

AGENDA ITEM BRIEFING

Submitted by: Billy Hamilton, Deputy Chancellor and Chief Financial Officer
The Texas A&M University System

Subject: Approval of the Project Scope and Budget, Appropriation for Construction Services, and Approval for Construction for the Innovative Technologies Development Complex Project, Texas A&M Engineering Experiment Station, Bryan, Texas (Project No. 28-3298)

Background and Prior Actions:

The Innovative Technologies Development Complex Project was approved by the Board to be added to the FY 2019 – FY 2023 A&M System Capital Plan at the April 2019 meeting.

Proposed Board Action:

- (1) Approve the project scope and budget.
- (2) Appropriate \$72,000,000 for construction services and related project costs. \$8,000,000 has been previously appropriated.
- (3) Approve construction of the Innovative Technologies Development Complex Project for the Texas A&M Engineering Experiment Station (TEES).

Funding/Budget Amount:

<u>Funding Source</u>	<u>Budget Amount</u>	<u>Average Estimated Annual Debt Service</u>	<u>Debt Service Source</u>
Permanent University Fund Debt Proceeds	<u>\$80,000,000</u>	\$6,210,953	Available University Fund
Total Project Funds	<u>\$80,000,000</u>		

Project Justification:

For 100 years, TEES has served the citizens of Texas through engineering and technology-oriented research and educational collaborations. TEES research has made significant impact on the health, safety and quality of life of Texas citizens and has contributed to the state's economic growth and development.

In support of its mission, TEES engineering and technology research programs continue to evolve and expand. To support this growth, TEES proposes to construct a new Innovative Technologies Development Complex (ITDC) on the RELLIS campus.

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The RELIS campus, a 2,000-acre collaborative ecosystem built to foster advanced research, technology development, testing and evaluation, and workforce training, will be home to the ITDC and will include research facilities, a fully instrumented Innovation Proving Ground (IPG) and required housing through a public-private partnership.

The first proposed facility will provide for modern offices and research labs that support interdisciplinary engineering research teams in a collaborative research environment. In addition, the facility will also provide a TEES Range Control and Operations Center.

The Texas A&M University System (A&M System) will develop an Innovative Technology research and development program with iterative design, prototype development, and testing and evaluation that allows for fundamental research to be linked with user engagement to produce cutting-edge networks, vehicles, and communication systems.

This unique complex will support the development of a state-of-the-art innovation hub for technology acceleration and provide platforms for agile technology evaluation cycles in collaboration with other ITDC components. Furthermore, a Technology Innovation and Modernization Catalyst (TIMC) will accelerate commercialization of these technologies by providing opportunities for the business community to invest in new technology development as it moves toward procurement. The ITDC will lead periodic Innovation and Integration Evaluation Events (I2E2) to accelerate technology maturation and implementation. These events will encourage technology development sprints by developers and provide valuable rapid feedback on system integration performance.

Research, development, experimentation, and testing and evaluation platforms will enable the convergence of novel technologies and support acceleration of technologies through user engagement. These platforms will include: i) hypersonics and directed energy, ii) next generation vehicles, iii) communication network systems, and iv) precision navigation and timing.

Scope:

This project will construct a state-of-the-art 79,500 square-foot building on the northwest area of RELIS campus. The building will be an anchor to the much broader footprint, which collectively will converge and accelerate specific modernization priorities of TEES clients. This facility will be a multifaceted-use facility and will include the following supporting functions:

- Offices, conference, and collaboration spaces for university, industry, and other subject matter experts to assess defined needs and create novel concepts.
- Applied research and development laboratories for designing technologically superior elements required to meet established concepts for each need.
- Prototyping and integration spaces for transitioning concepts into a high-performing capability by extensive prototyping.
- Innovation collaboration locations for testing and evaluating advanced-concept prototypes and technology demonstrations.
- Secure meeting spaces, sensitive equipment and data storage for reviewing field experimentation and refining the prototypes and/or new concepts.

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The ITDC building will be the outlet for connectivity with the four application platforms and will include specialized laboratories enabling the optimal functionality of these platforms. For example, the facility will contain a laser diagnostics lab, a telemetry and sensors instrumentation lab for autonomous vehicles, a control center for tactical networks, a GPS-denied navigation lab, a cybersecurity lab, an augmented and virtual reality lab, and a secure data storage and curation center.

In addition to the ITDC building, this project includes construction of a \$30,000,000 infrastructure and roadway extension along RELLIS Parkway. Also included are new utilities crossing the test beds/runways.

Construction on this project is scheduled to start in November 2019, with substantial completion of the building and critical infrastructure scheduled for June 2021, and substantial completion of RELLIS Parkway and landscaping scheduled for August 2021. The total project budget is \$80,000,000.

Other Major Fiscal Impacts:

None.

THE TEXAS A&M UNIVERSITY SYSTEM
FACILITIES PLANNING AND CONSTRUCTION
Office of the Deputy Chancellor and Chief Financial Officer
June 19, 2019

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 Innovative Technologies Development Complex Project, Texas A&M Engineering Experiment Station, Bryan, Texas (Project No. 28-3298)

I recommend adoption of the following minute order:

“The project scope along with a project budget of \$80,000,000 for the Innovative Technologies Development Complex Project is approved.

The amount of \$72,000,000 is appropriated from Account No. 01-085640, Permanent University Fund Debt Proceeds (AUF), for construction services and related project costs.

The Innovative Technologies Development Complex Project, Texas A&M Engineering Experiment Station, Bryan, 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).”

Respectfully submitted,

[ORIGINAL SIGNED BY]

Billy Hamilton
Deputy Chancellor and
Chief Financial Officer

Approval Recommended:

[ORIGINAL SIGNED BY]
John Sharp
Chancellor

[ORIGINAL SIGNED BY]
M. Katherine Banks, Ph.D., P.E., Director
Texas A&M Engineering Experiment Station

[ORIGINAL SIGNED BY]
Kelly Templin, Director
The Texas A&M University System RELIS Campus

Approved for Legal Sufficiency:

[ORIGINAL SIGNED BY]
Ray Bonilla
General Counsel

INNOVATIVE TECHNOLOGIES DEVELOPMENT COMPLEX TEXAS A&M ENGINEERING EXPERIMENT STATION PROJECT NO. 28-3298	PROJECT BUDGET
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1.	Amount Available for Construction Contract	\$62,215,000
	a. ITDC Facility	\$37,425,000
	b. Infrastructure.....	\$24,790,000
2.	A/E Services	\$ 4,395,700
3.	DB Pre-Construction Services	\$ 251,000
4.	Program of Requirements.....	\$ 32,000
5.	Physical Plant/Facility Services	\$ 220,000
6.	Data	\$ 640,000
7.	Telecommunications	\$ 525,000
8.	Construction Audit	\$ 20,000
9.	Security System.....	\$ 320,000
10.	Hazardous Materials.....	\$ 5,000
11.	Testing and Air Balancing.....	\$ 200,000
12.	Construction Materials Testing	\$ 120,000
13.	Envelope Testing	\$ 70,000
14.	Electrical Testing.....	\$ 5,000
15.	A/V Equipment.....	\$ 560,000
16.	Artwork	\$ 154,000
17.	Moveable Equipment	\$ 20,000
18.	Moveable Furnishings	\$ 2,000,000
19.	Owner Supplied Insurance	\$ 1,274,000
20.	FP&C Project Management and Inspection Fees.....	\$ 2,120,000
21.	Owner's Contingency	\$ 4,013,300
22.	Miscellaneous	\$ 840,000
23.	TOTAL ESTIMATED COST OF PROJECT	<u>\$80,000,000</u>

INNOVATIVE TECHNOLOGIES DEVELOPMENT COMPLEX TEXAS A&M ENGINEERING EXPERIMENT STATION PROJECT NO. 28-3298	PROJECT SCHEDULE
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1. Issue A/E Best Value Letter..... February 26, 2019
2. Best Value Letter Submitted to BOR..... March 5, 2019
3. Receive A/E Best Value Authorization March 18, 2019
4. BOR Approval to add project to Capital Plan April 11, 2019
5. Issue Construction Manager at Risk (CMAR) RFP..... April 25, 2019
6. Execute A/E Agreement April 30, 2019
7. A/E Design Kickoff April 30, 2019
8. Receive CMAR RFP Responses May 9, 2019
9. Shortlist CMAR Firms May 16, 2019
10. CMAR Rank Order Approved by Chancellor June 14, 2019
11. Complete Schematic Design June 14, 2019
12. Execute CMAR Agreement July 16, 2019
13. Complete Design Development July 26, 2019
14. BOR Approval for Construction August 8, 2019
15. Complete First Package Construction Docs August 16, 2019
16. Submit THECB Application August 29, 2019
17. Receive Guaranteed Maximum Price (GMP) September 20, 2019
18. Begin Construction October 15, 2019
19. Complete Final Construction Documents November 15, 2019
20. Substantial Completion of Building & Critical Infrastructure..... June 2021
21. Substantial Completion of RELLIS Parkway & Landscaping August 2021
22. Owner Occupancy August 2021

**TEXAS A&M ENGINEERING EXPERIMENT STATION
PERMANENT UNIVERSITY FUND
28-3298 Innovative Technologies Development Complex
Available University Fund**

Dates	Outstanding Principal	Principal Amount	Interest Amount	Annual Total
BONDS	80,790,000.00			
YEAR 1	78,215,000.00	2,575,000.00	3,635,550.00	6,210,550.00
YEAR 2	75,525,000.00	2,690,000.00	3,519,675.00	6,209,675.00
YEAR 3	72,715,000.00	2,810,000.00	3,398,625.00	6,208,625.00
YEAR 4	69,775,000.00	2,940,000.00	3,272,175.00	6,212,175.00
YEAR 5	66,705,000.00	3,070,000.00	3,139,875.00	6,209,875.00
YEAR 6	63,495,000.00	3,210,000.00	3,001,725.00	6,211,725.00
YEAR 7	60,140,000.00	3,355,000.00	2,857,275.00	6,212,275.00
YEAR 8	56,635,000.00	3,505,000.00	2,706,300.00	6,211,300.00
YEAR 9	52,975,000.00	3,660,000.00	2,548,575.00	6,208,575.00
YEAR 10	49,150,000.00	3,825,000.00	2,383,875.00	6,208,875.00
YEAR 11	45,150,000.00	4,000,000.00	2,211,750.00	6,211,750.00
YEAR 12	40,970,000.00	4,180,000.00	2,031,750.00	6,211,750.00
YEAR 13	36,605,000.00	4,365,000.00	1,843,650.00	6,208,650.00
YEAR 14	32,040,000.00	4,565,000.00	1,647,225.00	6,212,225.00
YEAR 15	27,270,000.00	4,770,000.00	1,441,800.00	6,211,800.00
YEAR 16	22,285,000.00	4,985,000.00	1,227,150.00	6,212,150.00
YEAR 17	17,075,000.00	5,210,000.00	1,002,825.00	6,212,825.00
YEAR 18	11,630,000.00	5,445,000.00	768,375.00	6,213,375.00
YEAR 19	5,945,000.00	5,685,000.00	523,350.00	6,208,350.00
YEAR 20	-	5,945,000.00	267,525.00	6,212,525.00
		<u>\$ 80,790,000.00</u>	<u>\$ 43,429,050.00</u>	<u>\$ 124,219,050.00</u>

Estimated Issuance Costs of \$790,000 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 05/31/2019

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

Innovative Technologies Development Complex Project No. 28-3298

Texas A&M Engineering Experiment Station

