



THE UNIVERSITY  
*of*  
**WISCONSIN**  
MADISON

**REQUEST FOR ARCHITECTURAL  
& ENGINEERING SERVICES**

Gymnasium Natatorium Replacement  
2019-21

DFDM Project # 18H3E

January 2019

## CONSULTANT REQUIREMENTS

Architectural/Engineering/Planning (Rev. 2018-05)

This request is to seek design consultant(s) to provide architectural/engineering/planning (AEP) services to complete the project phases indicated below for **State Project No. 18H3E – Gymnasium / Natatorium Replacement at the University of Wisconsin-Madison** (see attached for further detail).

Pre-Design Phase	Preliminary Design Phase	Final Design Phase	Bidding Phase	Construction Phase
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Consultants should submit their qualifications demonstrating specific expertise in the design and coordination of new construction and or comprehensive renovation of higher education athletic and recreation facilities. Project design team should consist of architectural, mechanical, electrical, plumbing, fire protection, audio visual, interior design, landscape, civil, and structural. Work includes project area surveys, acquiring field data, and verifying as-built conditions, if necessary, to assure accurate development of design and bidding documents.

The consultant(s) will participate in a highly interactive planning process by meeting with appropriate constituents, including DFDM, UW System, and campus staff (Facilities Planning & Management-FP&M and Recreational Sports) to verify that the document created as part of the Gymnasium-Natorium Replacement Feasibility Study is accurate. Working in collaboration with DFDM, UW System, and the campus project team, the consultant will be responsible for program development, verification, and documentation; developing and documenting design alternatives with corresponding budget estimates and construction cost and project schedules for each design alternative; and determining and documenting any project work dependencies for selected design alternatives.

The design consultant(s) will provide limited pre-design and complete preliminary-design services through construction administration/project closeout services as indicated in the Division of Facilities Development and Management *Policy and Procedure Manual for Architects/Engineers and Consultants*, and the DFDM *Contract for Professional Services*. These services may be contracted through multiple contracts or contracts with multiple parts and project-specific review/approval/authorization milestones as determined by the needs of the project. Authorization for subsequent services will be issued in writing upon satisfactory performance and completion of contracted services and deliverables.

**Preliminary-Design Services:** In addition to the requirements for preliminary-design through construction in the *Policy and Procedure Manual for Architects/Engineers and Consultant*], the following addition and clarifications should be noted:

- Verify existing project planning. Evaluate and prepare for DFDM, UW System, and campus consideration options and scenarios for determining project priorities and project delivery, this includes scheduling, phasing, estimated cost, inflation, and loss of revenue implications.
- Prepare a Project Plan with an updated Program Statement per the *Policy and Procedure Manual for Architects/Engineers and Consultants*, code assessment, and project delivery scenarios, phases, and alternatives.
- The design consultant(s) will also prepare documents necessary for Board of Regents and State Building Commission.

**Cost Estimating:** Provide conceptual construction cost estimates for all design alternatives and provide full budget estimates for selected design alternative. All estimates for a selected design alternative must provide construction cost detail with a dated reference for ease of future cost escalation. All project cost estimates not directly associated with the construction costs (basic and additional design services, project management fees, design contingency, project contingency, movable and special equipment, and escalation factors) must be indicated separately from the construction cost estimates.

Life cycle cost estimates must include annual energy consumption; operational maintenance and repair cost estimates; life expectancy; and capital maintenance, repair, and replacement cost estimates of all facilities and utilities included in the master plan. Energy consumption estimates will be provided in the unit of measure most appropriate to the associated utility service to allow cost impact calculations at a future date based on current rates and agreements.

**Deliverables:** Produce a Program Statement document with narrative descriptions of each project component and implementation phase, executive summary, detailed construction cost estimates, detailed life cycle costing estimates, full schematic building level floor plans for each level impacted by the project, two-dimensional elevations, building sections, and color renderings of selected components, and three-dimensional color renderings of selected project areas. The narrative descriptions must include functions, occupant capacity/limits, building/structure and site infrastructure requirements, proposed materials, and applicable building code impacts. The executive summary will include all planning findings, project goals and principles, key recommendations, and an implementation plan.

Produce a life cycle cost estimate document detailing energy consumption; operational maintenance and repair cost impacts; capital maintenance, repair, and replacement cost impacts; and life expectancy for all selected design alternatives.

All graphics must be grayscale compatible without losing meaning, distinguished characteristics, or legibility.

All final documentation must be provided electronically via download link, USB flash drive, or optical disc (CD or DVD) in its original electronic format and in Adobe Acrobat PDF format. All narrative text and cost estimate documentation shall also be provided in an unlocked, editable file format for future use and presentation outside of the final Program Statement document. Text shall be provided in rich text format (\*.RTF) or Microsoft Word XML document format (\*.DOCX) and cost estimates provided in Microsoft Excel XML workbook format (\*.XLSX). The content of the editable file formats must match the content of the final Program Statement document, but the organization, layout, and formatting needs only to be representative of the final content. All graphics, images, maps, plans, and renderings must be provided in electronic format separate from the master plan document in high-resolution 300 pixels per inch (ppi) raster format (\*.PNG), suitable for poster size (minimum 24-inches by 36-inches) publication. All graphics, images, maps, plans, renderings, models, and documentation will become the property of the university.

In addition to deliverables listed above, A/E shall provide:

- Seven (7) bound color copies. Six (6) bound color copies of the Concept Report, letter size. (Diagrams may be 11" x 17", folded to fit in the bound report). One (1) copy for DFDM and six (6) for UW System/ campus.
- Electronic copies, in PDF format, downloadable or via web link. All diagrams shall be capable of full graphic clarity in either color or black and white.
- Provide one mounted color image of the building exterior, approximately 30" x 36", mounted on a foam core board. The image need not be an image created specifically for this purpose but may be an image that is produced as part of the Design Report content. Also provide an electronic PDF of the image.

**Preliminary and Final Design Services:** In addition to the requirements for preliminary design through construction in the *DFDM Policy and Procedure Manual for Architects/Engineers and Consultants*, the following additions and clarifications should be noted:

- The design consultant(s) will work with DFDM and the appropriate campus staff (UW-Madison Division of Facilities Planning & Management, Recreational Sports, Environmental Health and Safety, and UW Police Department) to review the Program Statement, Preliminary Design, and Final Design documents. The design consultant(s) will attend a design review meeting at each of the Preliminary Design and Final Design review stages. The reviewers will provide written comments to the DFDM Project Manager based on the documents and discuss the comments with the design consultant(s). The design consultant(s) are required to provide written responses to the DFDM Project Manager.
- The A/E team will attend a review meeting at each of the Preliminary Review and Final Review stages. The A/E will provide the campus with eight (8) physical copies of complete review sets in addition to the review sets required for DFDM for the Preliminary Review and Final Reviews.
- A/E will provide 3D detailed design renderings illustrating massing, volume of main spaces, finishes, and colors for review by DFDM, FP&M, and UW Recreational Sports as the project progresses. These drawings should show information appropriate to the phase of the work (early drawings will show the architecture of the spaces; later drawings will show all colors and materials). These drawings will show exterior elevations and all major interior spaces. These drawings will also be used in the public and city zoning review process for the project.
- A/E will provide interior design services including design and specifications of systems furniture in office areas in addition to design and specification of all other movable furniture. This item should be a line item in the fee proposal.
- A/E will design building signage to include all life safety, room number, informational and way finding. Exterior building identification signage will be coordinated by FP&M staff and paid for by the project.
- The project will include design and construction documents for all landscape and site work around the new facility including new entry sidewalks, retaining walls, and landscape plantings and parking modifications, if necessary.
- At the end of construction, the A/E will provide DFDM with electronic copies and FP&M with two (2) electronic and two (2) hard-copies each of O&M manuals and record drawings/specifications in AutoCAD/MS Word/PDF format, including the work of all sub-consultants, furnishings, signage, etc. Any renderings or models generated by the AE will also be turned over to DFDM and campus.

Note that per the *DFDM Policy and Procedure Manual for Architects/Engineers and Consultants*, the following services will not be included in the scope of services:

- Hazardous material abatement design will be provided by a consultant under separate contract with DFDM based on the demolition plans. Abatement documents will be incorporated into the bid set.
- Third party Level-III commissioning will be contracted separately by DFDM.

The following documents will be made available to the successful design consultant team for reference, verification, and update as it relates to the project intent, description, and scope of work.

**RGD Associates**  
*Feasibility Study*  
*January 8, 2018*

<https://cpd.fpm.wisc.edu/planning/natorium-study-pre-design/>

**Note:** This template is based upon DFDM's *Policy and Procedure Manual for Architects/Engineers and Consultants*, December 2013 edition, Section Three - Pre-Design Phase (3.c.2.b Table of Contents, 3.C.2.e Physical Planning Issues, 3.C.2.h Room Data Sheets, 3.C.2.i Special Planning Issues, 3.C.2.j Budget).

ID	Y/N?	Description	Comments and Clarification Notes
1.00	<input checked="" type="checkbox"/>	<b>Project and Program Considerations</b>	<i>For Feasibility Studies, Project and Program Considerations items that are selected to recognize that the documentation and professional guidance required to develop the required support documentation is above and beyond the traditional 10% concept report, but not necessarily completing the full 35% preliminary design efforts.</i> <b>1.05</b> Please see < <a href="https://www.wisconsin.edu/capital-planning/reference/deliverables/">https://www.wisconsin.edu/capital-planning/reference/deliverables/</a> > for more detailed AutoCAD and geospatial data definition requirements. <b>1.06</b> Includes erosion control requirements.
1.01	<input checked="" type="checkbox"/>	<u>Program Verification</u>	
1.02	<input checked="" type="checkbox"/>	<u>Design Concept</u>	
1.03	<input checked="" type="checkbox"/>	<u>Site/Survey</u>	
1.04	<input checked="" type="checkbox"/>	Site/Existing Conditions	
1.05	<input checked="" type="checkbox"/>	Facilities Site Plan	
1.06	<input checked="" type="checkbox"/>	Existing Land Use	
1.07	<input checked="" type="checkbox"/>	<i>Topography/Drainage</i>	
1.08	<input checked="" type="checkbox"/>	<i>Vegetation/Landscaping</i>	
1.09	<input checked="" type="checkbox"/>	<i>Subsurface Conditions</i>	
1.10	<input checked="" type="checkbox"/>	<i>Construction Staging/Occupancy of Site During Construction</i>	
1.11	<input type="checkbox"/>	<i>WEPA – Environmental Impact Determination and Identification</i>	
1.12	<input checked="" type="checkbox"/>	<u>Utilities/Infrastructure</u>	<b>1.13</b> Includes the central utility plant. <b>1.14</b> Includes chilled water, domestic water, electrical power, natural gas, sanitary sewer, storm water sewer, steam and condensate return, and telecommunications. <b>1.20</b> Includes during construction period.
1.13	<input checked="" type="checkbox"/>	Existing: capacity and condition of existing lines and equipment	
1.14	<input checked="" type="checkbox"/>	Proposed central and site utility systems	
1.15	<input checked="" type="checkbox"/>	Maintaining utility services and infrastructure during construction	
1.16	<input checked="" type="checkbox"/>	<u>Transportation/Circulation</u>	
1.17	<input checked="" type="checkbox"/>	Vehicular/Bicycle/Pedestrian	
1.18	<input checked="" type="checkbox"/>	Parking	
1.19	<input checked="" type="checkbox"/>	Service/Loading/Unloading	
1.20	<input checked="" type="checkbox"/>	Access to Site	
1.21	<input checked="" type="checkbox"/>	<u>Existing Building Conditions</u>	
1.22	<input type="checkbox"/>	Conditions of Existing Building Spaces as necessary for design	
1.23	<input type="checkbox"/>	Condition of Existing Infrastructure and Equipment	
1.24	<input checked="" type="checkbox"/>	Demolition Planning/Phasing	
1.25	<input checked="" type="checkbox"/>	<u>Building Systems</u>	
1.26	<input checked="" type="checkbox"/>	Structural Systems	
1.27	<input checked="" type="checkbox"/>	Mechanical Systems/HVAC	
1.28	<input checked="" type="checkbox"/>	<i>Environmental Control</i>	
1.29	<input checked="" type="checkbox"/>	Electrical/Lighting	
1.30	<input checked="" type="checkbox"/>	<i>Lighting Design</i>	
1.31	<input checked="" type="checkbox"/>	<i>Fire Alarm</i>	
1.32	<input checked="" type="checkbox"/>	<i>Telecommunications Systems</i>	
1.33	<input checked="" type="checkbox"/>	<i>Access Control</i>	
1.34	<input checked="" type="checkbox"/>	Plumbing	
1.35	<input checked="" type="checkbox"/>	Fire Protection Systems	
1.36	<input checked="" type="checkbox"/>	Signage (Building and Room/Space Identification)	
1.37	<input checked="" type="checkbox"/>	Other Systems	
2.00	<input checked="" type="checkbox"/>	<b>Design Considerations</b>	<b>2.04</b> Includes the Sustainable Facilities Standards Checklist items applicable to the project. <b>5.01</b> Please see < <a href="https://www.wisconsin.edu/capital-planning/reference/deliverables/">https://www.wisconsin.edu/capital-planning/reference/deliverables/</a> > for more detailed AutoCAD and geospatial data definition requirements. <b>5.02</b> Includes performance test data, list of normal and alarm set points, and contact information for responsible parties. <b>5.03</b> Includes all newly installed components, include list of all input/output control points and custom software with programming requirements needed to maintain and/or field-modify newly installed systems. <b>5.04</b> Includes contact information for responsible parties and date of warranty expiration.
2.01	<input checked="" type="checkbox"/>	<u>Cost Estimating</u>	
2.02	<input checked="" type="checkbox"/>	<u>Constructability</u>	
2.03	<input checked="" type="checkbox"/>	<u>Accessibility</u>	
2.04	<input type="checkbox"/>	<u>Sustainable Facilities and Energy Conservation</u>	
2.05	<input checked="" type="checkbox"/>	<u>Equipment Layout</u>	
2.06	<input checked="" type="checkbox"/>	<u>Campus Technical Review</u>	
3.00	<input checked="" type="checkbox"/>	<b>Bid Documents (see contract for details)</b>	
4.00	<input checked="" type="checkbox"/>	<b>Construction Administration (see contract for details)</b>	
4.01	<input checked="" type="checkbox"/>	<u>Commissioning (Level 1)</u>	
5.00	<input checked="" type="checkbox"/>	<b>Post-Construction Deliverables (see contract for details)</b>	
5.01	<input checked="" type="checkbox"/>	<u>As-Built Record Drawings</u>	
5.02	<input checked="" type="checkbox"/>	<u>Commissioning Details</u>	
5.03	<input checked="" type="checkbox"/>	<u>Operations and Maintenance Manuals</u>	
5.04	<input checked="" type="checkbox"/>	<u>Warranty/Guarantee Details</u>	

**SUPPLEMENTAL SERVICES**

ID	Y/N?	Description	Comments and Clarification Notes
<b>A.00</b>	<input checked="" type="checkbox"/>	<b>Planning Considerations</b>	<i>A.04 Includes developing recommendations based on room scheduling and utilization data, program delivery, enrollment projections, and appropriate benchmarks.</i>
A.01	<input type="checkbox"/>	<u>Master Planning</u>	
A.02	<input type="checkbox"/>	<u>Blocking and Stacking Diagramming</u>	
A.03	<input type="checkbox"/>	<u>Scope Definition</u>	
A.04	<input type="checkbox"/>	<u>Space Needs Analysis</u>	
A.05	<input checked="" type="checkbox"/>	<u>Site Evaluation</u>	
A.06	<input type="checkbox"/>	<u>Market Study</u>	
A.07	<input type="checkbox"/>	<u>Space Utilization Analysis</u>	
<b>B.00</b>	<input checked="" type="checkbox"/>	<b>Project and Program Considerations</b>	<i>B.04 Includes Geotechnical Survey and Report. Please see &lt;<a href="https://www.wisconsin.edu/capital-planning/reference/deliverables/">https://www.wisconsin.edu/capital-planning/reference/deliverables/</a>&gt; for more detailed AutoCAD and geospatial data definition requirements. All buildings, site improvements, and site utilities within the designated project area, including those not impacted by project construction. Reference known elevation datum and include attributes for input or transfer to campus GIS mapping. B.12 Includes adaptive reuse, functionality assessment, and/or physical condition assessment.</i>
B.01	<input checked="" type="checkbox"/>	<u>Occupants/User Activities</u>	
B.02	<input checked="" type="checkbox"/>	Space Tabulation	
B.03	<input checked="" type="checkbox"/>	Room Data Sheets	
B.04	<input checked="" type="checkbox"/>	<u>Site/Survey</u>	
B.05	<input checked="" type="checkbox"/>	Easements	
B.06	<input checked="" type="checkbox"/>	Zoning Approval Efforts	
B.07	<input checked="" type="checkbox"/>	Floodplain Restrictions	
B.08	<input checked="" type="checkbox"/>	Landholdings/Ownership/Boundaries	
B.09	<input checked="" type="checkbox"/>	<u>Utilities/Infrastructure</u>	
B.10	<input type="checkbox"/>	Energy Modeling	
B.11	<input type="checkbox"/>	<u>Existing Facilities Survey</u>	
B.12	<input type="checkbox"/>	Facility Condition Assessment	
B.13	<input checked="" type="checkbox"/>	Document Existing Conditions	
B.14	<input type="checkbox"/>	Concealed Conditions	
B.15	<input type="checkbox"/>	Building Code Analysis	
B.16	<input checked="" type="checkbox"/>	Phasing Options and Analysis	
B.17	<input checked="" type="checkbox"/>	Adjacency Analysis and Matrix	
B.18	<input checked="" type="checkbox"/>	<u>Facility Specialties</u>	<i>B.23 Includes architectural and performance lighting (artistic, athletics, theatrical) B.25 Includes selection, recommendation, specification, and/or systems furniture layout.</i>
B.19	<input checked="" type="checkbox"/>	Acoustics	
B.20	<input checked="" type="checkbox"/>	Elevator Constructor/Vertical Transportation	
B.21	<input type="checkbox"/>	Food Service Operations/Kiosks	
B.22	<input checked="" type="checkbox"/>	Security/Video Surveillance	
B.23	<input type="checkbox"/>	Specialty Lighting	
B.24	<input type="checkbox"/>	Other (Please Specify)	
B.25	<input checked="" type="checkbox"/>	<u>Furniture and Equipment</u>	
B.26	<input checked="" type="checkbox"/>	Design Standards to Follow	
B.27	<input checked="" type="checkbox"/>	Furniture Design Services	
B.28	<input checked="" type="checkbox"/>	Fixed Equipment	
B.29	<input checked="" type="checkbox"/>	Movable Equipment	
B.30	<input type="checkbox"/>	Art Selection Assistance	
B.31	<input checked="" type="checkbox"/>	<u>Universal Design</u>	<i>C.01 Includes additional on-site construction administration beyond basic services</i>
B.32	<input type="checkbox"/>	<u>Historic Preservation</u>	
B.33	<input type="checkbox"/>	Historic Structure Report (HSR)	
B.34	<input type="checkbox"/>	Historic Preservation Plan (HPP)	
B.35	<input type="checkbox"/>	Wisconsin Historical Society Approval for Building Concept	
B.36	<input checked="" type="checkbox"/>	<u>Presentations</u>	
B.37	<input checked="" type="checkbox"/>	Formal Presentation(s)	
B.38	<input checked="" type="checkbox"/>	Presentation Materials	
B.39	<input checked="" type="checkbox"/>	Facilitate on Campus Design Document Review	
<b>C.00</b>	<input checked="" type="checkbox"/>	<b>Construction Administration</b>	
C.01	<input checked="" type="checkbox"/>	<u>Additional Construction Administration Services</u>	
<b>D.00</b>	<input checked="" type="checkbox"/>	<b>Miscellaneous</b>	<i>D.02 includes LEED certification, certification submittal, and/or measurement &amp; verification report.</i>
D.01	<input checked="" type="checkbox"/>	<u>Wayfinding</u>	
D.02	<input type="checkbox"/>	<u>LEED™</u>	

SUPPLEMENTAL SERVICES

D.03	<input checked="" type="checkbox"/>	<u>Renderings, Models, and Mock-Ups</u>
D.04	<input checked="" type="checkbox"/>	<u>Building Information Modeling</u>
D.05	<input type="checkbox"/>	<u>Measured Drawings Beyond Project Area</u>
D.06	<input type="checkbox"/>	<u>Commissioning (i.e. Level 2, Exterior Envelope)</u>
D.07	<input type="checkbox"/>	<u>Post Occupancy Evaluation</u>
E.00	<input type="checkbox"/>	Other (Please Specify)

*E.00 Includes Benchmark Facility Tours, Selective and Investigative Demolition, Post-bidding Analysis, and Specialty Bidding Conditions*

SUPPLEMENTAL SERVICES

Board of Regents Evaluation Criteria Responses

ID	Y/N?	Description	Comments and Clarification Notes
F.00	<input checked="" type="checkbox"/>	<b>General Considerations</b>	<p><i>F.01 Determine and document what type(s) of space is(are) required and where surge space is available to facilitate any portion of the proposed project solution/phase/alternate.</i></p> <p><i>F.02 Determine and document if any site utility work is required to facilitate the proposed project scope that <u>is not</u> included in the proposed project solution/phase/alternate scope and budget estimate.</i></p>
F.01	<input type="checkbox"/>	<u>Surge Space(s) Identification</u>	
F.02	<input checked="" type="checkbox"/>	<u>Utility Infrastructure Impact(s) Identification</u>	
G.00	<input checked="" type="checkbox"/>	<b>Priority Considerations</b>	<p><i>G.01 Determine and document what capital project work is required to facilitate any portion of the proposed project solution/phase/alternate. The scope of work identified in this section <u>should not</u> be included in the proposed project solution/phase/alternate scope or budget estimate.</i></p>
G.01	<input checked="" type="checkbox"/>	<u>Project Sequence Dependency Identification</u>	
H.00	<input checked="" type="checkbox"/>	<b>Physical Development Considerations</b>	<p><i>H.01 Determine and document what building code compliance resolutions are required and included in the proposed project solution/phase/alternate scope and budget estimate.</i></p> <p><i>H.02 Determine and document what health &amp; safety condition compliance resolutions are required and included in the proposed project solution/phase/alternate scope and budget estimate.</i></p> <p><i>H.03 Determine and document what environmental protection condition compliance resolutions are required and included in the proposed project solution/phase/alternate scope and budget estimate.</i></p> <p><i>H.04 Determine and document what facility and/or program standards resolutions are required and included in the proposed project solution scope/phase/alternate and budget estimate.</i></p> <p><i>H.05 Complete the table shown at left as per each proposed project solution/phase/alternate and provide the additional assessments for each type of project space as outlined below the table.</i></p>
H.01	<input checked="" type="checkbox"/>	Code Compliance Resolution	
H.02	<input checked="" type="checkbox"/>	Health & Safety Condition Resolution	
H.03	<input checked="" type="checkbox"/>	Environmental Protection Condition Resolution	
H.04	<input checked="" type="checkbox"/>	Facility and/or Program Standards Condition Resolution	
H.05	<input checked="" type="checkbox"/>	Space Profile (Demolition/Renovation/New Construction)	
		Demolition 148,667 ASF 249,579 GSF \$ 5,344,000	
		Renovation 0 ASF 0 GSF \$ 0	
		New 170,200 ASF 262,108 GSF \$ 92,388,000	
		Construction Project Total 318,867 ASF 511,687 GSF \$ 97,732,000	
		<p><i>Determine and document the following for each solution/phase/alternative...</i></p> <ol style="list-style-type: none"> <li><i>Estimated capital renovation costs and current replacement value for the proposed space to be demolished.</i></li> <li><i>Estimated capital renovation costs and current replacement value for the proposed space to be renovated.</i></li> <li><i>If any portion of the proposed new construction space is required to resolve building codes and standards, and/or health and safety conditions, and/or environmental protection conditions, and/or facility or program standards which cannot be economically be resolved in existing space.</i></li> <li><i>If any portion of the proposed new construction space is required to resolve demonstrated capacity issues or space shortages related to enrollment growth and 5-year enrollment trends (specific program and/or overall campus).</i></li> <li><i>If any portion of the proposed new construction is required to resolve poor adaptive reuse potential for existing space that could have been included in the proposed project solution scope and budget estimate.</i></li> </ol>	
I.00	<input checked="" type="checkbox"/>	<b>Program Considerations</b>	<p><i>I.01 Determine and document functionality improvements that the proposed project solution/phase/alternate provides in comparison to existing conditions and space.</i></p> <p><i>I.02 Determine and document a total energy cost estimate comparison for the proposed project per solution/phase/alternate vs. existing space energy costs. Please breakdown the energy cost estimate by electrical, heating, and cooling.</i></p>
I.01	<input checked="" type="checkbox"/>	Functionality Improvement(s) Identification	
I.02	<input checked="" type="checkbox"/>	Energy Cost Impact Profile	
I.03	<input checked="" type="checkbox"/>	Space Shortage(s) Condition Resolution	
I.04	<input checked="" type="checkbox"/>	Space Utilization Profile	

*1.03 Determine and document if any portion of the proposed project solution/phase/alternate resolves a demonstrated space shortage for program space, especially instructional classrooms and laboratories.*

*1.04 Determine and document if any portion of the proposed project solution resolves known and demonstrated poor space utilization, especially instructional classrooms and laboratories.*



## Major Project Request 2019 - 21 Biennium

<b><u>Agency</u></b>	<b><u>Institution</u></b>	<b><u>Facility ID</u></b>	<b><u>Facility Name</u></b>
University of Wisconsin	Madison	285-0A-0031	Gymnasium/Natorium

<b><u>Project Title</u></b>	<b><u>Priority</u></b>
Gymnasium/Natorium Replacement	15

### **Project Request**

The UW System requests that the Board of Regents recommend this project of \$126,391,000 (\$91,991,000 Program Revenue Supported Borrowing with a 30-year term and \$34,400,000 Gifts) to raze the original gymnasium and natatorium and construct a replacement facility on the same site at UW-Madison be included in the proposed 2019-21 Capital Budget request that will be submitted to the Department of Administration and the State Building Commission. The proposed segregated fee of \$114.38 will be implemented starting in 2020 through 2050, for a duration of 30 years.

### **Project Description and Scope**

This project razes the original Gymnasium/Natorium, prepares the site, and constructs a new replacement facility with an adaptive fitness laboratory for the Kinesiology program, basketball courts, ice sheet with spectator seating, indoor track, multi-purpose activity spaces, racquetball courts, expanded fitness for cardio and strength training, and a wellness center for Recreational Sports. These amenities are prevalent at peer institutions. Although the modest net square footage increase will still not meet the National Intramural and Recreational Sports Association (NIRSA) standards for square footage per student, it will allow the Recreational Sports program to grow and provide increased accessibility, visibility, and utilization by students. As the university seeks to increase enrollment, additional facilities will be required to accommodate that growth and the critical space needs have been identified and included in this request. The following summary is the construction cost portion for the proposed scope of work.

<b>Demolition:</b>	148,667	ASF	249,579	GSF	\$	5,344,000
<b>Renovation:</b>	0	ASF	0	GSF	\$	0
<b>New Construction:</b>	170,200	ASF	262,108	GSF	\$	72,580,000
<b>Project Total:</b>	<b>318,867</b>	<b>ASF</b>	<b>511,687</b>	<b>GSF</b>	\$	<b>77,924,000</b>

The new facility will be designed to promote a connection to the exterior campus, with natural light permeating deep into the interior to allow a natural interaction between the activities taking place both inside and outside the building. The proposed additional square footage is anticipated to produce a significant increase to space utilization by maximizing the connections between and among various activities. Some of these connections will be blended into each other, thus removing the circulation component. New and enhanced activity spaces and opportunities are anticipated to generate revenue for the Recreational Sports programs from club sports, faculty, staff, community, and external entities that use the facility, for example the Wisconsin Interscholastic Athletic Association (WIAA).

Completion of this project will also allow Intercollegiate Athletics, as per their master plan, to repurpose and fully occupy the Camp Randall Sports Center, space that is currently shared with Recreational Sports. A new ice arena, with a singular new sheet of ice, will be located in the proposed new Gymnasium/Natorium and effectively relocating the sheet of ice currently located in the Sports Center. The campus has secured a gift donation to be dedicated specifically to the creation of a new ice arena.

### **Background**

The original facility was constructed in an era and for a purpose vastly different than current physical activity demands. The building was designed to host men-only physical education classes and activity. It was expanded with single-use activity rooms, long windowless corridors between activity spaces, and men's restrooms. The Gymnasium/Natorium boasts annual participation from 1.5 million campus users and 100,000 users from the hosted special events. It provides facilities for robust fitness and wellness programs and a multitude of sports, swimming, and group-based activities options.

The 2007 Recreational Sports Master Plan was updated in 2013. A campus referendum was approved in March 2014 that included a \$223 million plan to reconstruct the Southeast Recreational Facility and the Gymnasium/Natorium and

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to renovate the Near East and West Playfields. A feasibility study was completed in 2017 to validate the programmatic needs for the replacement facility, and this proposed scope of work and budget estimate is based upon that effort.

### Analysis of Need and Project Justification

The Gymnasium/Natatorium (148,667 ASF/249,579 GSF) was constructed in 1962 with an addition in the 1970s. In its current state, the facility does not adequately support the current or future space needs of Recreation Sports. A comprehensive and detailed condition assessment was completed and determined that the mechanical system controls, electrical power, lighting, and telecommunications system were obsolete, not energy efficient, and of a condition and reliability that required complete replacement. Modifications to these systems in the current facility were estimated to be financially infeasible, if they could be accomplished at all. The assessment concluded that the mechanical system controls could not be upgraded to meet current energy efficiency standards and the facility lacked the space required to upgrade and expand the telecommunications system. It was determined that in addition to the significant deferred maintenance backlog, it would be prohibitively expensive to renovate due to the structural and geometric hurdles, and the magnitude of new infrastructure that would be needed throughout, under, and around its current site.

There is inadequate mechanical room space in the facility and the basement is susceptible to flooding, as evidenced by the severe corrosion on building elements and equipment. The gymnasium and workout areas are not served by the central campus chilled water system and have no ability to reduce the humidity or temperature in those spaces. Consequently, during warm and humid days, the building frequently overheats and is shut down completely when extremely hot and humid temperatures are experienced. The ceramic wall tiles in the natatorium are failing and falling off the walls and there is extensive corrosion on the windows and piping in the space.

Previous facility renovations to incorporate new types of spaces (including female physical education classes, activities, and support spaces) have fragmented the building infrastructure and space configurations. This fragmentation has resulted in a configuration and dedicated, specialized spaces that cannot be used for shared programmatic use. Due to the buildings existing structural systems, it is unable to support expanded space for programmatic needs. New spaces would require the removal of existing columns and bearing walls requiring extensive and expensive major alternatives to existing structural systems. There is a lack of electrical service throughout the building to serve the needs of equipment located in gymnasiums, performance and strength and conditioning rooms which leads to constant tripping of breakers attempting to meet the demand of the users. The existing electrical switchgear, located in the basement, shows signs of dampness and is subject to groundwater seepage.

### Alternatives

The option to comprehensively remodel the Gymnasium/Natatorium was investigated and determined to be cost ineffective, as the budget estimate to renovate would have resulted in a significantly compromised facility that was more than 50% of the cost to construct a new facility with no compromises. The planning and pre-design efforts already completed have concluded the Gymnasium/Natatorium cannot effectively be renovated for modern recreational sports and activities due to structural limitations and complex space geometries that hamper building infrastructure renovation, as well as the limitations of the utility corridor paths available to extend and install the new central site utility services required.

### Project Budget per Request for A/E Services

Construction:	\$	
Hazardous Materials:	\$	
<b>Total Construction:</b>	<b>\$</b>	
Design Fees (Basic):	\$	
Design Fees (Other):	\$	
<b>Total Design Fees:</b>	<b>\$</b>	
Contingency:	\$	
DFDM Management Fees:	\$	
Equipment/Other:	\$	
<b>Total Budget Estimate:</b>	<b>\$</b>	<b>95,025,000</b>

### Project Schedule per Request for A/E Services

A/E Selection:	Apr 2019
Design Report:	Dec 2019
Approval:	Feb 2020
Bid Date:	Dec 2020
Start Project:	Feb 2021
Substantial Completion:	Dec 2022
Project Close Out:	Jul 2023

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**Previous Action**  
None.

### Segregated Fee Impact(s)

iFiscal Year				Project Fee Impact		Description	
				Increment	Total		
2018	to	2020	\$	0.00	\$	1,282	Increase included in the 2014 student referendum to increase segregated fees. Segregated fees are charges, in addition to tuition, assessed to all students for student services, activities, programs, and facilities that support the mission of UW-Madison. All projects listed in the referendum (South East Recreational Facility replacement, Gym/Nat Replacement, Near West Play Fields, and Near East Play Fields) were approved by UW-Madison students in a FY14 referendum. Students voted in support with an 87% margin of victory (12,070 to 1,914), accounting for 34.4% of the total student population on campus. The vote reflected the campus's highest voter turnout and the largest margin of victory in school history for a referendum of this nature.
2020	to	2050	\$	114.38	\$	1,396	

### Impact on Operating Budget

	FTE	Cost	Description
Custodial Staff:	1.00	\$ 29,292	It is estimated that an additional \$1,306,000 will be required annually to support the completion of this project for staffing, supplies and expenses, and energy bills. Adequate and appropriate operational budget sources have been identified and internally allocated/committed to support this proposed project.
Maintenance Staff:	0.00	\$ 1,221,000	
Supplies & Expenses:		\$ 2,519	
Utility Bills:		\$ 53,000	
<b>TOTAL:</b>	<b>1.00</b>	<b>\$ 1,305,811</b>	