

AGENDA ITEM BRIEFING

Submitted by: Michael K. Young, President
Texas A&M University

Subject: Approval of the Project Scope and Budget, Appropriation for Construction Services, and Approval for Construction for the HVAC Replacement Lechner Hall Project, Texas A&M University, College Station, Texas (Project No. 2019-07175)

Background and Prior Actions:

The HVAC Replacement Lechner Hall Project was included as an approved project on the FY 2020 – FY 2024 A&M System Capital Plan approved by the Board at the August 2019 meeting.

Proposed Board Action:

- (1) Approve the project scope and budget.
- (2) Appropriate \$6,323,190 for construction services and related project costs. \$702,576 has been previously appropriated to this project.
- (3) Approve construction of the HVAC Replacement Lechner Hall Project at Texas A&M University (Texas A&M).

Funding/Budget Amount:

<u>Funding Source</u>	<u>Budget Amount</u>	<u>Average Estimated Annual Debt Service</u>	<u>Debt Service Source</u>
Revenue Financing System Debt Proceeds	<u>\$7,025,766</u>	\$478,569	Housing Revenue
Total Project Funds	<u>\$7,025,766</u>		

Project Justification:

Originally constructed in 1989, Lechner Hall is a four-story concrete structure consisting of 112 modular rooms, (majority being dorm rooms), shared bathrooms, study rooms and common area/space. Total net assignable square footage is 41,533.

Each room is conditioned by an individual Fan Coil Unit (FCU) served by a four-pipe Chilled Hot Water/Hot Water (CHW/HW) piping distribution system. Each room has a pneumatic thermostat and fan speed control switch (Hi/Med/Lo). Corridors are conditioned by floor-mounted FCUs. Each stairwell has a wall-mounted FCU located on the 2nd and 3rd floor landings. Outside Air (OA) is introduced into the building by two first-floor Air Handler Units (AHU) located at opposite

Agenda Item No. 3.7
Agenda Item Briefing

ends of the building, delivering air to the rooms by way of the corridor plenum through a small 4” hole.

The HVAC system has reached the end of its useful life and is in need of replacement. Maintenance issues continue to increase resulting from the aged HVAC system, heating water piping and valves located within the crawl space/pipe chases.

Scope:

The project will replace all FCUs with new four-pipe FCUs with HW coils in the re-heat position. Each room will have a digital thermostat and humidistat to implement a humidity control strategy at the room level. A fan controller will be provided in each room to allow for student control of the FCU. Corridor floor-mounted FCUs will be replaced. First-floor AHUs will be removed. Conditioned OA will be provided via new Roof Top Unit (RTU) with integral Energy Recovery Unit (ERU). Existing bathroom exhaust fans will be removed. New exhaust ductwork will be manifold on the roof and routed to the ERU to capture energy currently being exhausted. New OA and exhaust duct risers will be installed to introduce conditioned fresh air into each room. New FCUs will be provided to serve the stairwells. The existing Chilled Water Pump (CWP) and Hot Water Pump (HWP) will be replaced with Variable Frequency Driven (VFD) pumps. All thermal lines within the crawlspace and within the building will be replaced and insulated.

A new Direct Digital Control (DDC) system will be provided and tied into the campus-wide control system for better energy management and control by Utilities and Energy Services (UES). The Water, Air, Gas, Electric, Steam (WAGES) system will also be modified and upgraded to accommodate the replacement systems.

The Domestic Hot Water (DHW) main piping located in the crawlspace and valves located in the pipe chases will be replaced and re-insulated.

General construction shall consist of the removal and replacement of existing ceilings in hallways and bathrooms to facilitate mechanical work. In lieu of cleaning and reinstalling existing light fixtures, this project will install new, more energy efficient LED light fixtures.

Construction on this project is scheduled to start in September 2020 with substantial completion scheduled for July 2021. The total project budget is \$7,025,766.

Other Major Fiscal Impacts:

None.

Strategic Plan Imperative(s) this Item Advances:

Approval of this agenda item will advance The Texas A&M University System Strategic Imperative 3, by providing students a more comfortable living and study space. Improving the quality of campus life will improve the educational experience for all residents.

Agenda Item No. 3.7

TEXAS A&M UNIVERSITY

Office of the President

July 9, 2020

Members, Board of Regents
The Texas A&M University System

Subject: Approval of the Project Scope and Budget, Appropriation for Construction Services, and Approval for Construction for the HVAC Replacement Lechner Hall Project, Texas A&M University, College Station, Texas (Project No. 2019-07175)

I recommend adoption of the following minute order:

“The project scope along with a project budget of \$7,025,766 for the HVAC Replacement Lechner Hall Project is approved.

The amount of \$6,323,190 is appropriated from Account No. 01-083540 Revenue Financing System Debt Proceeds (Housing Revenue) for construction services and related project costs.

The HVAC Replacement Lechner Hall Project, Texas A&M University, College Station, Texas, is approved for construction.

The Board of Regents of The Texas A&M University System (Board) reasonably expects to incur debt in one or more obligations for this project, and all or a portion of the proceeds received from the sale of such obligations is reasonably expected to be used to reimburse the account(s) for amounts previously appropriated and/or expended from such account(s).

As required by Section 5(a) of the Master Resolution of the Revenue Financing System, the Board hereby determines that it will have sufficient funds to meet the financial obligations of The Texas A&M University System, including sufficient Pledged Revenues to satisfy the Annual Debt Service Requirements of the Revenue Financing System and to meet all financial obligations of the Board relating to the Revenue Financing System and that

the Participants, on whose behalf the debt is issued, possess the financial capacity to satisfy their Direct Obligations.”

Respectfully submitted,

[ORIGINAL SIGNED BY]

Michael K. Young
President

Approval Recommended:

[ORIGINAL SIGNED BY]

John Sharp
Chancellor

Approved for Legal Sufficiency:

[ORIGINAL SIGNED BY]

Ray Bonilla
General Counsel

[ORIGINAL SIGNED BY]

Billy Hamilton
Deputy Chancellor and
Chief Financial Officer

[ORIGINAL SIGNED BY]

Phillip Ray
Vice Chancellor for Business Affairs

HVAC REPLACEMENT LECHNER HALL	PROJECT BUDGET
TEXAS A&M UNIVERSITY	
PROJECT NO. 2019-07175	

1. Amount Available for Construction Contract.....	\$5,735,000
2. Architectural/Engineering Fees.....	\$372,775
3. Campus Services.....	\$19,282
4. Other Services.....	\$121,000
5. Contingency.....	\$573,200
6. SSC Fees.....	<u>\$204,509</u>
7. TOTAL ESTIMATED COST OF PROJECT.....	<u>\$7,025,766</u>

1. Best Value Letter Approved for A/E February 19, 2019
2. Initial BOR Approval to Include in Capital Plan..... August 23, 2019
3. Execute A/E AgreementOctober 14, 2019
4. A/E Design Kick-Off.....October 21, 2019
5. Complete Schematic Design December 19, 2019
6. Complete Design Development March 11, 2020
7. Complete Construction Documents April 29, 2020
8. BOR Approval for Construction August 20, 2020
9. Issue Construction Notice to Proceed September 2020
10. Full Demolition & Construction Commences May 2021
11. Substantial Completion July 21, 2021
12. Owner Occupancy August 1, 2021

TEXAS A&M UNIVERSITY SYSTEM
REVENUE FINANCING SYSTEM
HVAC Replacement Lechner
Housing Revenue

Dates	Outstanding Principal	Principal Amount	Interest Amount	Annual Total	Coverage 1.15x
BONDS	7,095,000.00				
YEAR 1	6,935,000.00	160,000.00	319,275.00	479,275.00	551,166.25
YEAR 2	6,770,000.00	165,000.00	312,075.00	477,075.00	548,636.25
YEAR 3	6,595,000.00	175,000.00	304,650.00	479,650.00	551,597.50
YEAR 4	6,415,000.00	180,000.00	296,775.00	476,775.00	548,291.25
YEAR 5	6,225,000.00	190,000.00	288,675.00	478,675.00	550,476.25
YEAR 6	6,025,000.00	200,000.00	280,125.00	480,125.00	552,143.75
YEAR 7	5,815,000.00	210,000.00	271,125.00	481,125.00	553,293.75
YEAR 8	5,600,000.00	215,000.00	261,675.00	476,675.00	548,176.25
YEAR 9	5,375,000.00	225,000.00	252,000.00	477,000.00	548,550.00
YEAR 10	5,140,000.00	235,000.00	241,875.00	476,875.00	548,406.25
YEAR 11	4,895,000.00	245,000.00	231,300.00	476,300.00	547,745.00
YEAR 12	4,635,000.00	260,000.00	220,275.00	480,275.00	552,316.25
YEAR 13	4,365,000.00	270,000.00	208,575.00	478,575.00	550,361.25
YEAR 14	4,085,000.00	280,000.00	196,425.00	476,425.00	547,888.75
YEAR 15	3,790,000.00	295,000.00	183,825.00	478,825.00	550,648.75
YEAR 16	3,480,000.00	310,000.00	170,550.00	480,550.00	552,632.50
YEAR 17	3,160,000.00	320,000.00	156,600.00	476,600.00	548,090.00
YEAR 18	2,825,000.00	335,000.00	142,200.00	477,200.00	548,780.00
YEAR 19	2,475,000.00	350,000.00	127,125.00	477,125.00	548,693.75
YEAR 20	2,105,000.00	370,000.00	111,375.00	481,375.00	553,581.25
YEAR 21	1,720,000.00	385,000.00	94,725.00	479,725.00	551,683.75
YEAR 22	1,320,000.00	400,000.00	77,400.00	477,400.00	549,010.00
YEAR 23	900,000.00	420,000.00	59,400.00	479,400.00	551,310.00
YEAR 24	460,000.00	440,000.00	40,500.00	480,500.00	552,575.00
YEAR 25	-	460,000.00	20,700.00	480,700.00	552,805.00
		<u>\$ 7,095,000.00</u>	<u>\$ 4,869,225.00</u>	<u>\$ 11,964,225.00</u>	<u>\$ 13,758,858.75</u>

Estimated Issuance Costs of \$69,234.00 are included in this schedule.
Long-term rates are assumed to be 4.50%. Rates are subject to market change.
Prepared by the Office of the Treasurer - Treasury Services 06/19/2020

Rates are subject to market change. Amounts are preliminary estimates that will be revised at the time bonds are issued.



HVAC Replacement Lechner Hall

Texas A&M University

Project No. 2019-07175

AGENDA ITEM BRIEFING

Submitted by: Michael K. Young, President
Texas A&M University

Subject: Approval of the Project Scope and Budget, Appropriation for Construction Services, and Approval for Construction for the HVAC Replacement Wells Hall Project, Texas A&M University, College Station, Texas (Project No. 2019-07176)

Background and Prior Actions:

The HVAC Replacement Wells Hall Project was included as an approved project on the FY 2020 – FY 2024 A&M System Capital Plan approved by the Board at the August 2019 meeting.

Proposed Board Action:

- (1) Approve the project scope and budget.
- (2) Appropriate \$7,195,434 for construction services and related project costs. \$799,492 has been previously appropriated to this project.
- (3) Approve construction of the HVAC Replacement Wells Hall Project at Texas A&M University (Texas A&M).

Funding/Budget Amount:

<u>Funding Source</u>	<u>Budget Amount</u>	<u>Average Estimated Annual Debt Service</u>	<u>Debt Service Source</u>
Revenue Financing System Debt Proceeds	<u>\$7,994,926</u>	\$544,625	Housing Revenue
Total Project Funds	<u>\$7,994,926</u>		

Project Justification:

Originally constructed in 1989, Wells Hall is a four-story concrete structure consisting of 128 modular rooms, (majority being dorm rooms), shared bathrooms, study rooms and common area/space. Total net assignable square footage is 47,081.

Each room is conditioned by an individual Fan Coil Unit (FCU) served by a four-pipe Chilled Hot Water/Hot Water (CHW/HW) piping distribution system. Each room has a pneumatic thermostat and fan speed control switch (Hi/Med/Lo). Corridors are conditioned by floor-mounted FCUs. Each stairwell has a wall-mounted FCU located on the 2nd and 3rd floor landings. Outside Air (OA) is introduced into the building by two first-floor Air Handler Units (AHU) located at opposite

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Agenda Item Briefing

ends of the building, delivering air to the rooms by way of the corridor plenum through a small 4” hole.

The HVAC system has reached the end of its useful life and is in need of replacement. Maintenance issues continue to increase resulting from the aged HVAC system, heating water piping and valves located within the crawl space/pipe chases.

Scope:

The project will replace all FCUs with new four-pipe FCUs with HW coils in the re-heat position. Each room will have a digital thermostat and humidistat to implement a humidity control strategy at the room level. A fan controller will be provided in each room to allow for student control of the FCU. Corridor floor-mounted FCUs will be replaced. First-floor AHUs will be removed. Conditioned OA will be provided via new Roof Top Unit (RTU) with integral Energy Recovery Unit (ERU). Existing bathroom exhaust fans will be removed. New exhaust ductwork will be manifold on the roof and routed to the ERU to capture energy currently being exhausted. New OA and exhaust duct risers will be installed to introduce conditioned fresh air into each room. New FCUs will be provided to serve the stairwells. The existing Chilled Water Pump (CWP) and Hot Water Pump (HWP) will be replaced with Variable Frequency Driven (VFD) pumps. All thermal lines within the crawlspace and within the building will be replaced and insulated.

A new Direct Digital Control (DDC) system will be provided and tied into the campus-wide control system for better energy management and control by Utilities and Energy Services (UES). The Water, Air, Gas, Electric, Steam (WAGES) system will also be modified and upgraded to accommodate the replacement systems.

The Domestic Hot Water (DHW) main piping located in the crawlspace and valves located in the pipe chases will be replaced and re-insulated.

General construction shall consist of the removal and replacement of existing ceilings in hallways and bathrooms to facilitate mechanical work. In lieu of cleaning and reinstalling existing light fixtures, this project will install new, more energy efficient LED light fixtures.

Construction on this project is scheduled to start in September 2020 with substantial completion scheduled for July 2021. The total project budget is \$7,994,926.

Other Major Fiscal Impacts:

None.

Strategic Plan Imperative(s) this Item Advances:

Approval of this agenda item will advance The Texas A&M University System Strategic Imperative 3, by providing students a more comfortable living and study space. Improving the quality of campus life will improve the educational experience for all residents.

TEXAS A&M UNIVERSITY

Office of the President

July 9, 2020

Members, Board of Regents
The Texas A&M University System

Subject: Approval of the Project Scope and Budget, Appropriation for Construction Services, and Approval for Construction for the HVAC Replacement Wells Hall Project, Texas A&M University, College Station, Texas (Project No. 2019-07176)

I recommend adoption of the following minute order:

“The project scope along with a project budget of \$7,994,926 for the HVAC Replacement Wells Hall Project is approved.

The amount of \$7,195,434 is appropriated from Account No. 01-083540 Revenue Financing System Debt Proceeds (Housing Revenue) for construction services and related project costs.

The HVAC Replacement Wells Hall Project, Texas A&M University, College Station, Texas, is approved for construction.

The Board of Regents of The Texas A&M University System (Board) reasonably expects to incur debt in one or more obligations for this project, and all or a portion of the proceeds received from the sale of such obligations is reasonably expected to be used to reimburse the account(s) for amounts previously appropriated and/or expended from such account(s).

As required by Section 5(a) of the Master Resolution of the Revenue Financing System, the Board hereby determines that it will have sufficient funds to meet the financial obligations of The Texas A&M University System, including sufficient Pledged Revenues to satisfy the Annual Debt Service Requirements of the Revenue Financing System and to meet all financial obligations of the Board relating to the Revenue Financing System and that

the Participants, on whose behalf the debt is issued, possess the financial capacity to satisfy their Direct Obligations.”

Respectfully submitted,

[ORIGINAL SIGNED BY]

Michael K. Young
President

Approval Recommended:

[ORIGINAL SIGNED BY]

John Sharp
Chancellor

Approved for Legal Sufficiency:

[ORIGINAL SIGNED BY]

Ray Bonilla
General Counsel

[ORIGINAL SIGNED BY]

Billy Hamilton
Deputy Chancellor and
Chief Financial Officer

[ORIGINAL SIGNED BY]

Phillip Ray
Vice Chancellor for Business Affairs

HVAC REPLACEMENT WELLS HALL TEXAS A&M UNIVERSITY PROJECT NO. 2019-07176	PROJECT BUDGET
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1. Amount Available for Construction Contract.....	\$6,546,000
2. Architectural/Engineering Fees.....	\$425,490
3. Campus Services.....	\$18,474
4. Other Services.....	\$117,500
5. Contingency.....	\$654,600
6. SSC Fees.....	<u>\$232,862</u>
7. TOTAL ESTIMATED COST OF PROJECT.....	<u>\$7,994,926</u>

1. Best Value Letter Approved for A/E February 19, 2019
2. Initial BOR Approval to Include in Capital Plan..... August 23, 2019
3. Execute A/E AgreementOctober 14, 2019
4. A/E Design Kick-Off.....October 21, 2019
5. Complete Schematic Design December 19, 2019
6. Complete Design Development March 11, 2020
7. Complete Construction Documents April 29, 2020
8. BOR Approval for Construction August 20, 2020
9. Issue Construction Notice to Proceed September 2020
10. Full Demolition & Construction Commences May 2021
11. Substantial Completion July 31, 2021
12. Owner Occupancy August 1, 2021

TEXAS A&M UNIVERSITY SYSTEM
REVENUE FINANCING SYSTEM
HVAC Replacement Wells Hall
Housing Revenue

Dates	Outstanding Principal	Principal Amount	Interest Amount	Annual Total	Coverage 1.15x
BONDS	8,075,000.00				
YEAR 1	7,895,000.00	180,000.00	363,375.00	543,375.00	624,881.25
YEAR 2	7,705,000.00	190,000.00	355,275.00	545,275.00	627,066.25
YEAR 3	7,505,000.00	200,000.00	346,725.00	546,725.00	628,733.75
YEAR 4	7,300,000.00	205,000.00	337,725.00	542,725.00	624,133.75
YEAR 5	7,085,000.00	215,000.00	328,500.00	543,500.00	625,025.00
YEAR 6	6,860,000.00	225,000.00	318,825.00	543,825.00	625,398.75
YEAR 7	6,625,000.00	235,000.00	308,700.00	543,700.00	625,255.00
YEAR 8	6,380,000.00	245,000.00	298,125.00	543,125.00	624,593.75
YEAR 9	6,120,000.00	260,000.00	287,100.00	547,100.00	629,165.00
YEAR 10	5,850,000.00	270,000.00	275,400.00	545,400.00	627,210.00
YEAR 11	5,570,000.00	280,000.00	263,250.00	543,250.00	624,737.50
YEAR 12	5,275,000.00	295,000.00	250,650.00	545,650.00	627,497.50
YEAR 13	4,965,000.00	310,000.00	237,375.00	547,375.00	629,481.25
YEAR 14	4,645,000.00	320,000.00	223,425.00	543,425.00	624,938.75
YEAR 15	4,310,000.00	335,000.00	209,025.00	544,025.00	625,628.75
YEAR 16	3,960,000.00	350,000.00	193,950.00	543,950.00	625,542.50
YEAR 17	3,595,000.00	365,000.00	178,200.00	543,200.00	624,680.00
YEAR 18	3,210,000.00	385,000.00	161,775.00	546,775.00	628,791.25
YEAR 19	2,810,000.00	400,000.00	144,450.00	544,450.00	626,117.50
YEAR 20	2,390,000.00	420,000.00	126,450.00	546,450.00	628,417.50
YEAR 21	1,955,000.00	435,000.00	107,550.00	542,550.00	623,932.50
YEAR 22	1,500,000.00	455,000.00	87,975.00	542,975.00	624,421.25
YEAR 23	1,020,000.00	480,000.00	67,500.00	547,500.00	629,625.00
YEAR 24	520,000.00	500,000.00	45,900.00	545,900.00	627,785.00
YEAR 25	-	520,000.00	23,400.00	543,400.00	624,910.00
		<u>\$ 8,075,000.00</u>	<u>\$ 5,540,625.00</u>	<u>\$ 13,615,625.00</u>	<u>\$ 15,657,968.75</u>

Estimated Issuance Costs of \$80,074.00 are included in this schedule.
Long-term rates are assumed to be 4.50%. Rates are subject to market change.
Prepared by the Office of the Treasurer - Treasury Services 06/19/2020

Rates are subject to market change. Amounts are preliminary estimates that will be revised at the time bonds are issued.



HVAC Replacement Wells Hall

Texas A&M University

Project No. 2019-07176