

DATE: August 16, 2024

SUBJECT: Construction Management – Request for Proposals (RFP)
UP-Microchip Packaging Cleanroom Renovation
Electrical Engineering West & Millenium Science Complex, University Park

PSU PROJECT No: 00-08958.00

TO: Construction Management (CM@R) Firms

The Pennsylvania State University (University) invites your firm to submit a proposal to provide Construction Management Services for the above-referenced project.

PART 1

PROJECT INFORMATION

A. PROJECT OVERVIEW:

1. Project Name/Building Name: UP-Microchip Packaging Cleanroom Renovation housed within Electrical Engineering West (EE West or EEW) and the Millenium Science Complex (MSC)
2. Electrical Engineering West was built in 1940 by famous campus architect Charles Klauder in the Georgian style. It houses the Electrical Engineering's departmental offices as well as important research labs and general purpose classrooms.

The Millennium Science Complex was designed by famed architect Rafael Vinoly and completed in 2011. The innovative complex is 276,600 SF and it brings together two highly technical research programs - The Huck Institutes of Life Sciences and the Materials Research Institute.

3. The Electrical Engineering Department recently hired a new department head who is a leader in the semiconductor research industry. The Semiconductor Research Corporation (SRC)'s Joint University Microelectronics Program 2.0 (JUMP 2.0) has announced the creation of a new Penn State-led Center for Heterogeneous Integration of Micro Electronic Systems (CHIMES). The focus of this research is to collaborate to advance effective integration and packaging of semiconduction devices, chips, and other components.¹ Two new advanced research facilities are required to support the EE Department's new research goals.

B. PROJECT SCOPE / OBJECTIVES:

- The purpose of this project is to complete the construction of the new micro electronic systems packaging research. This research is to be completed by the Penn State Department

of Electrical Engineering within the SRC JUMP Center, along with partnering external researchers, to develop an advanced semiconductor devices and packaging process.

- The research has been divided into two distinct processes and will be located in two buildings at University Park. The wet material processing functions will be located in the Millennium Science Complex (MSC). This location was selected because the MSC is thought to have the existing specialty utility systems required for support the wet material processes of the CHIMES research. The existing cleanrooms also have lab equipment that can be shared by multiple research groups allowing for optimizing of University assets. The scope of work within this facility consists of the fit out of new cleanroom space as well as modifications to existing space.
- The remaining research functions consist of dry packaging processes which will be located within the Electrical Engineering West Building (EEW). The existing Room 113 cleanroom suite was established in 1991. Significant renovation of portions of this suite will be required to meet current design and research standards. Demolition of existing lab space and the renewal of multiple MEP systems will require significant planning and coordination between the design and construction teams.
- The project is currently in schematic design and will be moving into design documents mid-Fall. The two buildings are following separate schedules. With the partnership of the CM, the project team will evaluate if the two buildings will continue to follow separate schedules for construction as well.
- Both buildings will remain occupied throughout construction and both buildings have cleanrooms adjacent to the construction space. There will be limited opportunities for shutdowns for either building.
- Stantec based out of Pittsburgh is the designer of record.

C. PROJECT BUDGET

- As part of the design process, Stantec completed an early programming phase. Below is a budget table indicating an initial construction cost estimate. PSU OPP is currently evaluating if additional building systems will be added to the scope of the project to reduce the building's maintenance backlog, and therefore the EE West budget may grow. These construction costs estimates do not include soft costs and internal PSU costs. Also, this budget was developed assuming at Q3 2024 construction start. It is understood the budget will need to be updated, preferable at the end of the DD phase.

| PROJECT SUMMARY | | | |
|-----------------|--------------|--------------|-------------------|
| COMPONENT | AREA (SF) | \$/SF | \$ |
| 01 EEW | 4,387 | 2,367 | 10,381,960 |
| 02 Millenium | 3,259 | 1,929 | 6,285,471 |
| TOTAL | 7,646 | 2,180 | 16,667,431 |



D. DESIGN & CONSTRUCTION SCHEDULE

| | |
|--|-----------------------------------|
| Design Kick-Off / Program Validation | July 2023 |
| RFP Issued: | August 16, 2024 |
| RFP Submission Date..... | 12:00 PM (ET), September 17, 2024 |
| CM Interviews | week of October 21, 2024 |
| Pre-Construction / Design..... | July 2023 - December 2024 |
| Establish GMP | January 2025 |
| Construction Start..... | March 2025 |
| Substantial Completion..... | June 2026 |

- **Current Detailed Design Schedule MSC**

| | |
|------------------------------------|--------------------|
| Schematic Design Due: | August 8, 2024 |
| Design Development (50%) | September 13, 2024 |
| DD Scope & Budget Evaluation | October 14, 2024 |
| Design Development (100%) | November 11, 2024 |
| Construction Documents | February 14, 2025 |

- **Current Detailed Design Schedule EE West**

| | |
|------------------------------------|-------------------|
| Schematic Design Due: | August 8, 2024 |
| DD Scope & Budget Evaluation | November 11, 2024 |
| Design Development (100%) | December 10, 2024 |
| Construction Documents | March 20, 2025 |

* Decommissioning of existing lab in EE West may cause schedule delays

PART 2
SUBMISSION INFORMATION

SUBMISSION REQUIREMENTS:

Provide the following information per the requirements detailed below:

1. Technical Requirements (one PDF):
 - a. One (1) A3 page, single sided, 10-font min. (**A.** Project Team).
 - b. Two (2) A3 pages, single sided, 10-font min. (**B.** Experience/Reference Projects).
 - c. One (1) A3 page, single sided, 10-font min. (**C.** “Open A3” - Project Approach/Additional information you feel relevant that demonstrates your firms fit for this project).
2. Include a monthly schedule/staffing bar chart indicating projected hours for each proposed staff member, along with a total, for both Pre-construction and Construction services for the project.
3. Within the “Project Approach” A3, please list any and all addenda you download from the web advertisement.

Email your submission, as a PDF attachment, **by 12:00 p.m. on September 17, 2024**, to my attention at jgw124@psu.edu, with a copy to Jason Little at jxl291@psu.edu. The University should receive two (2) emails from each firm with the following file names and subject lines in your emails:

1. PSU UP-Microchip Packaging Cleanroom Renovation - Tech Req - [your firm's name].
2. PSU UP-Microchip Packaging Cleanroom Renovation – Staffing Chart - [your firm's name].

Here is a summary of the information requested for each A3. We encourage you to be as concise as possible without sacrificing accuracy and completeness.

A. Project Team

1. Identify the specific construction management personnel and any sub-consultants proposed for all phases of this project. By submission of proposal, your firm commits to the Owner that the proposed team members will be those who will be assigned to the project.
2. Outline the proposed personnel's roles plus describe why they have been selected for this team and how their experience aligns directly with this project. Be specific on who will be the single point of contact during design and construction (lead project manager).
3. Identify which office, or offices, of your company will be directly involved with supporting the assigned field staff for this project.

B. Experience/Reference Projects

1. Provide a selection of projects (up to 5) that were managed by the core team members proposed for this project and further demonstrates the strength of the proposed team participants. Provide a matrix to illustrate core team involvement on each project. Include the following for each project, at a minimum:
 - a. Project Owner Contact Information (must be current)
 - b. Total Gross SF
 - c. Year Completed
 - d. Construction Duration
 - e. Project Cost (specifically construction volume)
 - f. Services Provided (including the contractual delivery method)
 - g. DBE (Diverse Business Enterprise) % achieved
 - h. Why you chose to highlight this particular project

C. Project Approach

1. "Open A3" - What makes your firm the right fit for this project?

SITE ACCESS: No formal site visits will be accommodated at this time, you are welcome to walk the exterior of the buildings. Firms invited for interview will be given the opportunity for a formal site visit.

CONFIDENTIALITY/NEWS RELEASES: News releases pertaining to this project will not be made without prior approval by the University, and then only in coordination with the University.

Included is the link to our [Form of Agreement 1-CM-GMP](#), along with the related [General Conditions](#):

Review this Agreement and related General Conditions 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-CM-GMP (v. 10/2023) and the related General Conditions (v. 10/2023).

The University reserves the right to waive any informality in any or all proposals, and to reject or accept any proposal or portion thereof. The University's intent is to identify the firm that provides the best overall fit with the perceived need. **Additionally, the above dates are target dates established by the University. The University reserves the right to modify the dates as/if it deems necessary.**

If you have any questions regarding this RFP please contact me via email. Interviews will be tentatively held the week of **October 21, 2024** with the final selection being made shortly after. **Please continue to check the original posting of this RFP for potential updates and addenda related to this RFP.**

Sincerely,

Jesse G. Wells

Jesse G. Wells – PSU Construction & Contract Specialist

cc: J. Bechtel; Julie Patrick; CM Selection Committee

Enclosure(s):

[RPT_000895800_Stantec_EEW_MPCR_Programming_Report_20231222](#)

[RPT_000895800_Stantec_MSC_MPCR_Programming_Report_20231222](#)

1. Penn State leads semiconductor packaging, heterogeneous integration center.
<https://www.psu.edu/news/engineering/story/penn-state-leads-semiconductor-packaging-heterogeneous-integration-center/>