  
Space to be Demolished (GSF) 0

**Increase in State Funded O&M** \$679,430

This number was developed using the LFA negotiated cost per square foot of \$7.66/SF for classrooms and offices and \$8.76/SF for labs. Existing O&M for the existing space has been subtracted out of the total. This number may shift as the program and design progress or as the utilities cost escalate.

**New Program Costs** NA

**New FTEs Required for O&M** 10

Additional O&M requirements will consist primarily of custodial staff and possibly a technician for crafts and trades. An estimated \$27,000 will be necessary to pay for utilities, 20% of the remainder for material costs - \$130,000, and dividing the remaining dollars by \$50,000 per person for salaries and benefits for 10 FTE.

**New FTEs Required for Programs** NA

**Other Sources of Funding** NA

**Previous State Funding** NA

**Existing Facility**

The existing Fine Arts Complex is comprised of three connected buildings; the Fine Arts Center built in 1967, the Fine Arts Visual, built in 1980, and the Fine Arts Museum built in 1982.

The existing facility adequately serves the needs for a large concerts and theatre productions, but is in need of major renovation, including several small additions, to address safety and functionality issues. The function of the existing spaces will not change if the project is funded.

Existing Space (square feet) Currently Occupied 264,800 GSF

### **Project Description**

The project consists of a renovation for the entire Fine Arts Complex, with the exception of the Museum. It includes three small additions of a new scenery shop, black box theater, and lobby/restroom area needed to support both theaters in the building.

Both the music and theater programs will be greatly enhanced by these improvements, and the entire campus and community will be served by increasing safety and quality of the performance venues. The improvements to the theatres will not add capacity, but will allow the School of the Arts to attract high quality programs, larger audiences, and potential donors. Their goal is to double ticket sales in the span of two years. In recent history they have seen steady increase in sales of 10% per year.

### **Project Justification**

The justification of the project is dependent on major fire and life deficiencies, deficiencies of the theatrical systems, the need for replacement of worn out building systems, and the need to improve functionality of the buildings. The Kent Concert Hall is the second largest indoor assembly space on campus, seating 2,168 people and accommodating 400 on its stage. The Morgan Theatre seats 669 people, and accommodates 400 on stage. Code upgrades will minimize the risk of a catastrophic event involving large assemblies of people.

The building lacks adequate fire protection, needing upgrades to the fire alarm system, safety lighting, fire doors, and seismic connections. There are currently no fire sprinklers in the building. Exterior concrete panels are beginning to crumble and pose a hazard to people below. The theatrical systems are both unsafe and dysfunctional. The theater catwalk systems do not meet current OSHA standards and are not adequately lit. They are wooden planks suspended with steel rods, which sway when used. Handrails are only supplied on one side in some areas. ADA door openers need to be installed to meet code requirements. The house lights are at the end of their life span, and the wiring and fixtures are beginning to fail. Replacement parts for some of the components are now obsolete. The aisle lights are failing and not being replaced due to lack of attic stock, and because they generate heat in the end seats that is uncomfortable for the user.

The ceilings in the Kent Concert Hall and Morgan Theatre do not meet current seismic code and need to be removed and rebuilt. The ceiling, shell, and walls need to be redesigned to accommodate a variety of acoustic needs. In 1967 most of the productions held in these venues used little or no sound reinforcement while now, almost all productions in these venues use some form of sound reinforcement. The placement of the sound source has moved from being on the stage to a position generally above and in front of the stage, and the overall average volume of a production has increased. This has dramatically changed the nature of the sound reflection, causing an overall degradation in intelligibility and sound quality. The Kent Concert Hall is complicated as it is a mixed usage venue, hosting events ranging from class lectures to orchestra concerts to ballet performances. The required acoustical room design for each of these productions is different. For best quality sound for a lecture, sound reflections hitting the listener need to be reduced so only the primary source is being heard. For best quality sound for an orchestra performance, many more possible reflections are acceptable and even desirable to increase the “fullness” of the sound in the room. The solution is to design the ceiling as a

natural, adjustable extension of the acoustical shells used on the stage. Ceiling pieces are adjustable on a pivoting frame work so sound reflections can be directed to or away from the audience members as is appropriate for a given performance.

Building security will be improved with this project, adding card access and security cameras at all exterior doors. Because the building is in use 24/7, this improvement is needed to secure the costly instruments, equipment, and furniture required for fine arts programs.

There is a need for several small additions as a part of this project to solve functional and code issues. A new 4,500 square foot scenery shop is needed to remove the scene production from the stage area of the Morgan Theatre. A new 4,000 square foot elevator / restroom lobby is proposed to expand the Kent Concert Hall lobby area. Currently the only ADA access to the lobby is via the freight elevator at the back of house area. Restrooms serving the Kent and Morgan are located in a very inconvenient area on the lower level. Again, the freight elevator is the only ADA access to the restrooms. A third 5,000 square foot addition of a new black box theatre is proposed to serve programmatic needs of the theater department.

### **Planning/Programming**

A facility master plan for the Fine Arts Complex has been completed recently, and outlines strategies and costs for planning a major renovation of the building. This document was utilized to estimate the cost of this renovation project.

### **Site and Infrastructure**

The site will remain mostly undisturbed, but will need to accommodate the three small additions proposed. There is ample room on the east side and in the courtyard of the building to accommodate these additions.

### **Scoring Analysis for Building Board Request Evaluation Guide**

#### **1. Existing Building Deficiencies and Life Safety Concerns**

**Score: 5**

The needs for the existing building include addressing fire/life safety and accessibility deficiencies, a capital HVAC replacement, interior finishes and theatrical systems upgrades. Some of these needs are documented in the ISES report conducted by DFCM in 2001 and in the recently completed facility master plan.

The Fine Arts Center has the following critical life safety and ADA deficiencies:

1. Fire Sprinkler System
2. Ceiling Replacement
3. Fire Doors
4. Exit signage
5. Exit lighting
6. Seismic upgrades
7. ADA compliant entry doors
8. ADA upgrades/additions for restrooms

9. New public elevator for ADA access
10. House lighting

The HVAC system has exceeded its life cycle and needs to be replaced with a new, modern VAV air distribution system. This will require full replacement of air handlers, partial ductwork replacement, VAVs, VFDs, DDCs, MCC, heat exchangers, pumps, piping, electrical connections, and demolition of existing equipment. The Fine Arts Visual has a major need for air conditioning. The new system will serve the entire Fine Arts Center, with the exception of the Tippetts Gallery which has been recently replaced.

Improvements to the performance venues are of particular importance. This building is a high risk, since this facility accommodates large assemblies of over 2000 people. In the event of a fire or seismic event, there is a greater chance of having catastrophic loss of life due to its fire and life safety deficiencies. Code upgrades will greatly reduce the risks to the building users.

In the performance venues, the house lights are failing and replacement parts are not available. The light level and quality in the theaters and lobbies is extremely poor. The house lights are cheap fixtures without safety features and have failed during events. Recently, the building power failed during an event, leaving a large number of patrons in complete darkness when the safety lighting did not perform. The event had to be evacuated with flashlights. This example illustrates the ongoing challenges with this facility.

As stated, the catwalk systems are sub-standard and do not meet OSHA standards. There is no sprinkler system serving the building, and the ceilings do not meet seismic code. Seismic connections also need to be added to connect the roof structure to the walls, allowing load transfer from the roof to the foundation to minimize the likelihood of a roof collapse on the assembly space below.



2. Essential Program Growth

**Score: 5**

This project will not add a significant amount of square footage, but it will greatly enhance existing programs and allow the College to meet their goals to increase attendance and quality of programs offered. The Kent Concert Hall and the Morgan Theatre currently serve a very large number of people and programs. In a typical semester, there are two classes offered in the Hall. One of the classes averages 1200 students three times a week and the other 900 students two times a week (for a total of 5400 students coming and going per week). Additionally, the hall accommodates 250 events each year, with attendance estimated to total 130,000 to 150,000 patrons. Several thousand students and independent performers take the stage every year. Two university graduations and one local high school graduation also attract major audiences.

Because these spaces are so widely used for educational and public events, their functioning and safety is critical to the College of Fine Arts and the community as a whole.

3. Cost Effectiveness

**Score: 4**

Since this project is largely a renovation of an existing building, it conserves resources and reduces costs of construction compared to the cost of a new facility. It also will reduce energy and maintenance costs as old building systems are replaced with new, more efficient ones.

The improvements to this building are not expected to be any less or more costly than would be expected for this type of renovation. Some of the theatrical systems require specific and specialized types of equipment which will need to be carefully designed and specified. Every effort to keep the renovation cost effective will be taken throughout the design and construction processes.

4. Project Need: Improved Program Effectiveness and Support of Critical Programs/Initiatives

**Score: 5**

The College of the Arts expects their ticket sales to double in two years and is developing strategies to increase program effectiveness and quality. They are a newly formed College, and have new leadership and are expanding their mission significantly. They have recently hired a new marketing coordinator, who is working on a strategic plan to encourage and accommodate this growth. They have seen an average of 10% increase in attendance in recent years.

One of the biggest challenges they face is the state of their existing performance venues, including the Kent Concert Hall and Morgan Theatre. The current condition of the facilities does not help the School attract the type of high quality events they would like to offer to the students and the public. The School feels they could also attract potential donors who are interested in contributing state of the art musical instruments, such as pianos, if they could demonstrate a high quality place to store and play them. The improvement of this space also has the potential to attract high quality students who need to be able to perform in a space that meets minimum standards for safety, lighting and acoustics.

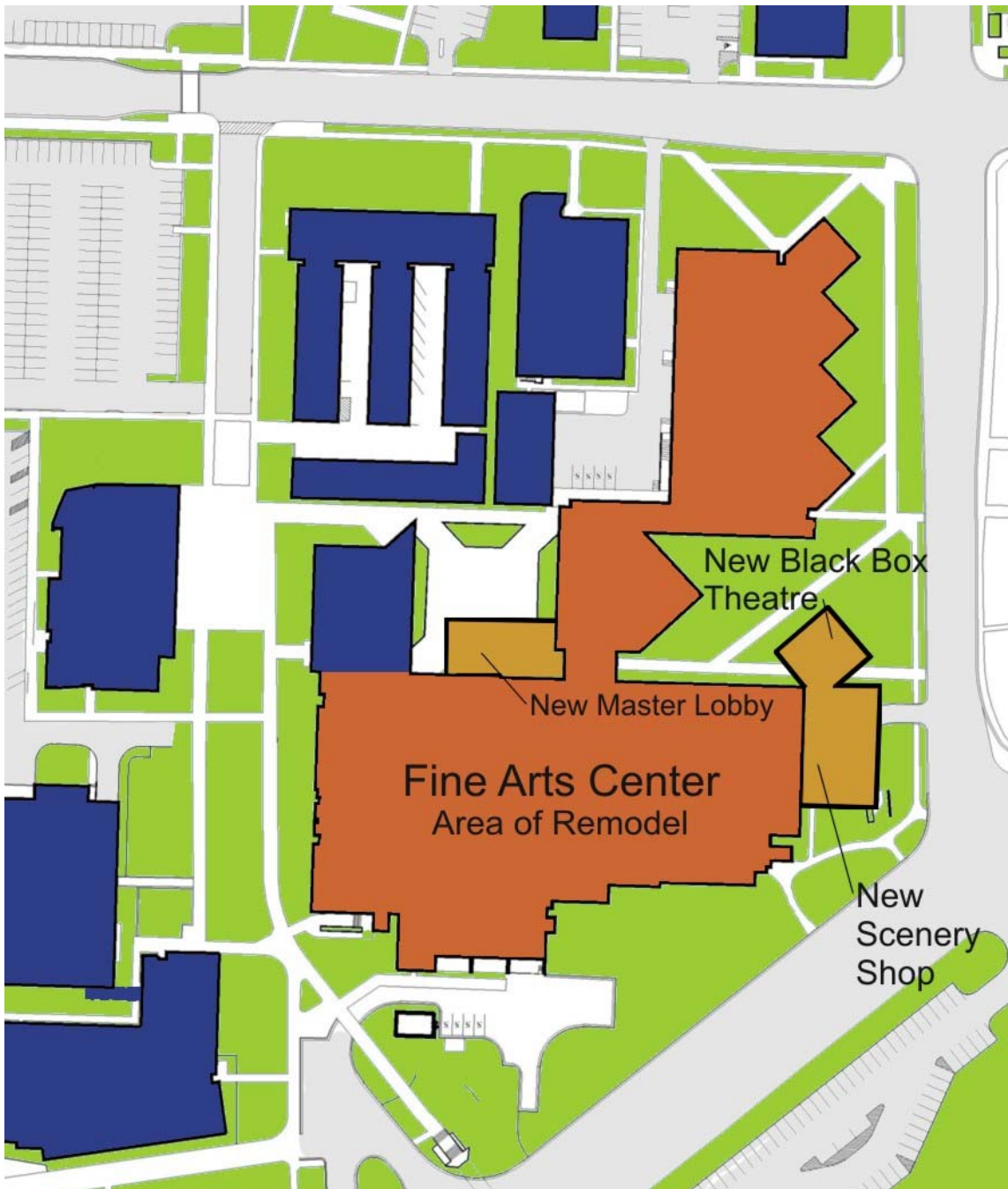
5. Alternative Funding Sources

**Score: 1**

This project does not have alternative funding sources at present. However, these improvements have the potential to attract donors as well as retain currently funded programs.

**Photographs and Maps:**

**Fine Arts Center Site Plan**



**Utah State University  
Land Bank Requests  
As of July 10, 2009**

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Phase II of this project is to renovate a building built in 1970 which has 6 stories on top of a three story base. There are problems with the design of the building that have some seismic weaknesses that need to be corrected, as well as worn out mechanical and electrical systems. The windows are single glazed and should be replaced with more energy efficient glass. Also the elevator lobby areas need to be screened to prevent smoke from entering the elevator chamber. The mechanical and electrical systems are past their useful life and need to be replaced. The electrical master panels have been replaced, but much of the remaining system needs to be updated and most branch circuits are at capacity. Much of the interior is the original décor and does not adequately reflect the caliber of teaching and research happening in the building.

Approximate Budget:                             \$60,000,000

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Approximate Budget: \$ 20,300,000

### **Project #3**    HPER Renovation/Addition

The HPER building was constructed in 1972 and was projected to support a student population of 12,000. The main purpose for the facility is to serve the instructional needs of the Emma Eccles Jones College of Education and Human Services as it prepares students to serve in the areas of physical education, parks and recreation and other exercise careers. In addition it was intended to serve as a recreational facility for students at large. The present on-campus student population is approximately 17,000 and the existing facility is inadequate for the instructional needs of the university, let alone the recreational needs of its students. Class scheduling is limited by the space available and recreational use is crowded out by class time. This project would add approximately 80,000 square feet of new space for additional classrooms and labs for exercise physiology and cardiovascular research as well as gymnasias, ball courts, weight training and instructional space for rock climbing. In addition, a number of much-needed repairs and upgrades to the existing mechanical systems will be implemented. The swimming pools have rust stains around the edges of the pools indicating that the steel reinforcing in the concrete is corroding and there is public concern about the ability to maintain a sanitary environment for students and visitors.

Approximate Budget: \$45,000,000

### **Project #4**    Biology-Natural Resources Renovation/Addition

This project will renovate the existing Quinney Biology-Natural Resources building to address life safety concerns, replace heating ventilating and electrical systems, improve disability access

and improve energy efficiency. The addition of study spaces and labs are necessary to accommodate growth within both colleges housed in the building. A study was done a few years ago to identify all the needs and the College of Natural Resources is attempting to raise part of the necessary funding from private sources.

Approximate Budget: \$45,000,000

**Project #5**    Animal Science Renovation

The existing Animal Science building located on the north side of the Quad is listed on the national register of historic buildings. It occupies a major presence on the Quad and has served a variety of functions throughout its life. The building is constructed of un-reinforced masonry and has concrete floors and a timber roof. The roof is structurally deficient and is not connected to the walls other than by gravity. The building has no air conditioning and occupants struggle during the summer months to keep computers operating. The open stairway is a life safety concern and needs to be addressed because in the event of a fire it would act as a chimney.

Approximate Budget: \$12,000,000

**Project #6**    Ray B. West Renovation

This project will renovate the historic Ray B. West Building on the south side of the Quad. This three story building is listed on the national historic register, and houses classrooms, computer labs, and faculty offices. The walls are constructed with un-reinforced masonry and the roof is timber. There is a central stairway that will act as a chimney in the event of a fire, although there are other exit stairways in the building. The heating system is old and needs to be replaced.

Approximate Budget: \$12,000,000

**Project #7**    Wind Turbine Generator

A feasibility study has been conducted to explore the possibility of developing a wind power project adjacent to USU's south electrical substation at the mouth of Logan Canyon. This area of the campus has long been considered as a possibility for a wind project because of the strong regular diurnal (cold air spilling from the mountains out the canyon from evening to mid morning) wind. This USU site is a good location for construction due to its close proximity to the USU substation, which will help the economics of project. The two year analysis of the site indicates that the average potential capacity is approximately 1.5 -2.0 megawatts of power.

More work is needed in negotiating power purchase agreements to determine the final economics of the project. The capacity factor for this project isn't high enough to justify a commercial project, but is still feasible. The wind power project offers a long-term protection from rising energy prices. The project has many other benefits for USU as well; such as marketing and

recruitment, education, research, reducing carbon footprint, and meeting the American College and University Presidents Climate Commitment. This study is complete and the project is ready to move to the next step.

Approximate Budget: \$4,000,000

**Project #8** Utility Tunnel Extension

This project will extend the existing tunnel system into the Quad to enable several buildings to connect to the Central Energy Plant. The benefit of this will be that the university will have a means of serving the Quad from a second direction and avoid the inconvenience and risk of a loss of heating and cooling at the wrong time of year. Last winter several buildings were without heat for an extended period of time and the university was at of property damage as a result of cold weather. This is part of the long range need that was identified by an infrastructure study completed in February 2000.

Approximate Budget: \$ 5,000,000

**Project #9** Tooele Regional Campus Utilities

This project would install major utility infrastructure along the edge of the new parcel of land. The first project on this site is a county building of education. The intent would be that the major utility systems would be installed during the construction of this facility.

Approximate Budget: \$5,000,000

**The anticipated Non-State Funded Capital Development projects planned for Utah State University over the next five years are listed below:**

**Project #10** Brigham City Campus Addition / Student Center

This project will include a partial renovation as well as an addition to the existing facility to develop a new student center for the Brigham City Regional Campus. The project will provide study spaces, gathering spaces, and food services for students. It will provide approximately 22,000 square feet of new space.

Approximate Budget: \$5,000,000

**Project #11** Regional Campuses and Distance Education Building

Utah State University's Regional Campuses and Distance Education (RCDE), in partnership with other university and state affiliated units, propose to construct a building on the USU Logan



campus. The building will be located at the site currently occupied by the Quonset Hut, across 1200 East from the NFS building. The Quonset Hut is in need of replacement, as it is in very poor condition and cannot fully meet the technical space requirements of the programs housed in the building. RCDE proposes to move quickly on the programming, design, and construction phases, with an anticipated completion date in 2012.

This building is anticipated to be roughly 25,000 - 30,000 square feet, 2-3 stories with/without a basement. The building will be funded by RCDE and Utah Public Radio (UPR).

Approximate Budget: \$10,000,000

**Project #12 Art Barn Renovation**

The existing Art Barn in the heart of campus has housed a number of activities over the years. The building has historical significance but is in need of some life safety upgrades. There is no fire suppression system, the heating system is inadequate, the stairways are a hazard because they are exterior and are not covered from the ice in winter, the uppermost floor has only one exit through a classroom, and the restrooms in the building are inadequate. The renovation will allow the building to remain a landmark on campus, but will provide safe accommodation for the teaching and research that takes place inside the building. It is hoped to secure private funds for the project.

Approximate Budget: \$2,500,000

**Project #13 Thermal Storage Tank**

In order to reduce the cost of energy and to provide redundancy for the central chilling plant, the University intends to construct a 2 million gallon underground cold water storage tank in the HPER recreational field. Once completed, the central chilling plant would produce chilled water at night when energy usage is low to fill this tank. During the day, when energy usage is high, we would use the stored chilled water for the campus reducing the energy load during peak usage periods. The funding is primarily from chilled water capacity fees collected from capital development projects.

Approximate Budget: \$3,000,000

**FY 2012  
State Funded Capital Development Project Request  
And  
Five Year Plan**

**Agency/Institution:** Weber State University

**Project Name:** Professional Programs Classroom Building and Central Plant

**Agency/Institution Priority:** 1

**Preliminary Cost Estimate:** \$39,284,796

State Funding Request	\$30,884,796
Student Fee Revenue Bond	\$4,400,000
NUAMES Revenue Bond	\$4,000,000

**Total Project Space (Gross Square Feet)** 122,556 SF

Classroom/Office/Union Building	114,647 SF
Central Plant	5,500 SF

New Space (Gross Square Feet)	120,147 SF
Professional Programs Space	45,974 SF
NUAMES Offices and Support	11,815 SF
Student Union Space	13,825 SF
Unassignable space	43,032 SF
Central Utilities Plant space	5,500 SF
Remodeled Space (GSF)	2,410 SF
Space to be Demolished (GSF)	0 SF

**Increase in State Funded O&M** \$725,134

The O&M funding requirement was determined using the O&M rate recommended by DFCM and based on gross square footage of the facilities. The portion of the facility eligible for state funded O&M was determined by subtracting the NUAMES exclusive space and the Student Union exclusive space from the Professional Programs Classroom Building gross square footage to gain a state funded square footage of 89,007 SF. The breakout in determining the O&M cost is as follows:

Higher Ed Classroom/Office	89,007 SF X \$7.66 = \$681,794
Central Plant	5,500 SF X \$7.88 = <u>\$43,340</u>
Total State Funded O&M	\$725,134

Both the NUAMES Charter High School and the Student Union space will be charged for O&M, fuel and power costs based on the 25,640 SF of space dedicated for their use. This space represents one third of the assignable space. One third of the O&M costs for common or unassigned areas will also be charged to NUAMES and the Student Union. Thus, the \$725,134 state funded O&M request for the new Professional Programs building is only two thirds of the

total O&M funding required for the entire facility.

**New Program Costs**                      \$0

The project is required to support the very rapid growth in demand for all educational programs at the WSU Davis campus, and particularly the master's degree programs at that campus. Five of the eight master's degree programs available from the University are now offered at the Davis campus. The Master's of Business Administration and Master's of Professional Accounting are well established programs that have operated very successfully for several years. The Master's Degree program in Health Administration finished its fourth year of operations in Spring 2010, while the master's program in English completed its third year in Spring 2010. A master's degree in Criminal Justice is also now offered at the Davis campus, as is a master's degree in English. These programs are already functioning at the Davis campus so no new program costs are involved.

For undergraduate programs, we continue to experience significant growth in demand as well. The bachelor's degree in Health Services Administration, which began classes at WSU Davis in the 2007-08 academic year, has not been able to provide the desired scope of its program at the Davis campus because of insufficient space. The nursing program at WSU Davis continues to have unsatisfied demand and we are already suffering from the need for expanded nursing practice labs and additional classrooms in support of the nursing program. The pre-engineering program that began at WSU Davis during the 2007-08 school year is also hampered by the lack of adequate lab and classroom space. Furthermore, the Construction Management Technology program, Electronics Engineering and Interior Design programs are slated to move to the Davis campus to better serve their enrolled students. These programs will transfer from the Ogden campus as soon as space permits.

All of the academic program offerings at the Davis campus are severely hampered because the single facility there is operating at maximum capacity. Over 3,600 students a semester take classes in that single facility, and it is operating from 7 AM in the morning until 10:30 PM in the evening each week day. It is also regularly utilized for seminars, conferences and special, high intensity class work during weekends.

Specific program costs have been and will continue to be funded through other mechanisms. The University is not able to relocate programs to the Davis campus because of lack of space, even though demand is well established for those programs there. This new facility is required to address the growth in demand for the existing programs already in place at the Davis campus or those already slated to move there from the Ogden campus.

**New FTEs Required for O&M**        7

To provide operations and maintenance of the new facilities, a crew of five custodians will be required. Each custodian normally can maintain 22,000 square feet of space in an 8-hour shift. That standard of performance is the historical average that Weber State University has been accomplishing with custodial crews and is consistent with performance capabilities that should be expected as reported in trade journals.

In addition to the five custodian FTE's, two additional maintenance personnel will be required. One of these will be an electrician, and one will be a general maintenance technician. The maintenance concept for the Davis campus is to have a small, multi-skilled maintenance team that can respond to and correct about 80 percent of the maintenance calls that are received, as

well as do preventive maintenance items. The more complex maintenance calls will be referred to the maintenance shops at the Ogden campus who will respond and resolve the problem.

The operations concept for the central plant is to automate it to the maximum extent possible and have all systems monitored at the central plant control room on the Ogden campus. If a system at the Davis plant has an alarm, it will be addressed to the extent possible using the automated remote control by the operators at the Ogden campus. If a response is required, the Ogden operators can dispatch maintenance personnel either from the Davis maintenance team or from the appropriate shop at the Ogden campus.

**New FTEs Required for Programs**                      3

Faculty positions to support programs at the Davis campus will be relocated from or shared with the Ogden campus. Four faculty positions will be moved to support the BS program in Health Services Administration. In addition, one additional academic support staff position will be relocated from the Ogden campus for this program.

<b>Other Sources of Funding</b>	\$8,400,000
Student Fees Revenue Bond	\$4,400,000
NUAMES Revenue Bond	\$4,000,000

Since the Professional Programs Classroom Building will be a jointly funded and multi-use facility, additional funding is available from the joint users using revenue bonds to capitalize their share of the construction and furnishings, fixtures and equipment (FFE) costs.

**Previous State Funding**                      \$0

No state funding has been allocated to this project. The University has completed programming of the facility, which the University funded with the provision that it can be reimbursed with project funds when they are appropriated by the Legislature. Reimbursement of programming costs is part of this funding request.

**Existing Facility:**

Professional graduate programs are currently scattered in different buildings and in different campuses. The University has consolidated, to the extent possible, professional graduate programs at the Davis campus because that is where the highest demand exists for these programs. The Davis campus graduate programs are offered at the most easily accessible campus for working professionals. That campus has close proximity to I-15 as well as the Frontrunner commuter rail service with a UTA bus connection available from both the Layton and Clearfield stations. With such easy accessibility, continued rapid growth in evening offerings of graduate programs has exceeded expectations and fully consumed the available capacity to support these programs on the Davis campus. Nearly all of our graduate students are working professionals who pursue their graduate degree in the evenings after working all day. The Davis campus is best situated for these working professionals to access.

Construction of this new facility will also allow a reorganization and reconfiguration of space within the existing building at the Davis campus, thus consolidating programs and accommodating growth in underserved undergraduate programs as well. This project includes the reconfiguration work required in the existing Davis campus building.

With the consolidation of existing WSU graduate programs at the Davis campus, classroom and laboratory space in the Wattis Business Building, the Social Sciences Building and the Marriott Allied Health Building, all located on the Ogden campus, will again be available for undergraduate course offerings.

There is no student union type facility at the WSU Davis campus. There are no food services except for a few vending machines and prepackaged cold sandwiches and snacks sold in the bookstore. There are no student activity spaces or student lounge spaces except for one small faculty workroom where a few workout machines are installed. The lounge spaces are in the hallways of the existing building. **While the spaces used for these purposes will not be funded by the State**, it is important to recognize their importance and value in the overall educational experience offered by the University.

The NUAMES charter high school will share in these facilities and will also provide funding for their portion of the construction of the facility. NUAMES is currently housed in temporary portable classroom units set up to the west of the existing building on the Davis campus. The land area that the classroom trailers are set upon was leased to NUAMES for this purpose. NUAMES also uses a few classrooms in the existing building at the Davis campus for classrooms as they are available during the day. At night, all of the classrooms at the existing Davis building are used in support of Weber State University educational programs. All of the portable classroom trailer units that NUAMES can make available are also used by WSU in the evenings because of the high demand for evening classes at that campus. Unfortunately, this situation cannot be sustained. The heavy use of temporary portable trailer classrooms is already causing excessive wear and deterioration to these facilities. The synergy of this shared use arrangement provides a much needed boost to each program at minimal cost and with consequent much higher utilization of available classroom and laboratory space. But, the current arrangement is a temporary, short term solution. The new facility provided by this project will enhance this synergy in a facility that is designed and built to handle the heavy, continuous use.

Existing Space (square feet) Currently Occupied           0          .

**Project Description:**

WSU has programmed a multipurpose, multifunctional building that will provide classroom and laboratory space supporting graduate programs, undergraduate course offerings, and NUAMES charter high school. All of the classrooms and laboratories are envisioned to be usable by both the university and NUAMES during the day and by university programs at night. The new building is envisioned to have approximately 50,000 square feet of space dedicated to classrooms, labs, faculty offices, and academic support space.

In addition, approximately 12,000 square feet of space will be dedicated to NUAMES charter high school use for administrative and office space, testing centers, and student services.

Further, the building will house student activity functions normally performed in a student union type facility. We plan for approximately 13,800 square feet of space to be dedicated to these functions. Included in this space will be such essential functions as food service areas, student activity and fitness areas, and areas for other student interaction. A lunch area is required for NUAMES, so that meals can be catered by Davis School District in accordance with state law for high school students. No food service areas currently exist at the Davis campus, nor are

there dedicated student activity facilities. ***No state funding will be used to build or operate the student activity facilities elements of this project.***

To support the multi-building campus, a central chilled water plant of approximately 5,500 square feet is part of this project. This facility will be located on the south-eastern edge of the Davis campus, away from the academic core area. The structure shell will be sized to support cooling requirements for the existing buildings, and will be expandable to accommodate anticipated growth through campus build-out. For phase 1, the central chilled water plant will be fitted with two chillers generating a total of approximately 1,440 tons of cooling. There will also be a two cell cooling tower located coincident with the central plant. The utility plant will be connected to the main campus buildings through a utility tunnel buried underground.

For heating, natural gas fired boilers will be installed in the new Professional Programs Classroom Building and will be integrated into the master control system to enable control and monitoring from the main control station on the Ogden campus.

An electrical substation is also planned that will allow power to be supplied at a much higher voltage, thus at a substantially reduced rate, reducing power costs in perpetuity. First year savings are projected to be over \$65,000 in electrical billing, with more savings as loads increase over time.

To complete the project, reconfiguration of some spaces in the existing Davis campus building, additional parking and landscaping will be provided that is consistent with the campus master plan.

### **Project Justification:**

The Weber State University Davis Campus, although only eight years old, has already outgrown its campus infrastructure and classroom capacity. We are seeing an explosion in growth in student enrollment that is unprecedented in the history of WSU. Our head-count for all students enrolled at the Davis campus increased from 2,988 in Fall 2009 to 3,275 in Fall 2010 plus 400 NUAMES students and projections show an even faster growth for the 2011 school year. Demand for classes has far exceeded growth projections. We just can't stuff any more students into most of our class offerings at the Davis campus.

When the campus was originally completed in 2003, all of the University's classes that had been held in high schools in the evenings throughout the area were consolidated into the new building on the new campus. But growth at the Davis campus far exceeded expectations, with more students attending classes than can be accommodated. Growth has been so rapid that within two years of opening the Davis campus, the University was forced to lease back space for evening classes in local area high schools. One of the advantages of having the NUAMES charter high school permanently located on the Davis campus is to more fully utilize the available space, both day and night. The now 14 portable classrooms that NUAMES makes available have helped the University to address the high demand for evening classes on the campus, but has not been able to satisfy that demand. All of the classrooms, labs and study spaces in the existing building at the Davis campus are now fully used to support demand. All of the NUAMES portable classrooms are now fully used by WSU classes in the evenings. Several conference rooms have also been pressed into service as classrooms to meet demand. But even with these measures, demand has exceeded available capacity on the Davis campus and WSU is back leasing evening class space in local area high schools. This dispersion of program offerings adversely impacts students and forces many of them to travel to several

different locations for their educational programs, if they can get into their preferred educational program at all.

The unprecedented demand for undergraduate programs now offered or slated for the Davis campus is exemplified in the following:

Nursing	Operating at capacity of all labs
Pre-Engineering	198% growth since 2003
Construction Management Technology	135% growth since 2003
Total undergraduate course offerings	186 in 2003 to 267 in Fall 2009 (44% growth)

Master's degree program offerings have also experienced tremendously rapid growth as shown in the following:

Master's degree courses	5 in 2003 to 36 in 2010 (620% growth)
Master's degree students enrolled	362 in 2003 to 696 in 2010 (92% growth)

This project will support the demand growth that WSU is experiencing and will allow reallocation of programs between the new and already existing buildings. For example, the Nursing programs will be consolidated into the new building, freeing up space in the existing building for the pre-engineering and general education courses. The new building will also provide the lab space and classroom space for the expanding Construction Management Technology program.

By combining the requirements of NUAMES, student union, and the classroom and laboratory spaces, the University maximizes leveraging of state funded dollars and creates the most efficient building use possible, while also allowing the building to be adaptable for future mission changes should they occur.

In addition to the unprecedented growth already experienced at the Davis campus, the immediate future portends even more rapid growth in demand for educational programs offered at that campus. Situated as the campus is immediately south of Hill Air Force Base, the expansion and growth of high technology jobs in the immediate area associated with the Falcon Hill project will place even greater demands on the Davis campus to provide highly educated, technically superior job candidates in business, economics, science, engineering, technology and education. The Falcon Hill project alone is projecting approximately 15,000 new high tech jobs being created upon completion. The Falcon Hill development, which has already broken ground and is under construction, is focused on aerospace, composites and plastics industries, with approximately \$500 million in development funding expected. The Davis campus of Weber State University is ideally located to support the tremendous economic growth that the Falcon Hill project promises to bring to northern Utah. Not only will this growth appear with new job creation, but also in continuously upgrading skills and credentials of working professionals. Access to higher education is fundamental to bringing in new companies and fostering economic growth.

### **Planning/Programming:**

In May, 2007, the State Building Board authorized WSU to initiate formal construction programming for this project. Using WSU funds, VCBO architects have completed the program for the facility.

### **Site and Infrastructure:**

The site for the new academic building is adjacent to and east of the single existing building at our Davis campus (see the campus master plan diagram that is attached). The Davis campus of Weber State University consists of over 100 acres of land, of which only about 7 acres has been developed. The site is fully owned by the state. The siting is consistent with the campus master plan and is fully serviced with existing water, sewer, electric power, natural gas, and secondary irrigation water of sufficient capacity to the site to permit full campus build-out. All utilities will require only stub out connections to existing main service lines.

As part of this project, a new central plant will be constructed and connected to the existing underground utility tunnel system to provide chilled water cooling to all of the permanent facilities on the campus. The first phase of the new central plant will have two chillers of 720 tons each to provide central chilled water for the campus, with redundancy. The piping will be installed in utility tunnels to connect the central plant to the two permanent facilities. Additional tunnels to allow these connections will be provided as part of this project.

### **Scoring Analysis for Building Board Request Evaluation Guide:**

#### **1. Existing Building Deficiencies and Life Safety Concerns.**

This is a new building and thus there are no existing building deficiencies or life safety concerns that apply.

#### **2. Essential Program Growth.**

The previously stated project justification clearly identifies the unprecedented program growth at the WSU Davis campus and the need it creates for this project.

#### **3. Cost Effectiveness.**

This facility, because of its multi-purpose, multi-function aspect, will receive construction and O&M funding from several sources, leveraging the state investment. Since most of the building will be dedicated to WSU graduate and undergraduate programs, the bulk of the construction and O&M funding must necessarily come from the State of Utah.

The student activities functions will be funded by students through the fee structure currently in place. The student fees will be used as the funding stream to pay back a bond that will provide the necessary capital costs of construction, and the continuing student fee funding stream will help pay for O&M.

A similar funding stream is available from NUAMES for the portion of the building they will occupy. Revenue bonds can be issued that will be repaid from the annual revenue stream that is available to NUAMES for their portion of the capital costs. In addition, NUAMES will have an ongoing O&M commitment that will be satisfied from annual operating revenues.

The synergy that will be obtained from joint use of common spaces by the University programs, student services functions, and the NUAMES charter high school make this project an exceptionally high value. Normally, these three functions would be housed in separate, distinct facilities, with most common features, such as restrooms, mechanical spaces, heating and ventilating equipment, etc. having to be duplicated. By combining these functions into one building, and then jointly sharing classrooms and lab spaces to meet peak demand requirements, a higher level of efficiency, better space utilization and improved cost



effectiveness is achieved. The net cost to each user is reduced to a lower level than could be achieved in separate facilities. Overall, the state of Utah gets the most efficiency possible in building utilization while very effectively leveraging state dollars.

#### 4. Project Need: Improved Program Effectiveness and Support of Critical Programs/Initiatives.

The need for this project is comprised of four different, mutually supporting elements. By combining these four requirements into one facility project, there is a major element of synergy that improves efficiency of operations, reduces overall construction costs, and provides maximum flexibility.

The first element that supports the need for this project is the rapidly expanding graduate programs at WSU Davis campus. These programs are rapidly expanding based on the demand for highly educated and technically proficient professionals required by business and industry in Utah. This demand is being accelerated by the Falcon Hill project at Hill AFB. Besides responding to the increased demand, having a highly educated work force also contributes in a significant way to fueling economic growth in Utah. It is a self-perpetuating cycle. Because of local business and industry demand, and the need for individual refresher education, WSU is experiencing significant expansion of our graduate programs. Most of the master's degree programs are offered at night so working professionals can avail themselves of this opportunity while continuing to work full-time. That exacerbates night-time demand on facilities at the Davis campus.

The second element that supports the need for this project is the continuing demand for and enrollment in undergraduate programs at the WSU Davis campus. Demand for undergraduate and graduate programs has more than exceeded the capacity of the Davis campus' existing infrastructure. Enrollment is now limited to approximately 3200 students solely based on available space. This new facility will allow existing demand to be more fully satisfied and meet immediate future demand.

The third element that supports the need for this project is the requirement for student services at the Davis campus. The existing single facility has no food services, no union facilities, very limited student lounge and study spaces, and only a small bookstore area. This project provides the opportunity to rectify these concerns and deficiencies to better attract and support students at the Davis campus and enhance the overall educational experience at the University. ***This part of the project will not be funded with state appropriated funds.***

The fourth element that supports the need for this project is the permanent relocation of the NUAMES charter high school to the Davis campus. The addition of this school increases demand for daytime classroom space, when University programs are in least demand, while their funding stream will help offset the costs of classrooms and labs used much more intensely by WSU programs in the evenings. The day and night loading and synergy of this arrangement leverages educational assets and provides exceptional value for the money invested. The joint use of student services functions will also help offset the costs of these amenities.

#### 5. Alternative Funding Sources.

The alternate funding sources available for this project come from the bonding capacity of NUAMES and the student services element. The NUAMES revenue stream will permit bonding to \$4 million, while the student services auxiliary has the capacity to bond for approximately

\$4.5 million to support their share of the design and construction costs of this project.

**Photographs and Maps:**



**Davis Campus Master Plan**



**FY2012**  
**State Funded Capital Development Project Request**  
**AND**  
**Five-Year Plan**  
July 9, 2010

**Agency/Institution:** Southern Utah University  
**Project Name:** Business Building Addition  
**Agency/Institution Priority:** 1  
**Preliminary Cost Estimate:** \$12,250,000

**Total Project Space (Gross Square Feet):** 20,000

New Space (Gross Square Feet)	20,000
Remodeled Space (GSF)	15,000
Space to be Demolished (GSF)	0

**Increase in State Funded O&M:** \$153,200

Total O&M for the new Business Building Addition, not including remodel space, was calculated by using the FY 2012 Higher Ed O&M Rates for classroom/office provided by DFCM. (20,000 sqft x \$7.66)

**New Program Costs:** \$0

**New FTEs Required for O&M:** \$0

**New FTEs Required for Programs:** \$0

**Other Sources of Funding:** \$0

**Previous State Funding:** \$0

**Existing Facility:**

The School of Business is housed on campus in the Dixie Leavitt Business Building. This building constructed in 1980 is a three story concrete and steel reinforced structure with brick veneer. It contains 26,123 gross sq. ft. and of that 14,005 net sq. ft. is assigned to the School of Business. The third floor consists of office space, while the first and second floors are primarily classrooms and labs. This building was constructed with a south slope of 58 degrees for optimum solar benefit, which significantly reduces interior usable space on the south side. Because of continual maintenance issues with the solar hot water panels, they were removed in 2002.

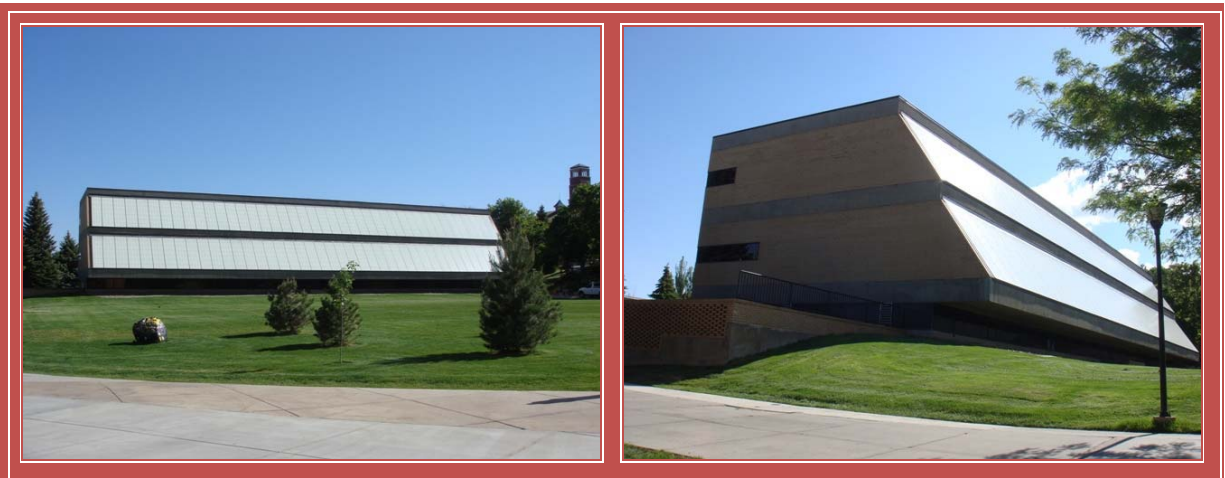
From the time the building was first constructed until 2008, the School of Business has experienced a 142% increase in students and 73% increase in faculty without increasing space in the Business Building. In addition, the School of Business has expanded student educational opportunities to include a Masters in Business Administration and a Masters of Accounting. In order to meet the continued demand for student education, this proposed 20,000 sq. ft. addition to the building is critical.

**Project Description:**

This project is to add 20,000 sq. ft. to the existing Dixie Leavitt Business Building and renovate/remodel 15,000 gross sq. ft. of existing building to meet the space needs of the School of Business. The following is requested to be added to the current Business Building:

- graduate classrooms/seminar rooms
- advanced computer lab
- graduate assistant work/study areas
- academic advising suite
- break-out/study rooms
- additional faculty offices

The new building addition will tie into a portion of the sloped south side of the existing building. To allow for code upgrade and occupant flow between the new addition and the existing building, a main corridor running north and south will be installed in the center of the existing building, which will require removal of the existing middle stairs and elevator. A new stair tower that includes an elevator will be built onto the existing business building where the main north entry is, as part of the renovation/remodel totaling 15,000 square feet.



Existing Business Building South Elevation:

SW Corner Illustrates Sloped Side of Building:

**Project Justification:**

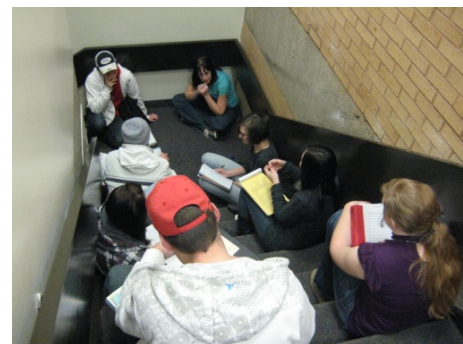


For the School of Business to continue to grow and develop, more space is necessary to meet student demand for education. When the Business Building was constructed in 1980, the Business Department had 351 majors and 15 faculty members. Currently, the School of Business has more than 625 undergraduate students, 141 graduate students, and 27 faculty members. This equates to an almost tripling in students and a doubling of faculty with no increase in facility space. The School currently offers two graduate programs (Masters in Business Administration and a Masters of Accounting) but has no seminar style classrooms or student breakout study rooms needed for graduate study. To compensate for increased student enrollment, the building is heavily scheduled and utilized from morning well into the evening. During the morning hours, from 8:00 am to 12:00 noon, for example, classroom utilization is 97%, (well above the accepted standard of 80%) with station utilization being 77% (the standard is 66%). Nearly all of the MBA classes, as well as the Small Business Development Center training classes, are held in the late afternoon and evening in the Business Building. Some MBA courses have also been scheduled in the evening at Dixie State College in St. George, which donates space to the School of Business for graduate instruction.

**Seminar Rooms.** These rooms are especially useful for case-based seminars that have become the standard for advanced business courses. U-shaped seating allows for up to 40 students to sit in close proximity to each other and the professor, facilitating discussion of cases and exercises. Students apply their knowledge of business to solve real-world problems, translating theory into practice. Since our business courses are heavily oriented to industry practice and are taught by faculty with both doctoral degrees and extensive professional experience, these seminar rooms are crucial to student learning and achievement.



**Breakout/Study Rooms.** These allow students to meet as teams to study and to work on team projects and assignments. Most of our professors give team assignments or projects so that students learn both leadership and teamwork skills that are so vital in the business world today. Currently, students must gather in foyers and hallways or find empty classrooms (which are usually not available) to meet with their teams.



**Expanded Service Learning Lab.** The current lab is adequate as an investment lab, but not as a service learning lab. Service learning occurs when students apply their business knowledge to solve real problems for real people. Our accounting undergraduate and graduate students do Voluntary Income Tax Assistance for students and low income families in Iron County. In 2008 they served more than 900 clients, which was just too much for our small lab.



We had to move them into a teaching lab, to the detriment of students and classes. Our finance

seniors and MBA students manage a \$250,000 investment portfolio, using the knowledge obtained in their investments classes. If this program grows any bigger, it will also need an expanded lab. We would also like students to provide free management consultation services, marketing research and economic analysis for businesses in Southern Utah. That will also require an expanded service learning lab.

**Advanced Business Computing Lab.** We have outgrown the capacity of our two business computer labs due to increased demand of faculty to teach in the labs. As disciplines increase their use of spreadsheets, databases and statistical tools to make better business decisions, this demand will only get worse. We need a computer lab dedicated to students where they can have access to the business software and tutors in accounting, economics and finance.

**Enhanced Adviser Suite and Faculty Offices.** The dean's office and advising suite is currently located on the third floor of the business building. The addition would allow this office to move to the main floor and be more accessible to students. That would make room for expansion of faculty offices to a size that better supports the mentoring and individualized instruction of students, something that is a trademark of SUU. The offices in the building are small and range from 78 to 95 sq. ft. as compared to the current standard of 120 sq. ft., and all are completely full.

**Planning/Programming:** A formal Architectural program needs to be completed.

**Site and Infrastructure:**

Utilities are available to support the addition. The existing building is located on the interior of campus. Property for expansion is University-owned, and access to the building and parking will remain the same.

**Scoring Analysis for Building Board Request Evaluation Guide:**

1. Existing Building Deficiencies and Life Safety Concerns:

- Does not meet all ADA regulations
- Stair guardrails are not code compliant
- Fire rated doors need to be installed in several locations
- Building lacks a fire sprinkler system

The Business Building was constructed in 1980, during an era of transition to more energy efficient designs. On the south side of the building, the roof is sloped where hot water solar panels were installed; the objective being to conserve energy by providing supplemental solar generated hot water. Because of continual leaking problems and maintenance costs, the solar panels were eventually removed in the spring of 2002 and replaced with Kalwal translucent panels.

Usable space on the second and third floors of the building is decreased because of the sloped South side.

2. Essential Program Growth:

Southern Utah University has had the benefit of 75% increase in fall 3<sup>rd</sup> week FTE student enrollment from 1990 to 2008. SUU is a stable Institution of Higher Education located in a robust area of the state that will continue to grow. The School of Business has experienced a 142% increase in student majors (including graduate students) and a 73% increase in faculty from 1980 to 2008. Both SUU and the School of Business have a proven track record that attest to their stability and growth potential, given the opportunity to gain additional adequate space to do so.

3. Cost Effectiveness:

The 20,000 sq. ft. addition, combined with the remodel/renovation of 15,000 sq. ft. to the existing Dixie Leavitt Business Building is the most practical and cost-effective means to gain the additional space necessary to meet academic growth demands.

4. Project Need: Improved Program Effectiveness and Support of Critical Programs/Initiatives.

The requested project will improve program effectiveness by providing program space innovations and ample room for expanding numbers of students, faculty, graduate assistants, lab space, class rooms, and work/study areas.

5. Alternative Funding Sources: None

**Photographs and Maps:**





## 5-Year Plan

### Project #1 Business Building Addition:

Project Size: New construction 20,000 square feet, renovation/remodel 15,000 square feet.  
 Estimated Project Cost: \$12,250,000.

#### Project Description/Justification:

This project is to add 20,000 sq. ft. to the existing Dixie Leavitt Business Building and to renovate/remodel 15,000 GSF of the existing building to meet the space needs of the School of Business. The following is requested to be added to the current Business Building:

- graduate classrooms/seminar rooms
- advanced computer lab
- graduate assistant work/study areas
- academic advising suite
- break-out/study rooms
- additional faculty offices

### Project #2 Performing Arts Auditorium Replacement:

Project Size: 30,000 square feet.  
Estimated Project Cost: \$13,000,000.

**Project Description/Justification:**

This project consists of constructing a new Auditorium on the university campus at the North West corner of 300 West and University Blvd. In 2006 a Facility Condition Analysis of the Auditorium was conducted by an independent architectural firm, and after assessing the long-term needs of the College of Performing and Visual Arts, the best solution would be to demolish the existing facility and replace it with new facilities. The Auditorium Replacement is the first step in this process. Over the last six years, the College of Performing and Visual Arts has experienced a growth in total majors of 24%. New degree programs and majors have been added in Art and Design; and the Dance and Art and Design departments have joined the Music department in becoming nationally accredited.

**Project #3 Academic Center for Excellence:**

Project Size: 60,000 square feet.  
Estimated Project Cost: \$20,000,000.

**Project Description/Justification:**

This project is to construct a new 60,000 sq. ft. facility, on the site where the Auditorium is currently located near the South West corner of 300 West and University Blvd. The Auditorium will be demolished when the Academic Center for Excellence is funded. This building would serve student academic functions and contain classrooms, labs, offices and support space.

**Project #4 Performing Arts Black Box:**

Project Size: 20,000 square feet.  
Estimated Project Cost: \$9,000,000.

**Project Description/Justification:**

This project consists of constructing a new Black Box Theater on the university campus at the North West corner of 300 West and University Blvd. Upon completion of the Auditorium Replacement and the Black Box, all programs and activities that were held in the Auditorium will be held in the new facilities. In 2006, a Facility Condition Analysis of the Auditorium was conducted by an independent architectural firm, and after assessing the long-term needs of the College of Performing and Visual Arts, the best solution would be to demolish the existing facility and replace it with new facilities. The existing Auditorium was not designed to support the academic programs now operating on the SUU campus.

Over the last six years, the College of Performing and Visual Arts has seen a growth in the total majors of 24%. New degree programs and majors have been added in Art and Design; and the

Dance and Art and Design departments have joined the Music department in becoming nationally accredited.

**Project #5 Gerald R. Sherratt Library Addition:**

Project Size: 50,000 square feet.

Estimated Project Cost: \$20,000,000.

**Project Description/Justification:**

This project consists of building an addition to the South side of the existing Library to meet the increasing need for student study space and special collections, in accordance with the design when the original building was constructed. Because the addition will be tied to the existing building, the project includes remodeling/reconfiguring areas where building attachment would occur. This is included in the price estimate. The library was constructed in 1996. Third week Fall FTE's have increased 30% since that time.

**FY 2012**  
**State Funded Capital Development Project Request**  
**&**  
**Five-Year Plan**

**Agency/Institution:**           **Snow College**

**Project Name:**               **Science Building**

**Agency/Institution Priority:**           **First**

**Preliminary Cost Estimate:**           \$11,802,845

*Your DFCM project director will work with you to develop the final budget request.*

**Total Project Space (Gross Square Feet) 69,000**

New Space (Gross Square Feet)	12,000
Remodeled Space (GSF)	57,000
Space to be Demolished (GSF)	none

**Increase in State Funded O&M**           \$ None anticipated at present

**New Program Costs**                       \$ None anticipated at present

**New FTEs Required for O&M**           \$ None anticipated at present

**New FTEs Required for Programs**       \$ None anticipated at present

**Other Sources of Funding**               \$ None

**Previous State Funding**                 \$ None

**Existing Facility:**

The current building was constructed in 1972 and has many safety issues. Due to sub-settling over the years there is a large crack running the height of the building. The last structural analysis of the building occurred more than fifteen years ago. The Labs are very outdated and would not meet current standards for chemistry and biology laboratories including inherent problems with the original glass lines required for certain chemicals. The lab floors and some classrooms have asbestos in them. Generally, the building is out of code compliance and can no longer adequately serve the purpose for which it was built.

Existing Space (square feet) Currently Occupied:           57,000 gross square feet

**Project Description:**

See Attached Summary

**Project Justification:**

See Existing Facility above.

**Land Acquisitions & New Campuses for UCAT:**

*Describe in detail how each of the requirements outlined in Statute have been met.*

Please include letters from school districts stating that they do not have space available for UCAT use; an inventory/utilization report of the current UCAT space; a summary of the ATE programs being offered by the college campuses in the UCAT area and copies of current cooperative agreements or a summary of efforts to develop such agreements.

**53B-2a-112. College campuses -- Relationships with other public and higher education institutions -- Agreements -- Priorities -- New capital facilities.**

(4) Before a college campus develops its own new instructional facilities, it shall give priority to:

- (a) maintaining its own existing instructional facilities for both secondary and adult students;
- (b) coordinating with the president of a higher education institution and entering into any necessary agreements to provide applied technology education to both secondary and adult students that:
  - i. maintain and support existing higher education applied technology education programs; and
  - ii. maximize the use of existing higher education facilities; and
- (c) developing cooperative agreements with local school districts, other higher education institutions, businesses, industries, and community and private agencies to maximize the availability of applied technology instructional facilities for both secondary and adult students.

(5) (a) Before submitting a funding request pertaining to new capital facilities and land purchases to the Utah College of Applied Technology, a college campus shall:

- i. ensure that all available instructional facilities are maximized in accordance with Subsections (4)(a) through (c); and
- ii. coordinate the request with the president of a higher education institution, if applicable.

(b) The State Building Board shall make a finding that the requirements of this section are met before it may consider a funding request of the Utah College of Applied Technology pertaining to new capital facilities and land purchases.

**Planning/Programming:**

See Attached Summary.

**Site and Infrastructure:**

The project will not involve a new location.

**Scoring Analysis for Building Board Request Evaluation Guide:**

*Please provide the following justification to aid the Building Board and DFCEM in applying the attached Capital Development Request Evaluation Guide.*

1. Existing Building Deficiencies and Life Safety Concerns.

The current building was constructed in 1972 and has many safety issues. Due to sub-settling over the years there is a large crack running the height of the building. The last structural analysis of the

building occurred more than fifteen years ago. The Labs are very outdated and would not meet current standards for chemistry and biology laboratories including inherent problems with the original glass lines required for certain chemicals. The lab floors and some classrooms have asbestos in them. Generally, the building is out of code compliance and can no longer adequately serve the purpose for which it was built.

2. Essential Program Growth.
3. Cost Effectiveness.
4. Project Need: Improved Program Effectiveness and Support of Critical Programs/Initiatives.
5. Alternative Funding Sources.

**Photographs and Maps:**

**5-Year Plan**

**Please list below the anticipated State Funded Capital Development projects planned for your agency/institution over the next five years. Include a short one paragraph description/justification of each project and the approximate cost of the project.**

**Project #1**

**Project #2**

**Project #3**

**Project #4**

**Project #5**

**FY2012**  
**State Funded Capital Development Project Request**

**Agency/Institution:** Utah State University / College of Eastern Utah

**Project Name:** Arts & Education Building

**Agency/Institution Priority:** 3

**Preliminary Cost Estimate:** \$22m

**Total Project Space (Gross Square Feet)** 70,000

New Space (Gross Square Feet)	62,000
Remodeled Space (GSF)	8,000
Space to be Demolished (GSF)	24,314

**Increase in State Funded O&M** \$393,532

*This number was developed using the LFA negotiated cost per square foot of \$7.66/SF for classrooms and offices and \$8.76/SF for labs. Existing O&M for the existing space has been subtracted out of the total. This number may shift as the program and design progress or as the utilities cost escalate.*

**New Program Costs** N/A

**New FTEs Required for O&M** 4

*Additional O&M requirements will consist primarily of custodial staff and possibly a technician for crafts and trades. An estimated \$124,000 will be necessary to pay for utilities, 20% of the remainder for material costs - \$54,000, and dividing the remaining dollars by \$50,000 per person for salaries and benefits for 4 FTE.*

**New FTEs Required for Programs** 0

**Other Sources of Funding** 0

**Previous State Funding** 0

**Existing Facility:**

*The current theater and music programs are housed in two separate buildings built in the 60's; the Geary Theatre and Music Building. USU/CEU art programs are divided among three buildings on campus, which makes it difficult for the program to maintain its identity. Existing facilities are limited in providing students with adequate opportunities to study these programs effectively. The Geary Theatre and Music buildings have life safety, ADA as well as structural issues. It is proposed that both buildings be demolished.*

**Existing Space (square feet) Currently Occupied:**

*32,314 GSF includes 24,314 GSF in the Geary Theater and Music buildings along with 8,000 GSF in the Art Department's space in the College Career Center. The space currently occupied by the art department in the Career Center would be used to expand USU/CEU's nursing program.*

**Project Description:**

*This project will replace the Geary Theater and the Music Building. DFCM identified these two buildings as among the most dangerous buildings in the state. The project will bring together theater, music, visual arts into one facility on campus. The larger footprint will be more cost-effective than building a smaller project.*

**Project Justification:**

*As USU/CEU strives to attract and retain students and faculty in the face of declining local populations, the safety, efficiency, and attractiveness of the facilities is of increasing importance. Continuing the traditions of successful education at CEU will depend on having renewed campus facilities that will ensure an effective setting for teaching and learning. The original buildings have served for a number of years and are now at the end of their life cycle.*

**Planning/Programming:**

*Preliminary programming has been completed. A two day workshop was held in June 2007 involving a broad range of participants from the campus community. Campus issues, priorities, and goals were established through a variety of interactive, participatory techniques. These exercises allowed all participants in the process to openly share information, discuss differences, and come to a general consensus on the direction of the project.*

**Site and Infrastructure:**

*The site for the project is roughly 150,000 square feet. The site for the new Arts & Education Building is on approximately 425 East 400 North. Proposed site is directly west of the Reeves Building in an open green space. A 2005 upgrade to campus infrastructure included the installation of steam, condensate, chilled water, and electrical connections at the building site.*

**Scoring Analysis for Building Board Request Evaluation Guide:**

1. **Existing Building Deficiencies and Life Safety Concerns**

*Two buildings to be replaced have been identified as among the most dangerous buildings in the state inventory. They now have many ADA issues and aged mechanical systems that severely limit their effectiveness. In addition life safety issues in both buildings include; minimal fire sprinkler systems, lack of adequate steel in the masonry wall, and structural systems not seismically sound.*



2. Essential Program Growth

*The new space will be a scene shop, black box theater and green rooms that will double as teaching space. The lack of these facilities impairs the ability of performing arts faculty to fully provide instruction.*

3. Cost Effectiveness

*The project is expanded from the 2010 request, but is still substantially smaller than previous requests forwarded in the early part of the decade. Green rooms will double as classroom teaching labs. Most projects around the country include two performance spaces and a black box theater. By building a flexible, large performance space and using solid scheduling, the project will save space and costs. The increase in footprint this year will allow the college to demolish aging buildings that have a long list of deferred maintenance needs and structural issues.*

4. Project Need: Improved Program Effectiveness and Support of Critical Programs/Initiatives

*The College provides community theater as part of its mission. The current configuration prevents us from staging one show while performing another. Further, the classroom experience of the scene shop and makeup areas are not part of the current facility.*

5. Alternative Funding Sources

*N/A*

**Photographs and Maps:**

*Program documents can be accessed via the College's Website:*

[www.ceu.edu/community/artscenter.aspx](http://www.ceu.edu/community/artscenter.aspx).

**Utah State University  
Land Bank Requests  
As of July 10, 2009**

<b>ADJACENT TO LOGAN MAIN CAMPUS:</b>	<b>Approx Acres</b>	<b>Estimate d Value</b>
1. <u>Undeveloped, vacant land NE of Campus fronting 1400 N and 1200 E</u> This land could provide for growth or could possibly be exchanged for an existing property closer to campus. In the past, the owner has been reluctant to consider disposing of the land.	<b>20</b>	<b>\$1.2m</b>
2. <u>Undeveloped, vacant land adjoining Campus to the NE &amp; fronting 1200 E:</u> This land could provide for student housing expansion/upgrade opportunity. (The owner may prefer to sponsor or participate/partner in such development.)	<b>25</b>	<b>\$1.5m</b>
3. <u>Developed parcels NW of central campus on SW corner/light at 700 N and 800 E comprised mostly of rental units with various owners:</u> This land would provide very prominent and visible growth area for future expansion.	<b>5.5</b>	<b>\$11m</b>
4. <u>Developed parcels north of Campus along the NW corner of 700 N and 800 E that includes most of the Fraternity Row and the Newman Center:</u> The University currently owns and uses two former fraternity houses and one unused small, vacant lot in this area north of 800 North and further ownership on these blocks could provide area for effective campus expansion. (Note: satisfactory land and locations would need to be made available through some exchanges or purchases for most or all of these owners.)	<b>4.5</b>	<b>\$9.5m</b>

## FY 2011-2012

**The anticipated State Funded Capital Development projects planned for Utah State University over the next five years are listed below:**

**Project #1**     Jon M. Huntsman School of Business Addition/Renovation

This project supports the expansion of the Jon M. Huntsman School of Business and, of necessity, is in two phases. Phase I is the design and construction of a new addition located just south of the existing building. After construction is complete, the existing functions would relocate into the new addition and Phase II could begin. This is the renovation of the existing building. The phasing of this project is necessary due to the lack of space to relocate the existing Jon M. Huntsman School of Business functions during renovation.

Phase I of this project will consist of building a new structure on the site of the Lund Hall building. The department displaced by the new building will move to renovated space in the Animal Science Building. The new building will be approximately 100,000 GSF on three or four floors with a partial basement for utilities.

Phase II of this project is to renovate a building built in 1970 which has 6 stories on top of a three story base. There are problems with the design of the building that have some seismic weaknesses that need to be corrected, as well as worn out mechanical and electrical systems. The windows are single glazed and should be replaced with more energy efficient glass. Also the elevator lobby areas need to be screened to prevent smoke from entering the elevator chamber. The mechanical and electrical systems are past their useful life and need to be replaced. The electrical master panels have been replaced, but much of the remaining system needs to be updated and most branch circuits are at capacity. Much of the interior is the original décor and does not adequately reflect the caliber of teaching and research happening in the building.

Approximate Budget:                             \$60,000,000

**Project #2**     Fine Arts Complex Addition/Renovation

The Fine Arts Complex includes the Fine Arts Center (1967), the Fine Arts Visual (1980), and the Fine Arts Museum (1982). This project consists of a comprehensive renovation of the Fine Arts Center and the Fine Arts Visual buildings and does not include the Museum. Improvements to these buildings will improve life safety, functionality, maintenance, energy efficiency and aesthetics of the space in a significant way.

The renovation will include general improvements to both buildings, including asbestos abatement, the addition of a new sprinkler system, emergency lighting and generator, ADA upgrades for restrooms and elevators, and a new security system.

The Fine Arts Center includes two major venues, the Kent Concert Hall and the Morgan Theatre. The concert hall is a high-use classroom that seats over 2,000 people, and the Morgan seats over



would add approximately 80,000 square feet of new space for additional classrooms and labs for exercise physiology and cardiovascular research as well as gymnasias, ball courts, weight training and instructional space for rock climbing. In addition, a number of much-needed repairs and upgrades to the existing mechanical systems will be implemented. The swimming pools have rust stains around the edges of the pools indicating that the steel reinforcing in the concrete is corroding and there is public concern about the ability to maintain a sanitary environment for students and visitors.

Approximate Budget: \$45,000,000

**Project #5** Biology-Natural Resources Renovation/Addition

This project will renovate the existing Quinney Biology-Natural Resources building to address life safety concerns, replace heating ventilating and electrical systems, improve disability access and improve energy efficiency. The addition of study spaces and labs are necessary to accommodate growth within both colleges housed in the building. A study was done a few years ago to identify all the needs and the College of Natural Resources is attempting to raise part of the necessary funding from private sources.

Approximate Budget: \$45,000,000

**Project #6** Animal Science Renovation

The existing Animal Science building located on the north side of the Quad is listed on the national register of historic buildings. It occupies a major presence on the Quad and has served a variety of functions throughout its life. The building is constructed of un-reinforced masonry and has concrete floors and a timber roof. The roof is structurally deficient and is not connected to the walls other than by gravity. The building has no air conditioning and occupants struggle during the summer months to keep computers operating. The open stairway is a life safety concern and needs to be addressed because in the event of a fire it would act as a chimney.

Approximate Budget: \$12,000,000

**Project #7** Ray B. West Renovation

This project will renovate the historic Ray B. West Building on the south side of the Quad. This three story building is listed on the national historic register, and houses classrooms, computer labs, and faculty offices. The walls are constructed with un-reinforced masonry and the roof is timber. There is a central stairway that will act as a chimney in the event of a fire, although there are other exit stairways in the building. The heating system is old and needs to be replaced.

Approximate Budget: \$12,000,000

**Project #8**    Wind Turbine Generator

A feasibility study has been conducted to explore the possibility of developing a wind power project adjacent to USU's south electrical substation at the mouth of Logan Canyon. This area of the campus has long been considered as a possibility for a wind project because of the strong regular diurnal (cold air spilling from the mountains out the canyon from evening to mid morning) wind. This USU site is a good location for construction due to its close proximity to the USU substation, which will help the economics of project. The two year analysis of the site indicates that the average potential capacity is approximately 1.5 -2.0 megawatts of power.

More work is needed in negotiating power purchase agreements to determine the final economics of the project. The capacity factor for this project isn't high enough to justify a commercial project, but is still feasible. The wind power project offers a long-term protection from rising energy prices. The project has many other benefits for USU as well; such as marketing and recruitment, education, research, reducing carbon footprint, and meeting the American College and University Presidents Climate Commitment. This study is complete and the project is ready to move to the next step.

Approximate Budget:                                \$4,000,000

**Project #9**    Utility Tunnel Extension

This project will extend the existing tunnel system into the Quad to enable several buildings to connect to the Central Energy Plant. The benefit of this will be that the university will have a means of serving the Quad from a second direction and avoid the inconvenience and risk of a loss of heating and cooling at the wrong time of year. Last winter several buildings were without heat for an extended period of time and the university was at of property damage as a result of cold weather. This is part of the long range need that was identified by an infrastructure study completed in February 2000.

Approximate Budget:                                \$ 5,000,000

**Project #10**    Tooele Regional Campus Utilities

This project would install major utility infrastructure along the edge of the new parcel of land. The first project on this site is a county building of education. The intent would be that the major utility systems would be installed during the construction of this facility.

Approximate Budget:                                \$5,000,000

**The anticipated Non-State Funded Capital Development projects planned for Utah State University over the next five years are listed below:**

**Project #11 Brigham City Campus Addition / Student Center**

This project will include a partial renovation as well as an addition to the existing facility to develop a new student center for the Brigham City Regional Campus. The project will provide study spaces, gathering spaces, and food services for students. It will provide approximately 22,000 square feet of new space.

Approximate Budget: \$5,000,000

**Project #12 Regional Campuses and Distance Education Building**

Utah State University's Regional Campuses and Distance Education (RCDE), in partnership with other university and state affiliated units, propose to construct a building on the USU Logan campus. The building will be located at the site currently occupied by the Quonset Hut, across 1200 East from the NFS building. The Quonset Hut is in need of replacement, as it is in very poor condition and cannot fully meet the technical space requirements of the programs housed in the building. RCDE proposes to move quickly on the programming, design, and construction phases, with an anticipated completion date in 2012.

This building is anticipated to be roughly 25,000 - 30,000 square feet, 2-3 stories with/without a basement. The building will be funded by RCDE and Utah Public Radio (UPR).

Approximate Budget: \$10,000,000

**Project #13 Art Barn Renovation**

The existing Art Barn in the heart of campus has housed a number of activities over the years. The building has historical significance but is in need of some life safety upgrades. There is no fire suppression system, the heating system is inadequate, the stairways are a hazard because they are exterior and are not covered from the ice in winter, the uppermost floor has only one exit through a classroom, and the restrooms in the building are inadequate. The renovation will allow the building to remain a landmark on campus, but will provide safe accommodation for the teaching and research that takes place inside the building. It is hoped to secure private funds for the project.

Approximate Budget: \$2,500,000

**Project #14 Thermal Storage Tank**

In order to reduce the cost of energy and to provide redundancy for the central chilling plant, the

University intends to construct a 2 million gallon underground cold water storage tank in the HPER recreational field. Once completed, the central chilling plant would produce chilled water at night when energy usage is low to fill this tank. During the day, when energy usage is high, we would use the stored chilled water for the campus reducing the energy load during peak usage periods. The funding is primarily from chilled water capacity fees collected from capital development projects.

Approximate Budget:           \$3,000,000



**FY2011**  
**State Funded Capital Development Project Request and Five-Year Plan**

**Land Bank Request**

**Agency/Institution:**           **Salt Lake Community College**

**Project Name:**           **Acquire 60 Acres of Land in Herriman for a Campus**

**Agency/Institution Priority:**           **1**

<b>Preliminary Cost Estimate:</b>	<b>Donation</b>	<b>\$10,125,000</b>
	<b>State Funds</b>	<b>\$19,650,000</b>
	<b>Other Funds</b>	<b>\$500,000</b>

**Total Project Space (Gross Square Feet)**           **Not Applicable**

**Increase in State Funded O&M**           **None**

**New Program Costs:**           **Not Applicable**

**New FTEs Required for O&M:**           **Not Applicable**

**New FTEs Required for Programs:**           **Not Applicable**

**Other Sources of Funding:**           **\$10,625,000**

A landowner will donate 30 acres for the establishment of the Herriman Campus. The value of the gift is \$10,125,000 based upon a September 2009 appraisal done by VanDrimmelen Commercial Appraisers. Additionally, \$500,000 in County Corridor Preservation Funds are committed to improving and widening the roads surrounding the land, mitigating costs to the State.

**Previous State Funding:** **None**

**Project Description:** A Herriman landowner's proposed gift will lay the foundation for a future southwest valley campus of Salt Lake Community College. The College proposes the acquisition of a future campus site totaling 90 acres at approximately 12000 South and 5600 West. A local landowner has pledged to donate up to 30 acres and the State will be required to purchase 60 Acres. The total gift will be \$10,125,000. In addition, County Corridor Preservation Funding has been acquired for road improvements and widening at a value of \$500,000, thus mitigating costs to the State and college. The cost to the state for the acquisition will be \$19,650,000. The population in southwest Salt Lake County is projected to exceed 150,000 people within 20 years. That growth creates a demand for a campus of Salt Lake Community College in that area and the campus is projected to serve roughly 15,000 students at build-out.

## FY2011

### State Funded Capital Development Project Request and Five-Year Plan

Salt Lake Community College has also been very successful as the higher education leader, both in the State and nationally, in the highly visible energy and green jobs workforce, education and training area. In 2009, SLCC was designated by the Governor's Office of Economic Development, the Utah Department of Workforce Services and the Utah System of Higher Education as the Cluster Accelerator Partnership convener and leader for energy and green jobs education and workforce initiatives. In response to this designation, SLCC has successfully competed for approximately \$10 million in training grants during the past year to support education and training in such career fields as wind, solar installation, green construction and energy efficiency. SLCC is leading a 15-state regional solar train-the-trainer consortium funded by the U.S. Department of Energy and is Utah's post-secondary education provider for SmartGrid electrical technology and electric lineman training as the only institution in the country that won both competitive grants during the solicitation from the U.S. Department of Energy. As a result of this success, SLCC has created the National Institute for Advanced Energy Training and will be a National training provider in emerging energy technologies and green energy. SLCC needs a campus for the National Institute, and Herriman has been designated as SLCC's energy and green jobs training site.

Transportation to the site will be served by a light rail stop on campus and an adjacent Mountain View corridor access point.

This gift and purchase will allow the College to plan and build facilities and offer services to meet the needs of the large population base that will surround this site within 10 years and will be needing immediate education and training in energy technologies green jobs.

**Project Justification:** Due to the timeframes imposed by the donor, this opportunity may be lost, leaving it necessary for the College to purchase much more expensive land to expand to serve the needs of this area in the future. In addition, due to the success of obtaining energy and green jobs training grants, private investors who are partnering with the college to provide green jobs workforce training are looking to provide funding to the College if the land can be procured.

#### **Planning/Programming:**

Expanding into the valley's south end is a key element of the Strategic Plan of the College and an important part of the College's Long Term Physical Facilities Plan, which envisions a chain of campuses the length of the county.

#### **Site and Infrastructure:**

The site is nearly flat but slopes gently to the southeast. It is adjacent to the Mountain View Corridor, around 5400 West and 12000 South on the border with South Jordan. It is next to the new Herriman High School, which opens this fall, and sites of future elementary and middle schools. A proposed TRAX line and stop location also abut the property,

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**Scoring Analysis for Building Board Request Evaluation:**

1. Existing Building Deficiencies and Life Safety Concerns:

No building exists on the site

2. Essential Program Growth.

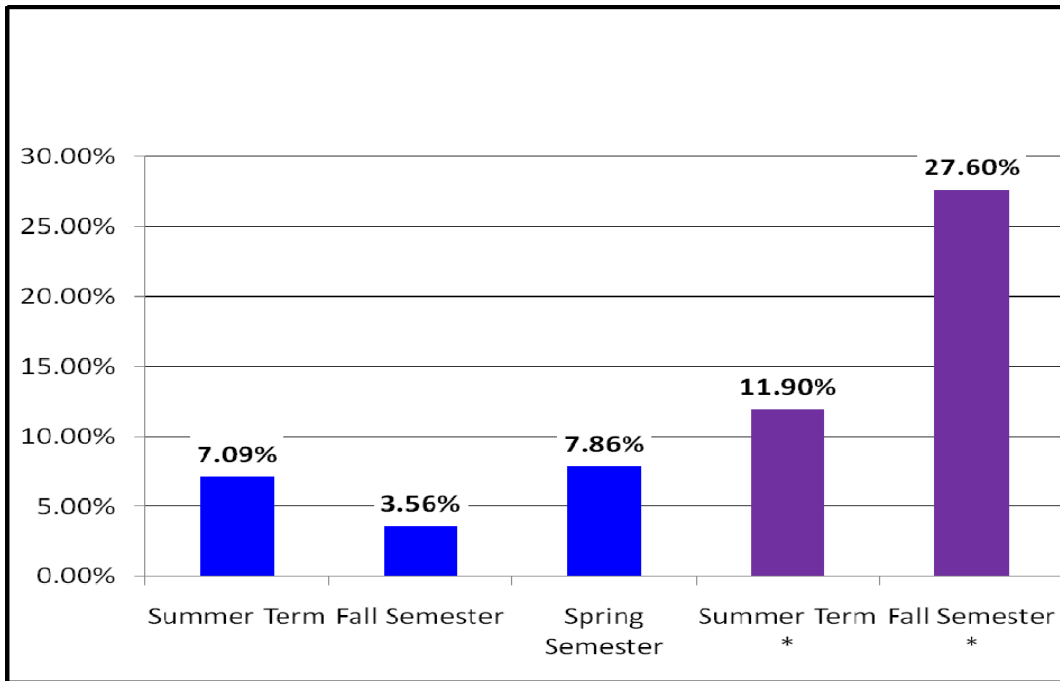
Salt Lake Community College growth has always surpassed most of the other higher education institutions in the state. The College plays a major role in the economic development of Salt Lake County and the State of Utah. It has played a significant role in providing learning opportunities to a higher percentage of ethnic minority students and also disadvantaged students than any other institution of higher education in the State of Utah. It is expected with the condition of the economy, growth in enrollment will surpass any predictions made to date. In addition, the State has continued opportunities for economic development and growth in the renewable and non-renewable energy fields, and this future campus could provide nationally recognized education and job training to help build and support Utah's energy and green jobs workforce.

Salt Lake County is projected to grow at an average annual rate of 1.5 percent over the next 20 years (2008-2028).

Utah System of Higher Education projections anticipate growth in fall full time equivalent students to be 2.7% per year for Salt Lake Community College. This year so far and projected enrollments for fall are much higher than this projection and will put heavy pressure on already heavily used facilities. This unprecedented growth as shown on the following graph is expected to continue.

**Percent FTE Increase over Prior Year Term by Term/Semester**

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**3. Cost Effectiveness.**

Since the College attracts a very diverse student population and since many of those students would not have much opportunity without the College programs, it is essential that the College have available adequate, safe, attractive space in which students can learn. It is important that those facilities be located convenient to those who will use them. With the anticipated future growth, it is prudent to obtain land today rather than to wait and pay significantly more later.

**4. Alternative Funding Sources:**

One third of the cost of this land acquisition is a private donation, road infrastructure funding has been obtained, and a capital investment campaign is under way to raise funds for a partial O & M endowment and a building.

**Photographs and Maps:**

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This proposed site plan shows the location of the property and how the campus might be designed.

