

**DGS-30-456**

(Rev. 10/18)

**Construction Management at Risk  
Procurement Review Submittal Form****General Project Information**

Agency Name:	University of Virginia Academic Division		
Is the agency a covered institution per §2.2-4379?			Yes
Project Name:	Biotechnology Institute		
Project Number:	207-B1303		

**Other Project Information**

Advising A/E Name:	David P. Manfredi	License Number:	401013798
COV Sections: §2.2-4380.B.2, §2.2-4381.C.2			
Attach written determination for use of CM at Risk.			
COV Sections: §2.2-4380.C.2, §2.2-4380.B.1; §2.2-4381.D.2, §2.2-4381.C.1			
Is the procurement process proposed a two-step process?			Yes
COV Sections: §2.2-4380.C.2, §2.2-4380.B.7; §2.2-4381.D.2, §2.2-4381.C.7			

**Agency Reasons for Use of CM at Risk**

Construction Cost (COV Sections: §2.2-4381.B.1, §2.2-4380.C.3, §2.2-4381.D.3)	Yes
Building Use (COV Sections: §2.2-4381.B.1, §2.2-4380.C.3, §2.2-4381.D.3)	Yes
Project Timeline (COV Sections: §2.2-4381.B.1, §2.2-4380.C.3, §2.2-4381.D.3)	Yes
Need for Project Phasing (COV Sections: §2.2-4380.C.5, §2.2-4381.D.5)	No
Project Complexity (COV Sections: §2.2-4381.B.1, §2.2-4380.C.4, §2.2-4381.D.4)	Yes
Value Eng. and/or Constructability Analysis Concurrent with Design (COV Sections: §2.2-4381.A)	Yes
Need for Quality Control/Vendor Prequalification (COV Sections: §2.2-4380.C.5, §2.2-4381.D.5)	Yes
Need for Cost/Design Control (COV Sections: §2.2-4380.C.5, §2.2-4381.D.5)	Yes

**Supporting Information for Procurement Method Selection**

Project Use (i.e. lab, classroom, office, etc.): (COV Sections: §2.2-4380.C.3; §2.2-4381.D.3)
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In June of 2022, the University Board of Visitors added a project to the 2022 Major Capital Plan for the Biotechnology Institute (Institute). The 2018 Fontaine Master Plan had identified sites for new research and clinical facilities in distinct neighborhoods. The proposed Institute will be located adjacent to other research buildings at the UVA Fontaine Research Park in one such neighborhood to create synergies, complementing and expanding the research laboratories, vivarium, and core facilities already existing in this area on the southwest corner of UVA Grounds. Enabling projects for the Institute include the new Fontaine Central Energy Plant & Utilities (FCEP&U) Project to provide thermal utilities (plant and distribution) for existing facilities and the new Institute. These two extraordinarily complex projects will be designed in parallel, and the FCEP&U will help inform the Biotechnology building's design team regarding mechanical design conditions. The Biotech project will likewise inform the FCEP&U regarding initial heating and cooling demands. Thus, there will need to be significant coordination between the two separate design teams to ensure that the critical thermal energy systems are in place exactly when needed to support the new Biotechnology facility.

The Institute will be a 5 to 6 story facility of 270,000 to 300,000 GSF. The facility is currently anticipated to include flexible, modular, multi-use experimental research and support space to accommodate a broad range of disciplines; a cGMP manufacturing core; a vivarium; an advanced imaging core; and conferencing, seminar, and building amenity space.

The proposed new facility will enable the University to catalyze cutting-edge research capable of creating new and innovative clinical therapies, making Virginia a national leader in research discovery, translation, and clinical care. It will accomplish this by expanding the overall research portfolio at UVA; developing translational "cores" including cellular therapy, gene therapy, viral vectors, and drug delivery technologies among others; significantly enhancing UVA's infrastructure for entrepreneurship, innovation, and translation; investing in clinical trials infrastructure and new facilities; and recruiting new, experienced faculty and research scientists to the Commonwealth. The ability to translate these discoveries to clinical therapies serves as an engine for regional and statewide growth and development. Patients with access to clinical trials benefit by receiving new and innovative therapies, and the most up-to-date clinical care.

Construction Cost:	\$350,000,000 (COV Sections: §2.2-4380.C.3; §2.2-4381.D.3)			
Project schedule: (COV Sections: §2.2-4380.C.3; §2.2-4381.D.3)	Design Start Date	4/1/2023	Design Compl. Date	2/28/2025
	Const. Start Date	4/1/2024	Const. Compl. Date	4/30/2027
	Attach bar chart schedule to illustrate fast tracking or other schedule complexities. (COV Sections: §2.2-4380.C.3, §2.2-4380.C.4; §2.2-4381.D.3, §2.2-4381.D.4)			

Additional description to highlight key attributes that affect the project complexity, need for value engineering/constructability analysis, quality control/vendor prequalification, and cost/design control as indicated by "Yes" answers above:

This Project will also be surrounded by ongoing construction occurring within the Fontaine precinct simultaneously including a Parking Garage and Road Infrastructure project, the FCEP&U, and the expansion and renovation of the UVA Encompass Rehabilitation Hospital. Throughout this period of very intensive work, the existing operations of the Fontaine park, both research and clinical/ patient care, will need to be consistently maintained and will present on-going logistical challenges. This will require significant coordination between the construction teams of each of these projects and UVA's operations staff. There will be impacts to both patient and staff parking, existing bus routes, and vehicular and pedestrian access throughout the complex. Additionally, the sole construction access for the site will be off Fontaine Avenue, a busy city street. All of this will need to be coordinated between the construction teams and those working on the operational side of multiple existing buildings and the departments that they represent.

The initial purpose of the enabling FCEP&U Project will be to support the new Biotechnology building. The location of the Institute and the FCEP&U projects' sites within the Fontaine research park will require the routing of extensive utilities through heavily trafficked roadways and pedestrian routes. Additionally, the close proximity of the new plant and the Institute to existing research facilities, along with the geological rock formations underlying the area, present significant planning and coordination issues involving construction impacts on extremely sensitive equipment and ongoing research.

Each of the multiple projects that will be in progress simultaneously will need to meet extremely critical schedule deadlines. The Institute will require heat and cooling from the new Central Energy Plant to be online by early 2026. An extremely aggressive schedule will need to be developed and maintained from Project initiation through the enhanced commissioning process.

A CM will be critical for minimizing construction time, providing cost efficiencies, and maintaining the highest quality construction for Project elements. Their active participation in the preconstruction process with the Owner, the professional consultants, UVA and other stakeholders, and other design and construction project teams working at Fontaine will enable the University to maintain an aggressive schedule of 48 months from start of Schematic Design to Substantial completion. This will require the Project team including the CM to participate in a target value design process providing early cost modeling of assorted options, managing the extensive VM process, and continuous cost control for the building system components.

Significant complexity includes:

- Planning and executing a viable, efficient, multi-phased construction phasing plan that keeps Project momentum on track for the Institute while also coordinating with the ongoing construction related to the new FCEP&U, new Parking Garage, and the UVA Encompass Rehabilitation Hospital.
- Current volatility in the construction industry, including labor shortages and supply chain delays, will require the CM's assistance to enable cost control and effective planning for phasing.
- The magnitude and technical complexity of the building infrastructure and control systems in this building involving laboratory, vivarium, and clean room spaces will require the CM to participate in thorough Constructability Analyses, an extremely high-level of quality control, and a rigorous enhanced commissioning process.

These complicating factors require a responsive phasing and logistics plan coordinated closely with the design team, the Department of Energy and Utilities, Physical Plant and Operations, and the end-users. Early costing exercises are essential to ensure priority scope items are accommodated in the construction. This complex project will gain significant fiscal benefit, schedule reliability, and an improved final product, from bringing a seasoned CM team on board during the design process.

Submitted by:	Jeff Moore	<small>DocuSigned by:</small> <i>Jeff Moore</i>	Date:	11/10/2022
Signature:	Donald E. Sundgren	<small>392ED34288F241D... DocuSigned by:</small> <i>Donald Sundgren</i>		11/10/2022
Title:	Associate Vice President & Chief Facilities Officer (Agency Head or Authorized Representative)			

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Based upon the information provided by the Agency, the use of Construction Management at Risk <b>IS</b> recommended for this project.	
Recommended by:	<small>DocuSigned by:</small> <i>W. M. Coppa</i> <small>C2C8454B56A44EF...</small>
W. Michael Coppa, RA Director, Division of Engineering and Buildings	