

Agenda Item No. 3.2

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 Pre-Construction and Construction Services, and Approval for Pre-Construction and Construction for the TEES Detonation Research Test Facility Project, Texas A&M Engineering Experiment Station, Bryan, Texas (Project No. 28-3341)

Background and Prior Actions:

The TEES Detonation Research Test Facility Project was included for FY 2022 on the FY 2021 – FY 2025 Texas A&M University System Capital Plan approved by the Board of Regents at the August 2020 meeting. The project was moved to FY 2021 by letter. Project scope and current \$5,000,000 project budget were approved by the Board of Regents at the August 2020 meeting.

Proposed Board Action:

- (1) Approve the project scope and budget.
- (2) Appropriate \$5,000,000 for pre-construction services, construction services, and related project costs.
- (3) Approve pre-construction and construction of the TEES Detonation Research Test Facility Project for Texas A&M Engineering Experiment Station (TEES) at The Texas A&M University System (A&M System) RELLIS Campus.

Funding/Budget Amount:

<u>Funding Source</u>	<u>Budget Amount</u>	<u>Average Estimated Annual Debt Service</u>	<u>Debt Service Source</u>
Cash – Governor’s University Research Initiative (GURI)	\$2,500,000	N/A	N/A
Cash – Chancellor’s Research Initiative (CRI) Award [AUF]	<u>\$2,500,000</u>	N/A	N/A
Total Project Funds	<u>\$5,000,000</u>	N/A	N/A

Project Justification:

Dr. Elaine Oran, Professor of Aerospace Engineering and holder of the O'Donnell Foundation Chair VI, will establish and lead detonation research at Texas A&M University. Dr. Oran was recruited as part of the Governor's University Research Initiative (GURI), an effort to bring nationally recognized researchers to Texas institutions of higher education. The proposed TEES Detonation Research Test Facility Project will support the numerous research thrusts overseen by Dr. Oran.

Scope:

The proposed TEES Detonation Research Test Facility Project will be the world's largest research facility of its kind on a university campus. The centerpiece of the project is a 2-meter diameter by 200-meter long (660-foot) steel detonation tube installed on concrete supports. The tube is filled with explosive gas and test firings conducted to facilitate explosion research.

The experimental data obtained will answer critical scientific questions in reactive-flow gas dynamics by addressing unanswered questions related to fuels and wave propagation in high-speed energetic systems. These data will benefit the aerospace industry, address detonation safety problems, and support fire research generally, but more specifically, it will benefit the oil and chemical industries in Texas.

Other Major Fiscal Impacts:

None.

Strategic Plan Imperative(s) this Item Advances:

Approval of this agenda item will advance the A&M System's Strategic Imperative #4 of increasing the A&M System's prominence by developing a state-of-the-art detonation research test facility that will enhance industry-based research.

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**THE TEXAS A&M UNIVERSITY SYSTEM
FACILITIES PLANNING AND CONSTRUCTION**
Office of the Deputy Chancellor and Chief Financial Officer
December 14, 2020

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

Subject: Approval of the Project Scope and Budget, Appropriation for Pre-Construction and Construction Services, and Approval for Pre-Construction and Construction for the TEES Detonation Research Test Facility Project, Texas A&M Engineering Experiment Station, Bryan, Texas (Project No. 28-3341).

I recommend adoption of the following minute order:

“The project scope and budget of \$5,000,000 for the TEES Detonation Research Test Facility Project is approved.

The amount of \$2,500,000 is appropriated from Account No. 02-419061-00001 GURI, and the amount of \$2,500,000 is appropriated from Account No. 02-290253-00001 CRI/GURI Match, for pre-construction and construction services and related project costs.

The scope and budget for the TEES Detonation Research Test Facility Project, Texas A&M Engineering Experiment Station, Bryan, Texas, is approved for construction.”

Respectfully submitted,

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Billy Hamilton
Deputy Chancellor and
Chief Financial Officer

Approval Recommended:

Approved for Legal Sufficiency:

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John Sharp
Chancellor

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Ray Bonilla
General Counsel

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Phillip Ray
Vice Chancellor for Business Affairs

[ORIGINAL SIGNED BY

Kelly Templin, Director
The Texas A&M University System
RELLIS Campus

[ORIGINAL SIGNED BY

M. Katherine Banks
Vice Chancellor of Engineering and National Laboratories
Dean of Engineering
Director, Texas A&M Engineering Experiment Station

TEES DETONATION RESEARCH TEST FACILITY TEXAS A&M ENGINEERING EXPERIMENT STATION PROJECT NO. 28-3341	PROJECT BUDGET
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1. Construction.....	\$4,000,000
2. Project Contingency.....	320,000
3. Program of Requirements	0
4. Pre-Construction Services.....	382,000
5. Commissioning Services.....	0
6. Construction Testing.....	39,000
7. Campus Services & Technology.....	85,000
8. Furnishings.....	0
9. Equipment.....	0
10. Other Project Costs	41,000
11. FPC Management.....	<u>133,000</u>
12. TOTAL ESTIMATED COST OF PROJECT	<u>\$5,000,000</u>

**TEES DETONATION RESEARCH TEST FACILITY
TEXAS A&M ENGINEERING EXPERIMENT STATION
PROJECT NO. 28-3341**

PROJECT SCHEDULE

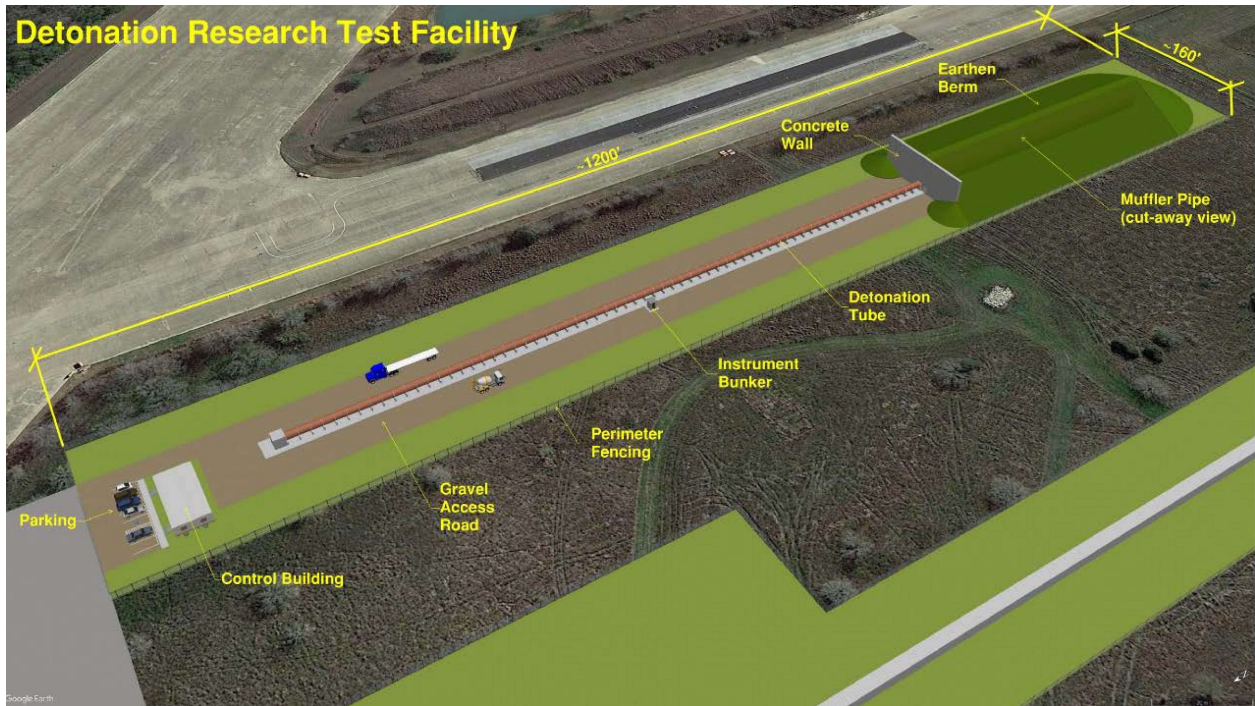
1. Issue DB Request for Qualifications (RFQ) January 19, 2021
2. BOR Approval for Construction February 4, 2021
3. Receive DB RFQ Response February 9, 2021
4. Shortlist DB Firms February 18, 2021
5. Issue DB RFP to Shortlist February 23, 2021
6. Receive DB Pricing March 2, 2021
7. Interview DB Firms March 9, 2021
8. Chancellor Approval of Rank Order April 8, 2021
9. Execute DB Agreement May 7, 2021
10. DB Notice to Proceed / Design Kickoff Meeting May 12, 2021
11. Complete Schematic Design June 11, 2021
12. Complete Design Development July 16, 2021
13. Receive GMP from DB August 20, 2021
14. Complete Construction Documents August 27, 2021
15. Begin Construction September 20, 2021
16. Substantial Completion March 2022
17. Owner Occupancy April 2022



TEES Detonation Research Test Facility

Texas A&M Engineering Experiment Station

Project No. 28-3341



TEES Detonation Research Test Facility

Texas A&M Engineering Experiment Station

Project No. 28-3341