Utah State Building Board

MEETING

February 3, 2012

MINUTES

Utah State Building Board Members in Attendance:
N. George Daines, Chair
Jeff Nielson
David Fitzsimmons
Ned Carnahan
Gordon Snow
Chip Nelson
Sheila Gelman

DFCM and Guests in Attendance:
Gregg Buxton                        Division of Facilities Construction & Management
Cee Cee Niederhauser                Division of Facilities Construction & Management
Kurt Baxter                         Division of Facilities Construction & Management
Kim Hood                            Department of Administrative Services
Kimberlee Willette                  Governor’s Office of Planning and Budget
Alan Bachman                        Attorney General’s Office
Bob Askerlund                       Salt Lake Community College
Keith Davis                         Department of Human Services
Wayne Christensen                   Division of Facilities Construction & Management
Tom Shaw                            Division of Facilities Construction & Management
Lynn Hinrichs                      Division of Facilities Construction & Management
Alex DeSomer                       Ken Garner Engineering
Eric S. Lund                        University of Utah Health Care
Brent Wilson                       University of Utah Health Care
David Moyes                        University of Utah
Ken Nye                            University of Utah
Darrin Blaisdell                   University of Utah
Mike Perez                         University of Utah
Cory Higgins                       University of Utah
Gordon Wilson                      University of Utah
David Quinlivan                    University of Utah
Mark Liddle                        University of Utah
Sherry Ruesch                     Dixie State College
David Tanner                       Southern Utah University
On Friday, February 3, 2012, the Utah State Building Board held a regularly scheduled meeting in Room 4112 of the Utah State Office Building, Salt Lake City, Utah. Chair George Daines called the meeting to order at 9:00 am and noted that a quorum was present.

- **APPROVAL OF MINUTES OF DECEMBER 6, 2011**

Chair Daines sought a motion for approval of the minutes.

**MOTION:** Ned Carnahan moved to approve the meeting minutes of December 6, 2011. The motion was seconded by Jeff Nielson and passed unanimously.

- **UNIVERSITY OF UTAH REMODEL PROJECT APPROVAL – CARDIOVASCULAR CLINIC**

Mike Perez, Associate Vice-President of Facilities Management and Dr. Brent Wilson, Medical Director of the Cardiovascular Center at the University of Utah presented their proposal to renovate the Cardiovascular Clinic at the University Hospital. Dr. Wilson explained that the expansion would provide a new entrance from the main thoroughfare, making it easier for patients to locate the clinic. It would also provide an expanded waiting area, increased capacity for an examination room, procedure rooms and work space. The expansion would also help with work flow. The critical component of the expansion involves relocation of the vascular lab closer to the check-in area to enable easier access for elderly patients. A total of 11,200 sq. ft. will be renovated at a total cost of $3.6 million (see PowerPoint, Attachment #1). Funding will come from clinical revenues; therefore no State funds will be used for this project. Ned Carnahan asked questions concerning O&M and if the electrical service would be provided by the University. Mike Perez confirmed that this will be an auxiliary operation with fuel, power and custodial being paid by the University.

**MOTION:** Sheila Gelman moved to approve the University of Utah Remodel Project of the Cardiovascular Clinic. The motion was seconded by Chip Nelson and passed unanimously.

- **ITEMS 3, 4, AND 5 were addressed together: FIVE YEAR NOTICE OF REVIEW AND STATEMENT OF CONTINUATION FOR RULE R23-1, PROCUREMENT OF CONSTRUCTION; RULE R23-19, FACILITY USE RULES; RULE R23-20, FREE SPEECH ACTIVITIES**

Assistant Attorney General, Alan Bachman, said that the Division of Administrative Rules has procedures which require that all rules be reviewed every five years to determine if the Agency wants to have them continue or disappear. The three rules up for Review involve rules for Procurement of Construction, Facility Use Rules (which govern the use of our buildings), and Free Speech Activities. They simply need to file a notice with Administrative Rules that they want to keep these rules. David Fitzsimmons asked for an explanation concerning the review process. Mr. Bachman explained that when rules are created, they are filed with the Division of Administrative Rules. The rule is then published in a bulletin available to the public, with a thirty day comment period. If there are negative comments from the public, the rule comes back to the Board for further
discussion or changes. If not, then it is made an Administrative Rule. If there are Legislative changes during this session that affect one of these rules then DFCM will separately bring this to the Board as a rule amendment. There was discussion concerning the content of the rules, whether DFCM supported or opposed any of the rules, and the tracking system concerning notification of review. Gordon Snow asked if the rules were being read at least once every five years to make sure they are current with what is needed in society. DFCM Director, Gregg Buxton, responded that DFCM management reviews the Administrative Rules that apply to them as part of their weekly management meeting. Mr. Bachman requested a motion from the Board to allow DFCM to file a notice of continuance of Items 3, 4, and 5.

**MOTION:** David Fitzsimmons moved to approve the Five Year Notice of Review and Statement of Continuation for Rule R23-1, Procurement of Construction; Rule R23-19, Facility Use Rules; and Rule R23-20, Free Speech Activities. The motion was seconded by Ned Carnahan and passed unanimously.

**CAPITOL PRESERVATION BOARD (CPB): REALLOCATION OF CAPITAL IMPROVEMENT FUNDS**

Kurt Baxter explained that this reallocation involves the State Office Building Tunnel Improvements here on Capitol Hill which had almost $300,000 left over from the project. The excess funds for this project resulted from funding being approved in 2008; however the project did not start until 2009 when construction costs decreased significantly. The Capitol Preservation Board would like to reallocate $250,000 to the East Staircase Improvements in the State Office Building. Chip Nelson asked what would happen to the East Staircase Improvements if the excess funds were not reallocated. Mr. Baxter explained that this additional amount to the East Staircase project would allow them to waterproof the existing deck and replace pavers, which would increase the life of the stairs to fifteen years. The project could be completed without the reallocation, but the life of the staircase would be shortened to about seven years. There was considerable discussion concerning whether the funds should be returned to the Project Reserve Fund.

**MOTION:** Jeff Nielson moved to approve the Reallocation of Capital Improvement Funds for the Capitol Preservation Board. The motion was seconded by Sheila Gelman and passed unanimously.

**APPROVAL OF MASTER PLAN – UTAH DEVELOPMENT CENTER**

John Nichols, DFCM Real Estate Manager and Keith Davis, Director of Administrative Support for the Department of Human Services explained they are requesting approval from the Board to move forward with a comprehensive Master Plan for the Utah State Developmental Center located in American Fork. This plan will specifically include the 250 acres of vacant land owned by the state and dedicated by state law for the benefit of the disabled through the Account for People with Disabilities, commonly known as the DSPD Trust Fund, and will attempt to identify the portion of land not needed for future use by the USDC. The study will plan for the orderly transfer of the surplus property out of state hands and wise development of the land for the benefit of the DSPD Trust Fund as provided for by state law. It is the most regulated parcel of land in the state and since there is a lot of developer interest in the parcel, they felt it was wise to have a Master Plan so that they will know what will best benefit the state and the people. Gordon Snow asked if they had an
idea of the cost of a Master Plan. Mr. Nichols said they had one proposal that was approximately $98,000 which DFCM intends to negotiate. There was considerable discussion concerning the value of the property, the details of the Master Plan, the mission of the strategic planning committee, and the revenue stream that could possibly be created to help with funding for people with disabilities.

MOTION: David Fitzsimmons moved in favor of the Approval of Master Plan for the Utah Development Center. The motion was seconded by Chip Nelson and passed unanimously.

UNIVERSITY OF UTAH ADMINISTRATIVE REPORT

As previously requested by the Board, Mike Perez, Cory Higgins and Dave Quinlivan reported on the history of their Infrastructure project and solutions for the future (see PowerPoint Attachment #2). Chair Daines said that his intention would be to present the University’s presentation to the Infrastructure and General Government Appropriations Subcommittee at the conclusion of the Board meeting. Cory Higgins addressed issues concerning the electrical distribution system and history of failures; the HTW system and number and size of breaks in the system. Since the 1990’s, the University has spent an average of thirty percent of their Capital Improvement allocations trying to keep these two systems operational. These systems are obsolete and trying to repair and maintain is a disruption to systems and buildings. The $38 Million previously spent help to replace some of the systems but there is much left to be done. Their presentation indicated Capital Development funding would provide $50 million and a bond issuance of $49 million for the remaining amount. An annual increase in the Fuel and Power Account of approximately $6 million is being sought to service the debt and support preventive maintenance and Renewal and Replacement (R&R) activities. Under this plan the state contributes approximately $4.0 - $4.5 million and the University’s auxiliaries contribute $1.5 - $2.0 million. After the debt is retired, the University plans to use the margin resulting from Fuel and Power Account increase to continue refurbishment and replacement of the HV infrastructure as it ages, thus hoping to eliminate this type of problem in the future. Mike Perez added that there would be an overall design where the project would be done in portions that would allow for the campus to be operational while work was in progress. There was some discussion concerning revenue sources, a comprehensive maintenance program, and the plan for future growth of the system. Ralph Hardy, Assistant to the Commissioner for Facilities Planning for the Office of the Commissioner of Higher Education said that because of concerns that this same issue will happen in the future with other campuses, the Regents asked the Office of the Commissioner to engage in a major infrastructure study for the System of Higher Education. This study will look at the inventory of existing systems and potential funding to ensure that this problem does not happen in the future. There is a huge amount of data that needs to be collected and analyzed as well as alternative funding mechanisms. It should be available approximately one year from now.

In addition, concerns were expressed over power substations, the replacement of future power substations at all the universities, and the idea of allowing private business (Rocky Mountain Power) to provide service. Ben Berrett from Utah State University was asked to comment. He said that Utah State uses about forty percent of their Capital Improvement money not only for maintenance but for replacements also. It also requires an additional Capital Development project in order to keep up with need. He reported that USU has a sinking fund (for future repairs) for their chilled
water for air-conditioning systems only. In addition, Mr. Berrett reported on his experience with their main campus in Logan (which is on Logan City Power) and their innovation campus in North Logan (which is on Rocky Mountain Power) and problems with outages. He said that Utah State had a $7 Million project back in 1995 which allowed them to update the infrastructure on their campus. The quality of work performed by the University was superior including multiple duct banks encased in concrete and multiple feeds and switches to all of their buildings which Rocky Mountain Power would not do. They have two transformers at each of their substations so they can switch the load to either transformer. He feels the University maintains utilities better than Rocky Mountain Power and as a result they have had fewer outages and problems. He is very satisfied with utility service from Logan City but the cost is ten percent more. Mike Perez agreed with Mr. Berrett that Rocky Mountain Power is not “free enterprise” but is regulated. He reminded the Board of the numerous problems with brown-outs and major outages of power in the early 2000’s.

Gordon Snow expressed concern about Salt Lake Community College moving to their substation and if other campuses should be moving in that direction. Bob Askerlund, Vice-President for Facilities at Salt Lake Community College reported that the College plans to connect their substation to a major transmission line on 4700 South which has very high voltage and is more dependable. SLCC will avoid problems incurred with smaller substations by connecting to the major line because very rarely does that major line go out across the valley. They have redundant transformers within the substation so if they lose a transformer they can immediately switch. That is a big benefit for the College. Mr. Askerlund said there were challenges within their funding mechanisms but they do have a reserve. Sherry Ruesch commented that Dixie College buys their power from St. George City and have had very few problems with service.

There were comments concerning the feasibility of solar and geothermal energy for campus buildings. Cory Higgins said the University of Utah has been making more efficient buildings, however solar panels (unless you have a large grant) are not cost effective. Geothermal is inefficient for large buildings, but works for smaller buildings. Jeff Nielson said he was sure there was data out there that would help the Board become more informed concerning this issue. There was continued conversation concerning the sources of power. Due to the length of this discussion, it was decided the Board will hear the University’s report on Parking Lots vs. Parking Structures at their next meeting.

After their presentation, Ken Nye indicated that his report would include two months of data covering periods November 15 through January 13. During this time there were five design agreements and five other types of agreements. Mr. Nye noted that four of those agreements were for feasibility studies and/or schematic design to better define the scope and cost of capital improvement projects requested for FY 2013. Under Construction Contracts, there were five remodeling and one site. There was one correction to the report: Heritage Center Improvements should be listed as Item 7 in the cover letter and not Item 5. This contract was awarded to Mark Hamilton Construction on a sole source basis as this was a condition of the gift which funded the work. The Project Reserve Fund did not have any activity. The Contingency Reserve Fund had several decreases which were noted and included the Eyring Chemistry HVAC System Upgrade which was $66,817 for a variety of unknown conditions and included additional asbestos abatement, emergency power feeders, and relocation of existing fans and duct work. The Chiller Capacity Consolidation had a decrease of $54,000 for unknown conditions and design errors and omissions. There have been additional design errors discovered after this report and the University met with the engineer this week to
express their concern. The University will continue to work with them to determine the financial impact. The HTW Zone 2 had a $36,000 transfer for unanticipated conditions, part of which was for redesign of the route of the pipe which would create less of an impact on campus. The HPER Mall Tunnel & HTW had a $24,000 transfer for unforeseen items. The largest involved the payment of a Questar inspector to inspect the pipeline that was suspended while they built underneath it. This was not an anticipated cost. There was also an asbestos abatement which was not anticipated. The Park Building Elevator Replacement, which required unexpected Architectural work due to code issues, had a transfer of $15,000.

Chip Nelson reminded the Universities that they were going to expand and change the reports to include balances on each of the projects (a pro forma and an actual). Mr. Nye said that DFCM required this information be provided on a quarterly basis. Chair Daines said the Board members need additional information in order to truly understand the report.

MOTION: Chip Nelson moved to approve the University of Utah Administrative Report. The motion was seconded by Jeff Nielson and passed unanimously.

Chair Daines expressed appreciation to Ben Berrett for his input into the previous discussion concerning University Infrastructures. Mr. Berrett indicated that Utah State’s report consisted of two individual reports. The December 23 report indicated minimal activity. There were two professional contracts and five construction projects. Utah State currently has fifty-five delegated projects -- down from nearly one hundred when they had full Capital Improvement funding. The two professional contracts consisted of one survey and a special inspector. The five construction project were 1) Chilled Water – Edith Bowen/CPD which extends the chilled water system to two buildings currently on individual chillers, 2) Miscellaneous Critical Improvements with Todd Jensen Construction which involved some ADA access, sidewalk, driveway and irri-gation landscape improvements associated with a smaller building down off Old Main Hill, 3) New Signage in the Fine Arts Center, 4) Animal Science Refreshment which is a small first phase of minor repairs involving paint and carpet in the Animal Science Building, 5) Miscellaneous Contracts – A Medium Voltage Upgrade which involved hauling three transformers from campus for recycling. There were no changes to the Contingency Reserve Fund and one small change to the Project Reserve which was the chilled water connections to the two buildings at $3,700 over budget. The January Report indicated no professional contracts, two construction contracts and no activity on Contingency Reserve or Project Reserve. The construction projects consisted of a small lab remodel of the Vet Science Animal Cadaver Lab which was over $300,000 and mostly for mechanical equipment. The cosmetic work is being performed by an in-house crew, with electrical and mechanical is being bid out. This project is in preparation for USU’s Veterinarian Program. There were also some minor improvements concerning heating and cooling to the building. There were no changes to the Contingency Reserve Fund and the Project Reserve Fund.

MOTION: David Fitzsimmons moved to accept Utah State University’s Administrative Report. The motion was seconded by Jeff Nielson and passed unanimously.

ADMINISTRATIVE REPORT FOR DFCM

Kurt Baxter, Program Director for DFCM, reported there were thirty-two construction contracts awarded. A few of those projects were budget over runs which were covered by the Agencies or by
DFCM. They are seeing increased prices resulting in over runs on mechanical and electrical projects. This is due to inflation on copper and steel. On the Contingency Reserve Fund, increases are additional budgeted contingencies and decrease change orders/modifications. Decreases to the Contingency Reserve Fund include the University of Utah USTAR Neuroscience Research Center in the amount of $664,907 for change orders #45 to #52. These change orders consist of design errors with the Nano exhaust system. During this time period, the Contingency Reserve Fund has decreased from $11.5 Million to $10.5 Million. This was due to these change orders as well as draws from the University of Utah David Eccles School of Business Building for $58,659, UVU Science Building Addition for $67,296, Dixie State College Holland Centennial Commons for $52,522, USU Agriculture Building for $32,121 and remodels of DOT Wellsville Maintenance Station Replacement requiring a transfer of $90,192 and remodel of Central Utah Correctional Facility Acorn Facility Vacuum Toilet System for $49,731. Next month DFCM will present the Quarterly Report which will include the Accounting Department’s assessment of the Contingency Reserve Fund and Project Reserve Fund. Director Gregg Buxton reminded the Board that the Legislature took $12 Million from those funds last year but does not intend to do the same this year. Mr. Baxter added that the size of the Project Reserve and Contingency Reserve Fund are determined by the number and size of projects and the possible change orders that may occur. Chair Daines addressed the issue of changing the format of the monthly report so the Board could more easily interpret this information. Chair Daines asked Chip Nelson if he could work with DFCM to assist with the format needed. Mr. Nelson said he would work with Director Buxton, particularly on how the Contingency is reported and how it could be broken down to be more understandable to the Board. Chair Daines also said that he would work with University of Utah’s Mike Perez to put together a packet of information to send over to the Infrastructure and General Government Appropriations Subcommittee. Chip Nelson said that during the IGG Subcommittee meeting this morning he felt the subcommittee needed more information on the Infrastructure Project which would re-state the Building Board’s support for that project.

Gordon Snow commented on Senate Bill 204 from the last Legislative Session that required the Building Board to be more involved in certain things. He would like Director Buxton to report the emphasis of this Bill concerning Building Board activities. Chip Nelson also expressed concern about bonding and requested additional training on the role of the Building Board. Chair Daines suggested that the Board invite the two co-chairs of the IGG Subcommittee to give the Board some feedback on how they could better serve. In addition, Chair Daines asked that Director Buxton look into IPads for the Board. He said that he had served on several other boards which used IPads and felt they improved the quality of the meetings and enhanced the movement of information to board members. Director Buxton said that they would look at this option in the future. Chair Daines added that he would also like to use a program called Filamente Lite which is highly rated. Cee Cee Niederhauser noted that four members of the Board already owned IPads.

☐ ADJOURNMENT ...........................................................................................................................................

MOTION: Sheila Gelman moved to adjourn the meeting. The motion was seconded by Gordon Snow and passed unanimously.

The meeting ended at 11:20 am.
Request Description

• Expand Cardiovascular Center located on 1st floor
  – New entrance off main hallway
  – New & expanded waiting and front desk
  – From 17 to 24 exam rooms
  – From 5 to 9 procedure rooms
  – From 4 to 6 provider work areas
  – Relocate Vascular Lab from Building 521 to 525

• 11,200 square feet will be renovated

• Capital cost: $3.6 million (estimate)
Description

- Cardiovascular Center (CVC) on 1<sup>st</sup> floor is ambulatory hub for Cardiovascular Service Line

- CVC on 1<sup>st</sup> floor:

<table>
<thead>
<tr>
<th>CLINICS</th>
<th>PROCEDURES</th>
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<tbody>
<tr>
<td>- Cardiology</td>
<td>- Cardioversion</td>
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<tr>
<td>- CT Surgery</td>
<td>- Echocardiography</td>
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<tr>
<td>- Heart Transplant</td>
<td>- ECG</td>
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<tr>
<td>- Faint &amp; Fall</td>
<td>- Implantable Loop Recorders</td>
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<tr>
<td>- Interventional Radiology</td>
<td>- Tilt Table</td>
</tr>
<tr>
<td>- Vascular Surgery</td>
<td>- Vein</td>
</tr>
<tr>
<td>- Valve (multidisciplinary)</td>
<td>- Vascular ultrasound</td>
</tr>
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</table>
Justification

• Front door to a profitable service line
• Programs have outgrown current space
• Inadequate for current volumes & future growth
  – Recently added 3 cardiothoracic surgeons, 1 general cardiologist, 1 interventional cardiologist
  – Planning to add 2 interventional cardiologists, 1-2 EP, 1-2 general cardiologists, 1 heart failure cardiologist
• Patient dissatisfaction with clinic layout
• Inadequate front desk and reception area
  – Check in for Clinic Visits, Echo Lab, Vascular Lab & Other Procedures
• Provider & staff dissatisfaction with clinic layout
• Missing key components (consult rooms and dedicated phlebotomy area)
Rapid CVC Growth

CV Center Arrived Visits

- FY 2007 Actual: 11,552
- FY 2009 Actual: 13,076 (13.2% increase)
- FY 2011 Actual: 16,077 (23.0% increase)
- FY 2013 Projection: 18,403 (14.5% increase)
- FY 2015 Projection: 21,664 (18% increase)

Note: Arrived patient visits includes CVC and Faint and Fall visit volumes
CVSL Total Profitability

CVSL Contribution Margin & Margin % includes Transfer amounts from UUHC to SOM CV Divisions

FY2013 Space Committee
CV Clinic Patient Satisfaction
Most Recent Six Months

CV Clinic - % Very Good
Received dates: April 2011 - Sept 2011

Wait, Waiting area comfort

<table>
<thead>
<tr>
<th>Category</th>
<th>% Very Good</th>
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<tr>
<td>Overall</td>
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<tr>
<td>Access</td>
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<tr>
<td>Moving Through Your Visit</td>
<td>20.0%</td>
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<tr>
<td>Nurse/Assistant</td>
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<tr>
<td>Care Provider</td>
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<tr>
<td>Personal Issues</td>
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<tr>
<td>Recommend CP</td>
<td>80.0%</td>
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<tr>
<td>Recommend Practice</td>
<td>80.0%</td>
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CV Clinic Front Desk and Reception Area
Many CVC providers

**General Cardiology**
Chris McGann, MD
Brent Wilson, MD, PhD
Jack Morshedzadeh, MD
Rob Mitchell, MD
Jerry Walker, MD
Helen Hong, MD
Lillian Khor, MD
Fred Shean, MD
Bruce Bray, MD

**Cardiothoracic Surgery**
David Bull, MD
Craig Selzman, MD
Amit Patel, MD
Shamus Carr, MD
J. Gomez-Abraham, MD
Ganesh Kumpati, MD

**Cardiac Electrophysiology**
Mohamed Hamdan, MD
Nassir Marrouche, MD
Roger Freedman, MD
Nazem Akoum, MD
Ravi Ranjan, MD, PhD

**Interventional Cardiology**
Rodney Badger, MD
Anwar Tandar, MD
Imran Zubair, MD

**Interventional Radiology**

**Congenital Heart Dz**
Larry Green, MD
Kevin Whitehead, MD
Angela Yetman, MD

**Vascular Surgery**
Larry Kraiss, MD
Mark Sarfati, MD
Michelle Mueller, MD
Dan Kinikini, MD
Dan Ihnat, MD

**Heart Failure/Transplant**
Mike Gilbert, MD
Josef Stehlik, MD
Feras Bader, MD

**17 Midlevels**
Fellows, Residents, Medical Students

**Thrombosis Service**
Robert Pendleton, MD
Matthew Rondina, MD
Russell Vinik, MD
Nathan Wanner, MD

**Echocardiography**

**Vascular Ultrasound**

**Pacemaker Clinic**
Polly Chapman, RN
Stacey Lloyd, MS
Melissa Randall, LPN
Financial Summary

Pro Forma 1, includes clinic visits & procedures, echo lab, vascular lab

• Total Cost= $3.63 million
• Net Present Value (Cost of Capital)= $801K
• Internal Rate of Return= 15%
• Payback Years= 4.3

Pro Forma 2, includes Cath Lab & EP Lab, CT Surgery and Vascular Surgery downstream cases

• Total Cost= $3.63 million
• Net Present Value (Cost of Capital)= $10.7M
• Internal Rate of Return= 95%
• Payback Years= 0.86

Note: Both pro forma estimates include margin associated with clinic visits such as labs, Rx, etc.
Key Points/Summary

• Front door to a profitable service line
• Programs have outgrown current space
• Inadequate for current volumes and future growth
• Patient dissatisfaction with clinic layout
• Inadequate front desk and reception area
• Makes sense financially
  – Clinic services alone – NPV $801K, payback 4 years
  – CVSL impact – NPV $10.7M, payback 0.86 years

FY2013 Space Committee
Questions?
Utility Distribution
Infrastructure Replacement

University of Utah
Facilities Management
February 2012
Electrical Power Infrastructure Condition
How did we get here?

- Mid 1950's Major Electrical Infrastructure Built
  Nominal 35 yr. useful life

- Since 1991
  University has spent
  $16.4 Million in Capital Improvement Funds

- Around 2006
  Equipment continues to age.
  Failures increase and lengthen in duration

- 2008 to 2012
  • $9 M spent to replace damaged equipment
  • $85 M Needed to finish the job
Power Distribution Interruptions

Annual Electrical Distribution Failure History

- **Actual Hours**
- **Customer Hours**
- **Outages**

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<th>Year</th>
<th>Actual Hours</th>
<th>Customer Hours</th>
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<td>149</td>
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<td>2011</td>
<td>10</td>
<td>42,255</td>
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High Temperature Infrastructure Condition
How did we get here?

Early 1960’s Major HTW Infrastructure Built
Nominal 20 yr. useful life

Since 1991
The University has spent $22 M in Capital Improvement Funds

Around 2007
HTW Pipe failures increase and lengthen in duration

2007 to 2012
$22 M Spent to replace HTW Lines
$14 M needed to finish the job

Since 1991, 30% of Capital Improvement Funds have been spent on infrastructure
HTW Distribution Interruptions
Historical Spending on High Voltage Electrical/HTW Infrastructure

- FY 1991 thru FY 2012
  - $38.3 Million Dedicated to HTW and Electrical Distribution Repairs and Replacements
  - Amounts to 30% of total Capital Improvement Funds

Total & High Voltage/HTW Capital Improvement Funding
47 Switches (26 weeks)
38 Transformers (12 weeks)
2 Substation Switchgear (44 weeks)
High Temp/Pressure Water
## Infrastructure Project Financial Plan

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<th>FY 13</th>
<th>FY 14</th>
<th>FY 15</th>
<th>FY 16</th>
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<tr>
<td>Capital Development</td>
<td>$ 50 Million</td>
<td>$ 0</td>
<td>$0</td>
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<td>Revenue Bond</td>
<td>$ 0</td>
<td>$ 49 Million</td>
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<td>Fuel and Power Account</td>
<td>$ 0</td>
<td>$ 4.5 Million State</td>
<td>$ 1.5 Million University</td>
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<th>FY 14</th>
<th>FY 15</th>
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<tr>
<td>Project Commit</td>
<td>$ 38 Million</td>
<td>$ 34 Million</td>
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<tr>
<td>Bond Payment R &amp; R, O&amp;M</td>
<td>$ 0</td>
<td>$ 6 Million</td>
<td>$ 6 Million</td>
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<th>FY 14</th>
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<tr>
<td></td>
<td>$ 25 Million</td>
<td>$ 28 Million</td>
<td>$ 30 Million</td>
<td>$ 21 Million</td>
</tr>
</tbody>
</table>
Project Execution

- **FY 2013 $38 Million Commit**
  - Project Design $5 M
  - University Substation Design and Construct $11 M
  - Conversion to 12 kV Distribution Voltage $11 M
  - High Failure Risk Replacements $5 M
  - HTW Line Replacement $6 M
Project Execution

- **FY 2014 $34 Million Commit**
  - Project Design $1.5 Million
  - Supervisory Control System and Security $1.5 M
  - Power Distribution Equipment Replacement $18 M
  - High Failure Risk Replacements $5 M
  - HTW Line Replacement $8 M
Project Execution

FY 2015  $27 Million

- Cable Installation and Termination $13 M
- Medical Substation Preparation for 138 kV $4 M
- Red Butte Substation Preparation for 138 kV $4 M
- Campus Building Change Over $3 M
- Testing and Commissioning $3 M
Fuel and Power Account Changes

Increase by $6 M per year to cover - $4.5 M from State, $1.5 M from University

- Debt Service – Primary use for first 15 years $  4.5 M per year
- R&R – small annual contribution first 15 years $ 500 K per year
  
  • After 15 years R&R used for planned overhauls and replacements based on maintenance and repair history
- Annual Preventive and Predictive Maintenance $ 1 M