

DESCRIPTION OF INTERIM CAPITAL PROJECT FOR CONSIDERATION

October 5, 2017

MEDICAL UNIVERSITY OF SOUTH CAROLINA

PROJECT NAME: Clinical Sciences Building Cooling Towers Replacement

REQUESTED ACTION: Establish Construction Budget (Phase II)

REQUESTED ACTION AMOUNT: \$1,823,000

PREVIOUS CHE ACTIONS: June 1, 2017 (Phase I)

<u>Project Budget</u>	<u>Previous</u>	<u>Change</u>	<u>Revised</u>
Professional Service Fees	\$27,000	\$73,000	\$100,000
Renovations – Utilities	\$0	\$1,550,000	\$1,550,000
Labor Costs	\$0	\$50,000	\$50,000
Contingency	\$0	\$150,000	\$150,000
<i>Total</i>	<i>\$27,000</i>	<i>\$1,823,000</i>	<i>\$1,850,000</i>

<u>Source of Funds</u>	<u>Previous</u>	<u>Change</u>	<u>Revised</u>
Institutional Deferred Maintenance*	\$27,000	\$1,823,000	\$1,850,000
<i>Total</i>	<i>\$27,000</i>	<i>\$1,823,000</i>	<i>\$1,850,000</i>

*ENTIRE BALANCE COMMITTED TO FUND FACILITIES AND DEFERRED MAINTENANCE, BUDGET ALLOCATED IN FY17 AND FY18

DESCRIPTION:

MUSC requests to proceed with Phase II for replacement of three (3) cooling towers at the Clinical Sciences Building. This project directly addresses backlogged deferred maintenance. The towers support a 273,899 sq. ft. building constructed in 1975. The cooling towers were most recently replaced prior to 2003, and have reached the end of their useful lives. The existing structural steel support is original to the building and is compromised; temporary wood supports have been installed as a safety measure. Replacing the steel support and the cooling towers simultaneously provides the most economical solution. The building will not be off-line during construction. The replacement of the towers will be performed in multiple phases during the winter months when the cooling load is at a minimum.

The proposed budget has not increased since presented for Phase I. All of the funds have been committed and are available for the project. Schematic design comments have been received from the Office of State Engineer, with no issues noted.

E&G MAINTENANCE NEEDS:

Cooling system average was a 2.625 on 2014 assessment

ADDITIONAL ANNUAL OPERATING COSTS/SAVINGS:

No change in current expenses as this building is already built into the University’s maintenance plan.

FOR DEPARTMENT USE ONLY	
CHE	_____
JBRC	_____
SFAA	_____
JBRC Staff	_____
ADMIN Staff	_____
A-1 Form Mailed	_____
SPIRS Date	_____
Summary	_____

(For Department Use Only)
SUMMARY NUMBER
FORM NUMBER

PERMANENT IMPROVEMENT PROJECT REQUEST

1. AGENCY Code H51 Name Medical University of South Carolina
 Contact Person Philip S. Mauney Phone 843-792-2490

2. PROJECT Project # 9837 Name Clinical Sciences Building Cooling Towers Replacement
 Facility # 600 Facility Name Clinical Sciences Building

County Code	10 - Charleston
New/Revised Budget	\$1,850,000.00

Project Type	4 - Replace Existing Facilities/Systems
Facility Type	2 - Program/Academic

3. CPIP PROJECT APPROVAL FOR CURRENT FISCAL YEAR
 CPIP priority number _____ of _____ for FY _____.

4. PROJECT ACTION PROPOSED (Indicate all requested actions by checking the appropriate boxes.)

Establish Project	<input type="checkbox"/>	Decrease Budget	<input type="checkbox"/>	Close Project	<input type="checkbox"/>
Establish Project - CPIP	<input type="checkbox"/>	Change Source of Funds	<input type="checkbox"/>	Change Project Name	<input type="checkbox"/>
Increase Budget	<input checked="" type="checkbox"/>	Revise Scope	<input type="checkbox"/>	Cancel Project	<input type="checkbox"/>

5. PROJECT DESCRIPTION AND JUSTIFICATION
 (Explain and justify the project or revision, including what it is, why it is needed, and any alternatives considered.
 Attach supporting documentation/maps to fully convey the need for the request.)

This project will replace three (3) cooling towers at the Clinical Sciences Building. These cooling towers are at the end of their useful life and in need of replacement. The existing structural steel support system is severely deteriorated and must be replaced. Temporary wood supports have been installed under the towers as a safety measure until the towers can be replaced. Replacement of the steel would require removal of the cooling towers. Replacement of the towers at the same time as replacement of the steel provides the most economical solution. This request is for approval to proceed with phase 2 full design and construction.

6. OPERATING COSTS IMPLICATIONS
 Attach Form A-49 if any additional operating costs or savings will result from this request. This includes costs to be absorbed with current funding.

7. ESTIMATED PROJECT SCHEDULE AND EXPENDITURES
 Estimated Start Date: June 2017 Estimated Completion Date: June 2019
 Estimated Expenditures: Thru Current FY: \$350,000.00 After Current FY: \$1,500,000.00

8. ESTIMATES OF NEW/REVISED PROJECT COSTS

PROJECT #	9837
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- 1. _____ Land Purchase ---->
 - 2. _____ Building Purchase ---->
 - 3. 100,000.00 Professional Services Fees
 - 4. _____ Equipment and/or Materials ---->
 - 5. _____ Site Development
 - 6. _____ New Construction ---->
 - 7. _____ Renovations - Building Interior ---->
 - 8. 1,550,000.00 Renovations - Utilities
 - 9. _____ Roofing - _____ Roof Age
 - 10. _____ Renovations - Building Exterior
 - 11. _____ Other Permanent Improvements
 - 12. _____ Landscaping
 - 13. _____ Builders Risk Insurance
 - 14. _____ Other Capital Outlay
 - 15. 50,000.00 Labor Costs
 - 16. _____ Bond Issue Costs
 - 17. _____ Other: _____
 - 18. 150,000.00 Contingency
- \$1,850,000.00 TOTAL PROJECT BUDGET

Land: _____ Acres
 Floor Space: _____ Gross Square Feet
 Information Technology _____
 Floor Space: _____ Gross Square Feet
 Floor Space: _____ Gross Square Feet

ENVIRONMENTAL HAZARDS	
Identify all types of significant environmental hazards (including asbestos, PCB's, etc.,) present in the project and the financial impact they will have on the project. Type: _____	
Cost Breakdown	
Design Services	\$ _____
Monitoring	\$ _____
Abate/Remed	\$ _____
Total Costs	\$ _____ 0.00

9. PROPOSED SOURCE OF FUNDING

Source	Previously Approved Amount	Increase/Decrease	Original/Revised Budget	Transfer to/from Proj. #	Rev Object Code	Treasurer's ID Number	Rev Sub Fund	Exp Sub Fund
(0) CIB, Group			0.00 0.00		8115		3043	3043
(1) Dept. CIB, Group			0.00 0.00		8115		3143	3143
(2) Institution Bonds			0.00 0.00					3235
(3) Revenue Bonds			0.00 0.00					3393
(4) Excess Debt Service			0.00 0.00					3497
(5) Capital Reserve Fund			0.00 0.00		8895		3603	3603
(6) Appropriated State			0.00 0.00		8895	68800100	1001	3600
(7) Federal			0.00 0.00			78800100		5787
(8) Athletic			0.00 0.00			88800100		3807
(9) Other (Specify) Institutional DM	27,000.00	1,823,000.00	1,850,000.00 0.00 0.00		2802	98800100	3035	3907
TOTAL BUDGET	\$27,000.00	\$1,823,000.00	\$1,850,000.00	#1 on FY18 Capital Budget				

10. SUBMITTED BY:


 Signature of Authorized Official and Title

August 28, 2017

Date

11. APPROVED BY:

(For Department Use Only) Authorized Signature and Title

Date

**ADDITIONAL ANNUAL OPERATING COSTS / SAVINGS
RESULTING FROM PERMANENT IMPROVEMENT PROJECT**

1. AGENCY Code H51 Name Medical University of South Carolina
2. PROJECT Project # 9837 Name Clinical Sciences Building Cooling Towers Replacement

3. ADDITIONAL ANNUAL OPERATING COSTS / SAVINGS. (Check whether reporting costs or savings.)

COSTS SAVINGS NO CHANGE

4.

TOTAL ADDITIONAL OPERATING COSTS / SAVINGS				
Projected Financing Sources				
(1)	(2)	(3)	(4)	(5)
Fiscal Year	General Funds	Federal	Other	Total
1)	\$	\$	\$	\$ 0.00
2)	\$	\$	\$	\$ 0.00
3)	\$	\$	\$	\$ 0.00

5. If "Other" sources are reported in Column 4 above, itemize and specify what the other sources are (revenues, fees, etc.).

6. Will the additional costs be absorbed into your existing budget? YES NO
If no, how will additional funds be provided?

7. Itemize below the cost factors that contribute to the total costs or savings reported above in Column 5 for the first fiscal year.

	<u>COST FACTORS</u>	<u>AMOUNT</u>
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
	TOTAL	\$0.00

8. If personal services costs or savings are reported in 7 above, please indicate the number of additional positions required or positions saved. _____

9. Submitted By:  8/28/2017
Signature of Authorized Official and Title Date

**PERMANENT IMPROVEMENT PROJECT INFORMATION FORMAT
FOR PHASE II CONSTRUCTION BUDGET**

9837 – CSB Cooling Towers Replacement

1. What is the total projected cost of the project and what is it based on? Please attach a summary of the costs prepared during the A&E pre-design phase to support the total cost.

\$1,850,000

2. What is/are the source(s) of funds for the construction? If any private or federal funds are included, please attach a letter guaranteeing the availability of the funds.

Investment Fund - Deferred Maintenance

3. What is your agency/institution's definition of each fund source to be used for construction? (If any type of fee makes up a portion of the source, what is the fee called, what is the fee amount, and when it was put in place. If there is a statutory authority authorizing the use of the funds for capital projects, please cite the code section.)

Investment Fund - Deferred Maintenance. The University adopted RCM (Responsibility Centered Management) in fiscal year 2013 as the budget model. This budgeting model allocates all state appropriations and tuition/fees to the colleges and allocates all grant indirect cost recoveries to the grantee's college or unit. MUSC does not charge a separate plant improvement fee to the students. Under RCM, a Strategic Investment Fund has been created based on a percentage tax on certain college revenue streams. Approximately \$4 million of the Strategic Investment Fund retained by central administration is used to fund facilities and deferred maintenance. The source of funding varies each year and is dependent on what each college has identified as available funding.

4. What is the current uncommitted balance of funds for each source listed in 3 above?

All funds in the account were committed to deferred maintenance projects during FY17 and FY18 capital budget process.

5. If institution or revenue bonds are included as a source, when were the bonds issued? If not issued yet, when is the bond resolution expected to be brought for B&C Board approval?

Not Applicable

6. If a student fee is used to fund debt service, what is the current amount of the fee annually or by semester? Please specify which.

Not Applicable

7. Will the use of any funds for construction require an increase in any student fee or tuition? If so, please explain in detail.

NO

8. Will the project be LEED certified for energy savings and conservation and if so, at what level will it be certified? For projects requiring or using LEED certification, please attach the required cost-benefit analysis and a checklist of items to be used to achieve LEED points or a description of the energy measures to achieve LEED.

NO

9. What energy savings/conservation measures will be implemented within the project if the project will not be LEED certified? For projects that do not require/use LEED, please provide a paragraph on energy savings measures to be implemented as part of the project. If there are no energy savings measures included, please state that and explain why.

Energy efficient motors and controls will be incorporated into the design.

10. What is the projected date (month and year) for execution of the construction contract?

May 2018

11. What is the projected date (month and year) for completion of construction?

April 2019

12. What program(s) are to be included in the constructed or renovated space?

Not Applicable – Roof top Equipment Replacement

13. What is the total square footage of the building to be renovated or constructed?

273,899

14. If a portion of the building is to be renovated, what is the square footage of the portion that will be included in the renovation?

Not Applicable – Roof top Equipment Replacement

15. What is the current age of the building or building systems to be renovated?
20 years old
16. If any new space is being added to the facility, please provide demand/usage data to support the need.
No new space being added
17. What are the estimated numbers of students, faculty, staff and/or clients that are expected to use the space affected by the project or the entire building? (Answer for as many as are applicable.)
Not applicable, equipment replacement
18. If the construction cost increased significantly from the internal estimate (30% or more), what factors caused the cost to increase?
Not Applicable
19. If the contingency is more than 10%, please explain why.
Not Applicable
20. If funds are being transferred from another project, what is the current status of the project from which funds are being transferred?
Not Applicable
21. Has the project been included in a previous year's CPIP? If so, what was the last year the project was included and for which year, 1-5?
At the time of the last CPIP submittal it was originally anticipated that this replacement cost was under \$1,000,000. Therefore it was not included.
22. What are the economic impacts of the project, including job creation and retention? If there are none, please explain.
This project will create/retain approximately 10 construction jobs during implementation. Since the cooling towers are critical to the operation of the HVAC system, the major economic impact is continued operation of a major facility.
23. How will your agency/institution address and fund maintenance of this facility construction/renovation?
Since this is a replacement of existing equipment in an existing facility, the maintenance support structure is already in place
24. If your agency/institution has a deferred maintenance account, what is the name of the account and what is its current uncommitted balance?
Yes, the name of the account is "Investment Fund-Deferred Maintenance." All funds in the account were committed to deferred maintenance projects during the FY17 and FY18 capital budget process.
25. If how maintenance will be addressed and funded for this facility construction/renovation has not been determined yet, what steps are in place to begin to address how your agency/institution will fund maintenance to this and other agency/institution facilities?
Not Applicable

CONSTRUCTION COST ESTIMATE								
PROJECT MUSC CSB Cooling Tower Replacement								
LOCATION Medical University of South Carolina				DATE PREPARED 8/7/2017				
ARCHITECT/ENGINEER RMF Engineering, Inc.				PROJECT NO. 315345.D0				
DRAWING NO.				ESTIMATOR RMF				
CHECKED BY								
BASIS FOR ESTIMATE								
<input checked="" type="checkbox"/> PRELIMINARY DESIGN <input type="checkbox"/> 35% SUBMITTAL <input type="checkbox"/> 50% SUBMITTAL <input type="checkbox"/> 95% SUBMITTAL <input type="checkbox"/> FINAL SUBMITTAL <input type="checkbox"/> OTHER								
LINE #	SUMMARY	QUANTITY		MATERIAL		LABOR		TOTAL COST
		NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Sub-total							\$ 1,133,000
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17	Sub-total							\$1,133,000
18								
19								
20	Sub-total							\$1,133,000
21								
22								
23	Sub-total							\$1,133,000
24	Material % Labor %							
25	Overhead 10% 10%							\$113,300
26	Sub-total							\$1,246,300
27	Material % Labor %							
28	Profit 7% 7%							\$87,241
29	Sub-total							\$1,333,541
30								
31	General Conditions 15%							\$200,031
32	Sub-total							\$1,533,572
33								
34	Design Contingencies 10%							\$153,357
35	Sub-total							\$1,686,929
36								
37	Escalation 3%							\$50,607.88
38	Sub-total							\$1,737,537
39								
40	Bond 2%							\$34,750.74
41								
TOTAL								\$1,772,288



CONSTRUCTION COST ESTIMATE

PROJECT MUSC CSB Cooling Tower Replacement		
LOCATION Medical University of South Carolina	DATE PREPARED 8/7/2017	
ARCHITECT/ENGINEER RMF Engineering, Inc.	PROJECT NO. 315345.D0	
DRAWING NO.	ESTIMATOR RMF	CHECKED BY
BASIS FOR ESTIMATE		
<input checked="" type="checkbox"/> PRELIMINARY DESIGN	<input type="checkbox"/> 35% SUBMITTAL	<input type="checkbox"/> 50% SUBMITTAL
<input type="checkbox"/> 95% SUBMITTAL	<input type="checkbox"/> FINAL SUBMITTAL	<input type="checkbox"/> OTHER

LINE #	CIVIL SUMMARY	QUANTITY		MATERIAL		LABOR		TOTAL COST
		NO. UNITS	UNIT MEAS.	PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Demolition - CT 1-3, piping, structure							40,000
2	Structural framing - CT -1,2,3,4							350,000
3	Cooling Towers - CT 1,2,3, 1260 GPM			325,000.00		40,000.00		401,500
4	HVAC piping							90,000
5	ATC							82,500
6	Electrical							50,000
7	Crane Lifts							70,000
8	Roofing							44,000
9	TAB							5,000
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
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28								
29								
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31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
41								
Sub-total								\$ 1,133,000

Mauney, Philip S.

From: Stewart, James H
Sent: Wednesday, August 09, 2017 8:05 AM
To: Mauney, Philip S.
Subject: FW: MUSC CSB Cooling Tower Replacement: SFAA Approved Items

Does this work?

From: Craig Buck [mailto:craig.buck@rmf.com]
Sent: Tuesday, August 08, 2017 5:41 PM
To: Stewart, James H
Subject: RE: MUSC CSB Cooling Tower Replacement: SFAA Approved Items

CAUTION: External

Jimmy –

Left you a message – not sure if this is what Phil needs. His first email indicated to assume November 1st as the release date to the A/E, but I changed the schedule to reflect the requested 10/23/2017. I also expanded it a little from the schedule my first email to allow more time for submittals and lead times before the on-site work starts...

Design Notice to Proceed: 10/23/2017
Design Development: 1/15/2018
Construction/Bid Documents: 3/15/2018
Bid Opening: 4/15/2018
Execution of Construction Contract: 5/15/2018
Date of Commencement: 7/15/2018
Construction: 7/15/2018 - 4/15/2019
 - Submittals and steel/equipment orders 7/15/2018 - 12/1/2018
 - On-site activities 12/1/2018 - 4/15/2019

Craig Buck, PE, LEED AP

From: Stewart, James H [mailto:stewarjh@musc.edu]
Sent: Tuesday, August 8, 2017 1:29 PM
To: Craig Buck
Subject: FW: MUSC CSB Cooling Tower Replacement: SFAA Approved Items

This message was sent securely by MUSC