



Office of Physical Plant
Physical Plant Building
University Park, PA 16802-1118

Date: February 28, 2020

Subject: **Request for Proposals (RFP) – Architect/Engineering (A/E) Team Selection
Applied Research Laboratory (ARL) Replacement Building at Science Park project**
Ferguson Township, PA

To: BHDP Architecture
CallisonRTKL
Clark Nexsen and Hofman Leakey Architects, LLC
Gensler
HDR
Jacobs
SmithGroup
Whitman, Requardt & Associates, LLP (WR&A)
WILSON HGA
WTW Architects and Cooper Carry

REQUEST FOR PROPOSALS - PART 1 PROJECT INFORMATION and OWNER REQUIREMENTS

The Pennsylvania State University (PSU) wants to first thank the 20 submitting teams that expressed interest in this project. After careful review of the submitted Letters of Interest, we congratulate the 10 A/E teams who were selected to continue to the next step in the process: invitation to respond to this Request for Proposal (RFP). PSU uses a qualifications-based A/E Team Selection Process with three assessments: Long-list (based on Letter of Interest), Short-list (based on Proposal responses), and in-person Interviews. This specific A/E Selection process is as follows.

Proposal responses are due in my office by **Noon on March 19, 2020**. After review of Proposal responses, the Screening Committee will identify three firms for in-person interviews. The **Short-List/ Interview Notice will be posted to website on April 1, 2020**. In-person interviews will occur on **April 30, 2020 in State College, PA. (This date is now finalized and will not change)**. Non-Binding Fees will be requested of the three Short-Listed teams, for each project, which will be due just prior to the respective Interview.

The results of the AE Team selection process will be announced at the Board of Trustees meeting on **May 8, 2020** and posted to the OPP website:

<https://opp.psu.edu/planningdesignconstruction/project-bidsproposals>.

Participation in this RFP and selection process is voluntary and at no cost or obligation to PSU. PSU reserves the right to waive any informality in any or all Proposals, and to reject or accept any Proposal or portion thereof. PSU reserves the right to modify dates as/if it deems necessary.

Confidentiality and Non-Disclosure. News releases pertaining to this project will not be made without prior approval from PSU, and then only in coordination with PSU. The contents of all A/E selection process correspondence are to remain confidential, and as such, not be made public.

A. PROJECT OVERVIEW

The Applied Research Laboratory (ARL) at Penn State is an integral part of the University and was established in 1945 at the request of the U.S. Navy. ARL research expenditures in University Fiscal Year 2019 were \$269M, contributing significantly to the nearly \$1B of research conducted by Penn State.

Originally focused on undersea weapons technology development, ARL now includes a broad research portfolio addressing the needs of various sponsors. ARL supports national security, economic competitiveness, and quality of life through education, scientific discovery, technological demonstration, and successful transition to application. As a Department of Defense (DoD) designated University Affiliated Research Center (UARC), ARL conducts essential research, development, and systems engineering in support of our nation's priorities free from conflict of interest or competition with industry. ARL is wholly reliant on sponsored research programs for operation of the Laboratory and therefore must maintain relevance to our sponsor base, as well as an operational agility to meet ever-changing requirements.

Penn State ARL employs approximately 1,400 full time personnel, including approximately 200 PSU students, within the four research offices and the supporting enterprise groups. ARL's 4.7% 11-year growth rate in revenue and 5-year growth rate of 9.1% are creating overcrowding of on-campus facilities.

The ARL physical plant is 754,000 GSF in 25 buildings spread across seven unique geographic locations. The majority of this space is located in State College, PA and on the Penn State University Park Campus. ARL is excited to be celebrating 75 years of research in 2020, but aging facilities pose significant risk to the ongoing operations. Operations and facilities comply with National Industrial Security Program Operating Manual (NISPOM) Intelligence Community Directive ICD705. Inflexible infrastructure is limiting agility in responding to research opportunities.

B. PROJECT-SPECIFIC INFORMATION AND PROGRAM

The ARL Replacement Building is planned as a new freestanding facility on ARL's envisioned Science Park campus, with an anticipated Total Project Cost of \$50.8M (\$31.0M Construction Cost; \$6.2M FF&E). The project funding was identified in PSU's 2018-2023 Five Year Capital Plan. The building will be approximately 126,000 Gross Square Feet and will contain offices, labs, secure research, collaboration spaces, and support areas. This project is the confluence of two main drivers: Replacement of the existing Applied Research Building (120,946 GSF, built in 1945 and 1969) located on PSU's University Park campus; and helping build/establish/reinforce ARL's envisioned Science Park campus.

We are seeking proven A/E team experience leading and executing similar master planning efforts and require the A/E team to guide the master plan process including the client engagement effort. PSU/ARL need to define a multi-year, multi-phase capital project strategy in conjunction with the design and construction of the ARL Replacement Building. The campus master plan must determine the ideal location for the Replacement Building, the first newly planned building at Science Park,

amongst existing buildings at Science Park that ARL owns or occupies. In order to make the best short- and long-term planning solutions, the selected A/E team will need to provide multiple master plan scenarios to “test” the different programmatic/site factors and different cost scenarios of the different options. Additionally, the campus master plan must help address other ARL strategic initiatives that include:

- The campus master plan will consider long term relocation of many ARL facilities to the State College Science Park area.
- Plan for a phased approach for land acquisition and capital investments that will consider the following: land acquisition, infrastructure and utilities and municipal integration.
 - This will include fiscal evaluation of multiple options on available properties in the State College Science Park area.
- Consider land required for long term expansion, supporting future growth of ARL’s research portfolio.
- Consider strategies to help build/reinforce the ARL campus character of the Science Park corridor by exploring placemaking attributes that include, and are not limited to: Campus cohesion, visual and functional connections between buildings, connections between buildings and the site, overall campus character, pedestrian and vehicle access/circulation/parking, zoning and water management considerations, purposeful open spaces, etc. These concepts will be balanced with the security requirements inherent in the ARL research.
- Perform ARL-wide space utilization planning to inform the specific program of the Replacement Building and other future projects.

The goals for the ARL Replacement Building project are, as follows:

- Establish the ARL Science Park Campus and provide a consolidated research facility, in support of ARL’s long-term growth strategy.
- Create secure, flexible facility to meet the needs of ARL for the next 40 years.
- Enhance cross laboratory synergy. Help ARL establish ideal research and workplace environments – including space relationships and space efficiencies – in order to foster collaboration and enhance productivity.
- Increase quality and quantity of research space and build flexible facilities that support agility in responding to sponsor research needs
- Improve student and research staff experience and help ARL attract/retain employees.
- Return on capital investment. The Replacement Building must fit with an economical/sensible cost structure deemed acceptable to ARL sponsors and that is low risk to the University.
- Provide a solution to pre-existing campus security considerations and SCIF accreditation changes. Important Note: These are critical drivers in the relocation from the existing Applied Research Building (on PSU’s University Park Campus) to the ARL Science Park campus.

- In keeping with PSU’s commitment to environmental sustainability, the new facility will be a high-performance building and will, at a minimum, attain LEED Certification
- ARL is seeking flexible and adaptable MEP systems to accommodate ever-changing research projects and programs.

C. A/E TEAM SELECTION PROCESS and PROJECT SCHEDULE MILESTONES

• RFP Issued to Long-Listed Teams:	February 28, 2020
• A/E Proposal Submissions Due:	Noon (Eastern Standard), March 19, 2020
• Post Short-List results + Interview notice:	April 1, 2020
• A/E Team Interviews:	April 30, 2020 (The Penn Stater Hotel)
• Board of Trustees Selection of Team + Post Results:	May 8, 2020
• Contract Award / Letter of Intent:	June 2020
• Begin master planning/ space analysis/ programming phase:	July, 2020
• Start of Schematic Design Phase:	To Be Determined
• Completion of Construction Document Phase:	September, 2023
• Construction Start Date	October, 2023
• Project Occupancy	December, 2025

D. PROJECT DELIVERY METHOD and PROJECT DELIVERY REQUIREMENTS

Penn State University and the Office of the Physical Plant (OPP) require a high level of collaboration to ensure project success. **The final selected A/E design team must establish a process for the design, documentation, and execution of the project.**

The project will be designed and constructed in conjunction with a Construction Manager at Risk (CMaR). The successful A/E Team will work closely with the CMaR throughout design and construction phases. The A/E team and CMaR will separately develop parallel cost estimates, which will be reconciled at the end of project phases. Confirmation of being within the project budget is required before PSU will allow the A/E Team to proceed to each subsequent project phase.

As mentioned previously, the selected A/E Team will begin this project with master planning phase, which will include: Science Park ARL Master Plan, ARL space utilization analysis, site selection, and the development of the building program. The program will include tabular/space program, space adjacency diagrams, site impact diagrams, and room data sheets that provide detailed room-by-room info. PSU will work with the selected A/E to determine the level of detailed master planning and programming scope.

After master planning and program validation, PSU follows industry-standard design Phases (Schematic Design, Design Development, Construction Documents, Bidding Phase, and Construction Administration) in accordance with Penn State’s standard 1-P agreement.

Given the importance of this project, Penn State will require at least three (3) Conceptual Design options be developed for PSU’s review and approval. We ask that you describe your approach to developing options in Proposal Section 3.

E. ADDITIONAL OWNER REQUIREMENTS

It is required that a Pennsylvania registered architects and engineers stamp the final construction and bidding documents.

U.S. citizenship requirements will be a part of the final agreement. All team members must be willing to submit to a background check and clearances if deemed necessary for the project.

It is critically important that the Architectural/Engineering team have experience with:

- Complex research environments created by Department of Defense (DOD) affiliated research partners.
- Design details related to sites and facilities compliant with National Industrial Security Program Operating Manual (NISPOM) Intelligence Community Directive ICD705.
- Infrastructure integrated research and testing facilities, such as pressurized and open tankage, SCIF facilities, etc.
- Creation of flexible research facilities that are cost effective, well thought-through design solutions.

Refer to PSU's and PSU's Office of the Physical Plant (OPP) standards in the following RFP Section.

F. RFP ATTACHMENTS AND REFERENCED STANDARDS

- Separate attachments will be available with details on existing ARL buildings and facilities. These will be released separately from the RFP. These files are currently being reviewed by ARL for public release. The teams will be notified when that information is available. We expect it to be released the week of March 2.
- **Form of Agreement.** Included is the link to our Form of Agreement 1-P: <https://wikispaces.psu.edu/display/OPPDCS/Division+00+-+Procurement+and+Contracting+Requirements>. Please review this agreement to ensure that your firm accepts all terms and conditions as written. In submitting a proposal for this project, you acknowledge that you concur, without exception, with all terms, conditions and provisions of Form of Agreement 1-P.
- **Design Phase Deliverables.** Reference this document under the heading *00 51 00 MISCELLANEOUS FORMS* at the following link: <https://wikispaces.psu.edu/display/OPPDCS/Division+00+-+Procurement+and+Contracting+Requirements>
- **Office of the Physical Plan (OPP) Standards.** The web sites www.opp.psu.edu and <https://wikispaces.psu.edu/display/OPPDCS/Design+and+Construction+Standards> provide information regarding specific design submission requirements and standards, of the University. Please review to ensure that your team is able to deliver a compliant building.
- **OPP High Performance Standards.** The University has a commitment to environmental stewardship with a focus on University and campus-wide carbon reduction and total-cost-of-ownership. Our projects require maximum consideration of potential sustainable and energy-efficient designs and specifications for architectural, site, utility, structural, mechanical,

electrical, and plumbing disciplines. Refer to the following link for the University's high performance standards that exceed building code minimum requirements:
<https://wikispaces.psu.edu/display/OPPDCS/01+80+00+PERFORMANCE+REQUIREMENTS>

A part of this is PSU's High-Performance Building Design Standards: Building projects shall comply with ASHRAE Standard 90.1 Energy Standard for Buildings Except Low-Rise Residential Buildings, 2010 version AND as superseded by more stringent requirements of ASHRAE Standard 189.1 Standard for the Design of High-Performance Green Buildings, 2011 version.

The standard defines a minimum requirement of LEED Certified for this project. The project will consider additional sustainability or high-performance measures and innovations.

G. PRE-PROPOSAL SUBMISSION CONTACT

Due to the secure and sensitive nature of the existing ARL facilities, the Office of Physical Plant and ARL will be restricting tours of the site to only the successful short-listed teams. The tours will not be mandatory, but if you seek to attend a tour, you must RSVP for a time slot. We will publish exact dates closer to the short list announcement. Plan for tours to occur sometime between April 7 and April 9, 2020.

Contact Jeff Spackman at 814.863.2496 or djs47@psu.edu with any questions regarding the project.

Campus Planning, design-related, or A/E selection-process questions should be directed to Greg Kufner, University Architect.

REQUEST FOR PROPOSALS - PART 2 PROPOSAL REQUIREMENTS

Deliver twelve (12) hard copies of your proposal and one (1) digital copy on a thumb drive to:

Shipping Address (Note that this address has changed):

Greg Kufner, AIA, NCARB
The Pennsylvania State University
One Benedict House
University Park, PA 16802

Hard copies of the Proposals are due March 19, 2020 at Noon, Eastern Standard Time. A PDF version of your proposal should be included on a thumb drive with your submission. Proposals received after this date and time may be automatically rejected. Proposals shall be provided in an 8.5"x 11" format. Limit submission to forty-two (42) single-sided pages maximum (21 double-sided), plus a cover letter. Double-sided printing is strongly encouraged. Font size is to be 10-point type, minimum.

A cover letter shall be provided from the proposed leader(s) of the Candidate Team submitting. The cover letter should be one page maximum. The cover letter should include the following:

- A. This letter should establish the contact information (name, address, phone, and e-mail) for your team's main point of contact
- B. Primary office location of the submitting candidate team
- C. A concise summary as to why your team is best suited for this project
- D. Statement of certification that all information provided in your submittal is accurate

Collate and bind proposals according to the following four (4) Sections:

Proposals shall follow the below format, in the order stated to ensure that all pertinent information necessary for evaluation is included and easily comparable by Selection Committee. The cover letter, table of contents, and divider pages will not count towards the RFP page limitation. OPP encourages you to be as brief as possible without sacrificing accuracy and completeness.

*** Note 1: As applicable throughout the proposal, provide professional credit to architectural partners (including design architect, architect of record, and academic / lab planning partners) for all projects discussed within the proposal and for all project images shown.**

Section 1.0 –TEAM STRUCTURE

- A. Identify prime firm, architecture and/or planning consultants, and key engineering/consultant firms. For each firm, identify the firm differentiators, size of firm, each firm's qualifications and experience on similar projects, and clearly identify each firm's role on this project. Identify past collaboration between prime firm and key consultants, including number/ value of projects, and the added benefit the key consultants provide to your team.

Penn State University values variety in the composition of consultant teams. As such, teams should demonstrate previous successful collaboration, execution of projects similar to the

ones in this RFP, and the ability to incorporate owner's design standards similar to the Penn State Design and Construction Standards. While we appreciate firms with experience at PSU we do not have a preferred vendor list and encourage the selection of the best talent possible for our projects.

- B. **Provide team organizational chart.** Include prime and key consultant firms, and provide the name and role of key team members. Clearly identify which team members are designated for leadership positions on the team. Please highlight Diverse Business Enterprise Program (DBE) representation on your team.
- C. **Provide role descriptions and resumes of key team members identified in the organizational chart.** Include registrations/ certifications, educational background, years of experience, and relevant project experience. Relevant project experience should include size, budget, program type, project overview, and define what each team member's role was on each project listed on their resume. Emphasize each team member's most relevant experience and ideally highlight that the team member has had comparable roles on similar projects. Include at least two client references for each key team member. **If possible, please avoid using Penn State employees as references.**

Include resumes for, at least, the following key team members:

1. Principal in Charge (Project Team Lead)
2. Lead Design Architect (Lead Designer)
3. Project Manager (PSU's day-to-day point of contact)
4. Campus Planner and/or Landscape Architect
5. Project Architect (Architectural Technical Lead)
6. Laboratory Programmer/Planner(s)
7. Lead Mechanical, Electrical, Plumbing/FP, Structural, and Civil Engineers
8. Sustainability Leader and/or energy modeler
9. Interior Designer
10. Construction Administration Leader (Construction oversight leader)
11. Cost Estimator

Note: If any individual(s) is fulfilling multiple project roles, identify multiple roles on the organizational chart and within individual resumes.

Section 2.0 – TEAM QUALIFICATIONS

- A. Provide a summary of qualifications and expertise of the firms with specific emphasis on:
1. Design Excellence, including national recognitions.
 2. Distinguishing factors of team differentiation.
 3. Experience delivering programs, studies and projects of a similar scope, scale, and complexity. **(See Note 1)**
 4. Highlight building programming/design, lab programming/planning, and workplace programming/design expertise for projects that include secure research, SCIFs, laboratories, workplace/offices, and collaboration spaces. **(See Note 1)**
 5. Highlight experience/expertise with the following:
 - a. Complex research environments created by Department of Defense (DOD) affiliated research partners.

- b. Design details related to sites and facilities compliant with National Industrial Security Program Operating Manual (NISPOM) Intelligence Community Directive ICD705.
 - c. Infrastructure integrated research and testing facilities, such as pressurized and open tankage, SCIF facilities, etc.
 - d. Highlight industrial type spaces that support research assembly and process development.
6. Highlight expertise in master planning and campus-making, space utilization analysis. **(See Note 1)**

- B. Identify a maximum of 10 example projects, or studies, within the last ten (10) years, which BEST exemplify qualifications and expertise listed above for the proposed team.** Include brief description of each project, project gross square feet, project budget, final project cost, and completion date of project and a client reference(s). Consider/convey the relevance of each project and how it is similar to this project.

As much as possible, highlight projects with the following:

- a. Complex research environments created by Department of Defense (DOD) affiliated research partners.
- b. Design details related to sites and facilities compliant with National Industrial Security Program Operating Manual (NISPOM) Intelligence Community Directive ICD705.
- c. Infrastructure integrated research and testing facilities, such as pressurized and open tankage, SCIF facilities, etc.
- d. Flexible research facilities that are cost effective, and well thought-through.

Show illustrative representation of the example projects, particularly those highlighting the work of your team's proposed Lead Design Architect. **(See Note 1)**

- C. Project Relevancy Matrix.** Develop a matrix that illustrates the similarities between the example projects and this project. Please be as specific to our project, as possible.
- D. People-Projects Matrix.** Develop a matrix to show the participation of key individuals from your proposed team on the example projects. List individual's role on example projects.
- E. Diverse Business Enterprise.** The Pennsylvania State University encourages the participation of Minority Business Enterprises, Women Business Enterprises, Veteran Business Enterprises, Service-Disabled Veteran Business Enterprises, and LGBT Business Enterprises; collectively referred to as Diverse Business Enterprise (DBE) for Design Professionals.

Briefly describe your proposed methodology to include Diverse Business Enterprise participation for this project. This may include, but not limited to partnerships, joint ventures, mentor/mentee protégé program, or other outreach efforts. Participating firms should specify whether the professional or consultants being proposed is a current DBE firm. If the proposing firm itself is a current Diverse Business Enterprise, the firm should state that fact in their proposal.

Submitting A/E team are encouraged to include at least one (1) certified DBE design professional firm as part of their team. If the proposing firm itself is a current Diverse Business Enterprise, the firm should state that fact in their proposal. Below is a partial list of acceptable certifying agencies:

1. Department of General Services Bureau of Small Business Opportunities (DGS BSBO)
2. Federal Department of Transportation
3. National Minority Development Council (NMSDC) or its affiliates
4. Southern PA Transportation Authority (SEPTA)
5. Women Business Enterprise National Council (WBENC)
6. Pennsylvania Unified Certification Program (PA UCP)
7. National Women Business Owners Corporation (NWBOC)
8. Minority Business Enterprise Council (MBEC)
9. National Gay and Lesbian Chamber of Commerce (NGLCC)
10. U. S. Department of Veteran Affairs (VOB/SDVOB)

* Or comparable state agencies or regulating bodies in other states or local jurisdictions.

- F. List errors and omissions insurance coverage limits of the lead/ prime entity of the candidate team. Provide information on errors and omissions claims in the last (7) seven years.
- G. Provide historic breakdown of project performance. Include project delivery method, history of project budgets compared to completed construction cost, history of change orders, average response time to RFIs, and any other key project profiles relevant to this project.
- H. Acknowledgment of your review and acceptance of the attached Form of Agreement 1-P, ensuring that your firm accepts all terms and conditions as written. In submitting a proposal for this project, you concur, without exception, with all terms, conditions and provisions of this Form of Agreement.

Section 3.0 – PROJECT APPROACH AND SCHEDULE

- A. **Describe your team’s proposed design approach for this project. Given the importance of this project, the awarded A/E team would be required to provide at least three (3) distinct design options be developed for PSU’s review and approval.** Options will be developed at least to a Concept Design level and could be developed to Schematic Design level. Be as specific to our project as possible. Discuss, at the least, your approach to the following:
 1. Project visioning and project mission/goal setting. And, your approach to then establishing a design process that works to achieve the project vision and goals.
 2. Validating the project program and gaining knowledge of the project brief. Additionally, describe any programming/building planning tools, benchmarking tools, and/or other firm-specific methodologies to assist in the design of our project.
 3. How the initial project phase leads into the Concept Design and/or Schematic Design Phase of the project.
 4. Developing building planning options and/or overall building design schemes. Approach to developing programmatic ‘blocking and stacking’ options that explore gallery and/or programmatic adjacencies.
 5. Working with PSU to analyze, compare/contrast different design options.

6. Developing the interior/ exterior “look and feel” of the new building, particularly the level of advancement at the various project phases.
 7. Use of BIM, “predictive modeling”, analytical/ digital tools, and other technologies.
- B. Approach to project delivery.** After program validation, PSU typically follows industry-standard design Phases (Schematic Design, Design Development, Construction Documents, Bidding Phase, and Construction Administration) in accordance with Penn State’s standard 1-P agreement. At least, describe your team’s overall approach to:
1. Meeting the schedule parameters.
 2. Planning, managing, and executing the project.
 3. Consensus building and guiding stakeholders through decision-making process(es)
 4. Creating a collaborative environment between architects, planners, exhibit designers, engineering consultants, and PSU stakeholders.
 5. Working with PSU’s third-party Construction Manager at Risk (CMaR) throughout design and construction phases. Describe previous success delivering projects with a CMaR. Identify potential innovative strategies that you consider using in the design, procurement, and construction of the project, while maintaining quality and uncompromised project goals (example: Design Assist).
 6. Identify key risks to project schedule and strategy for mitigating
- C. Approach to Cost Control.** Delivering our project on budget is critical. So, provide your approach to manage costs through all design and construction phases, especially considering currently escalating construction costs. Additionally, provide the following:
1. Highlight your process of cost estimating, scope/budget alignment and cost/quality control through the design and construction phases.
 2. Define critical factors with respect to the project budget.
 3. Provide your impression of the project budget.
 4. Identify key risk to project budget and strategy for mitigating
- D. Approach to MEP and building system design.** Narrative approach to MEP planning/ design/ delivery of facility that will contain programs and space types as noted herein. Be specific with your experience and highlight your project type expertise. Please include your thoughts on a partial renovation of this existing building.
- E. Approach to Sustainability.** After reviewing PSU’s High-Performance Standards, describe your team’s approach to driving towards PSU’s sustainability goals on the project, including exceeding our standards. Highlight your experience meeting similar high-performance standards and describe overall team commitment to sustainable design (including number of completed LEED projects). Among other applicable topics, discuss your team’s approach and experience applying advanced sustainability measures, ability to apply best practice in sustainable design, applications of creative innovations to obtain the optimum performance for projects, and experience using energy models to drive design thinking.
- F.** Briefly describe your approach to Penn State reviews, PSU design reviews, and jurisdictional reviews. With assistance of the University, the selected AE team will be responsible for securing any/all local municipal reviews, Labor & Industry reviews and/or permits that are required. Any fees associated with permits shall be paid for by the Professional and will be reimbursed by the University.

- G. **Project Staffing/Workload.** Verify the entire A/E team’s availability to successfully staff the project, immediately, given our project schedule and other A/E Team workload.
- H. **Graphic Schedule.** Create a graphic project schedule showing phase durations, owner engagement and review periods, and identify critical path items, milestones, and schedule drivers. This can be printed on an 11x17 fold-out and will only count as a single page.

Section 4.0 – PROJECT-SPECIFIC KEY DRIVERS AND IDEAS

- A. Project Understanding. Briefly demonstrate your understanding of the project. Provide any observations of the project program or other provided information.
- B. Your firm’s vision of what, beyond purely functional issues, constitutes the essence of the ARL Replacement Building project.
- C. To indicate your understanding of the uniqueness of this project, describe key project drivers, critical design elements, and potential constructability considerations your team has identified as a priority for this specific project. Discuss how you addressed similar issues on other projects.

If important to your team, discuss an example project(s), highly relevant to our project, in more detail than your Section 2 response may allow. Include insights into what made the example project(s) successful, including how those design intentions were translated into a meaningful and synthesized final solution.

- D. Delivering a building with flexible research facilities that are cost effective, and well thought-through is critical to the success of this project. Additionally, we need to explore programmatic and design options that seek to idealize operational and research effectiveness. Moreover, we expect to explore innovations and efficiencies in the planning and design of the completed facility to achieve a highly space efficient facility. Describe programming, planning, benchmarking tools and methodologies that your team will use to meet these objectives.

Provide specific principles/ideas or project examples for the following programs/spaces
(See Note 1):

1. Secure research, Laboratories
 2. Infrastructure integrated research and testing facilities such as pressurized and open tankage
 3. SCIF facilities
 4. Workplace environments, including offices, collaboration spaces,
 5. Common/shared/amenity spaces, etc.
- E. Provide any initial design ideas, thoughts or considerations regarding the project. We are not seeking design solutions, but rather your design thinking. Considerations may include your thoughts/opinions related to the project site area, master planning and/or placemaking factors, environmental considerations, programmatic and/or thematic considerations, building massing and/or any other design considerations.

Thank you for your anticipated participation in this A/E Team Selection process. The Pennsylvania State University looks forward to reviewing your responsive proposal for this important project.

Please feel free to contact me with any questions you may have.

Respectfully,

Greg Kufner, AIA, NCARB

A handwritten signature in black ink, appearing to be 'GK', written over a horizontal line.

University Architect

The Pennsylvania State University

206 Physical Plant Building, University Park, PA 16802

Phone: 814-865-8177 | Mobile: 614-512-2287

Email: gak21@psu.edu

CC: ARL Replacement Building Screening Committee