



THE UNIVERSITY
of
WISCONSIN
MADISON

**REQUEST FOR ARCHITECTURAL
& ENGINEERING SERVICES**

Wisconsin Veterinary Diagnostic
Laboratory Renovation and Expansion

DFDM Project # 21I2Q

December 2021

CONSULTANT REQUIREMENTS

Architectural/Engineering/Planning (Rev. 2021-07)

-This request provides architectural/engineering/planning (AEP) resources to complete the project phases indicated below for **Project No. 21I2Q – Wisconsin Veterinary Diagnostic Laboratory Renovation and Expansion – Barron 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 and demonstrate specific expertise and experience in the design and coordination of BSL2 and BSL3 laboratories within higher-ed facilities while part of a design team. Work to include project area surveys, acquiring field data, and verifying as-built conditions to assure accurate development of design and bidding documents. Project seeks to expand and renovate the Wisconsin Veterinary Diagnostics Laboratory-Barron (WVDL-Barron) to create a modern scientific facility that meets the laboratory and space needs of the University and the State of Wisconsin, Department of Agriculture, Trade and Consumer Protection (DATCP). The recommended solution allows the WVDL to remain operational during construction.

The consultant(s) will participate in a highly collaborative and interactive campus planning process by meeting with appropriate campus staff, including UW Madison Facilities Planning and Management and team members from the WVDL to develop Preliminary Design, and Final Design documentation. Working in collaboration with 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 project and construction schedules for each design alternative; and determining and documenting any project work dependencies for selected design alternatives.

The design consultant(s) will provide preliminary design services through construction administration services as indicated in the current Division of Facilities Development (DFD) *Policy and Procedure Manual for Architects/Engineers and Consultants*, and the DFD *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.

COST ESTIMATING

Provide conceptual construction cost estimates for all design alternatives and provide full budget estimates for selected design. All estimates for a selected design 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, 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.

PRELIMINARY AND FINAL DESIGN SERVICES

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

- The design consultant(s) will work with DFD and the appropriate campus staff 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 DFD 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 DFD Project Manager.

Note that per the DFD *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.
- Preparation of a Wisconsin Environmental Protection Act (WEPA) Environmental Assessment/Statement will be contracted separately. It is expected that the AEP team will participate in providing drawings, data, and design details to the WEPA consultant and attend at least one public information meeting to present the project on Type II EIA projects and up to three public meetings for full Type I EIS projects.

CONSULTANT REQUIREMENTS

Architectural/Engineering/Planning (Rev. 2021-07)

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.

***Advanced Planning Wisconsin Veterinary Diagnostic
Laboratory,
UW-Madison
Barron, Wisconsin
April 16, 2021
DFD Project 20H1H***

ID	Y/N?	Description	Comments and Clarification Notes
1.00	<input checked="" type="checkbox"/>	Project and Program Considerations	
1.01	<input checked="" type="checkbox"/>	<u>Programming & Program Verification</u>	1.01 Verify program in existing pre-design study meets the WVDL needs and stays within the enumerated budget.
1.02	<input checked="" type="checkbox"/>	<u>Design Concept</u>	1.02 Verify Design Concept within pre-design study. Propose additional design options that meet the budget, scope and schedule.
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	1.05 Please see < https://www.wisconsin.edu/capital-planning/reference/deliverables/ > for more detailed AutoCAD and geospatial data definition requirements.
1.07	<input checked="" type="checkbox"/>	Topography/Drainage	1.06 Includes erosion control requirements.
1.08	<input checked="" type="checkbox"/>	Vegetation/Landscaping	
1.09	<input checked="" type="checkbox"/>	Subsurface Conditions	
1.10	<input checked="" type="checkbox"/>	Construction Staging/Occupancy of Site During Construction	
1.11	<input checked="" type="checkbox"/>	WEPA – Environmental Impact Determination and Identification	
1.12	<input checked="" type="checkbox"/>	<u>Utilities/Infrastructure</u>	1.13 Site is not connected to UW-Madison’s utility services. Verify capacity for proposed utility loads and ensure project site is equipped to handle loads. If not, add to design. Facility should connect the university’s DDC system.
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>	1.14 Wel water, electrical power, natural gas, sanitary sewer, storm water sewer, steam and condensate return, and telecommunications.
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 Includes during construction period. Building will remain occupied and in use during construction.
1.20	<input checked="" type="checkbox"/>	Access to Site	
1.21	<input checked="" type="checkbox"/>	<u>Existing Building Conditions</u>	
1.22	<input checked="" type="checkbox"/>	Conditions of Existing Building Spaces as necessary for design	
1.23	<input checked="" 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>	1.28 Environmental control to include the disposal of bio waste and various other chemicals or samples.
1.26	<input checked="" type="checkbox"/>	Structural Systems	
1.27	<input checked="" type="checkbox"/>	Mechanical Systems/HVAC	1.33 Access control to be connected to the universities access control system. Card readers to be utilized to secure facility
1.28	<input checked="" type="checkbox"/>	Environmental Control	1.37 Site currently use a well for potable water.
1.29	<input checked="" type="checkbox"/>	Electrical/Lighting	
1.30	<input checked="" type="checkbox"/>	Lighting Design	
1.31	<input checked="" type="checkbox"/>	Fire Alarm	
1.32	<input checked="" type="checkbox"/>	Telecommunications Systems	
1.33	<input checked="" type="checkbox"/>	Access Control	
1.34	<input checked="" type="checkbox"/>	Plumbing	
1.35	<input checked="" type="checkbox"/>	Fire Protection Systems	
1.36	<input checked="" type="checkbox"/>	Signage (Code Required; Building and Room/Space Identification)	
1.37	<input checked="" type="checkbox"/>	Other Systems	
2.00	<input checked="" type="checkbox"/>	Design Considerations	2.04 Includes the Sustainable Facilities Standards Checklist items applicable to the project.
2.01	<input checked="" type="checkbox"/>	<u>Cost Estimating</u>	
2.02	<input checked="" type="checkbox"/>	<u>Constructability</u>	5.01 Please see < https://www.wisconsin.edu/capital-planning/reference/deliverables/ > for more detailed AutoCAD and geospatial data definition requirements.
2.03	<input checked="" type="checkbox"/>	<u>Accessibility</u>	
2.04	<input checked="" type="checkbox"/>	<u>Sustainable Facilities and Energy Conservation</u>	5.02 Includes performance test data, list of normal and alarm set points, and contact information for responsible parties.
2.05	<input checked="" type="checkbox"/>	<u>Equipment Layout</u>	5.03 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.
2.06	<input checked="" type="checkbox"/>	Campus Technical Review	5.04 Includes contact information for responsible parties and date of warranty expiration.
3.00	<input checked="" type="checkbox"/>	Bid Documents (see contract for details)	
4.00	<input checked="" type="checkbox"/>	Construction Administration (see contract for details)	
4.01	<input checked="" type="checkbox"/>	<u>Commissioning (Level 1)</u>	
5.00	<input checked="" type="checkbox"/>	Post-Construction Deliverables (see contract for details)	
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
A.00	<input type="checkbox"/>	Planning Considerations	
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 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.00	<input checked="" type="checkbox"/>	Project and Program Considerations	<i>B.04 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 as necessary to complete this project.</i>
B.01	<input type="checkbox"/>	<u>Occupants/User Activities</u>	
B.02	<input 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 type="checkbox"/>	Zoning Approval Efforts	
B.07	<input type="checkbox"/>	Floodplain Restrictions	
B.08	<input type="checkbox"/>	Landholdings/Ownership/Boundaries	
B.09	<input type="checkbox"/>	<u>Utilities/Infrastructure</u>	
B.10	<input type="checkbox"/>	Energy Modeling	
B.11	<input checked="" type="checkbox"/>	<u>Existing Facilities Survey</u>	
B.12	<input checked="" type="checkbox"/>	Facility Condition Assessment	
B.13	<input 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 type="checkbox"/>	Adjacency Analysis and Matrix	
B.18	<input checked="" type="checkbox"/>	<u>Facility Specialties</u>	
B.19	<input type="checkbox"/>	Acoustics	
B.20	<input type="checkbox"/>	Elevator Constructor/Vertical Transportation	
B.21	<input type="checkbox"/>	Food Service Operations/Kiosks	
B.22	<input type="checkbox"/>	Security/Video Surveillance	
B.23	<input type="checkbox"/>	Specialty Lighting	
B.24	<input checked="" type="checkbox"/>	Laboratory BSL2/3	
B.25	<input checked="" type="checkbox"/>	<u>Furnishings, Fixtures, & Equipment</u>	
B.26	<input type="checkbox"/>	Select Only (campus to procure and install)	
B.27	<input type="checkbox"/>	Select & Specify (campus to procure and install)	
B.28	<input type="checkbox"/>	Select, Specify, & Supervise Installation	
B.29	<input checked="" type="checkbox"/>	Fixed Equipment	
B.30	<input checked="" type="checkbox"/>	Movable Equipment	
B.31	<input type="checkbox"/>	Art Selection Assistance	
B.32	<input type="checkbox"/>	<u>Universal Design</u>	
B.33	<input type="checkbox"/>	<u>Historic Preservation</u>	
B.34	<input type="checkbox"/>	Historic Structure Report (HSR)	
B.35	<input type="checkbox"/>	Historic Preservation Plan (HPP)	
B.36	<input type="checkbox"/>	Wisconsin Historical Society Approval for Building Concept	
B.37	<input type="checkbox"/>	<u>Presentations</u>	
B.38	<input type="checkbox"/>	Formal Presentation(s)	
B.39	<input type="checkbox"/>	Presentation Materials	
B.40	<input type="checkbox"/>	Facilitate on Campus Design Document Review	
C.00	<input type="checkbox"/>	Construction Administration	
C.01	<input type="checkbox"/>	<u>Additional Construction Administration Services</u>	
D.00	<input checked="" type="checkbox"/>	Miscellaneous	

SUPPLEMENTAL SERVICES

Architectural/Engineering/Planning (Rev. 2021-07)

D.01	<input type="checkbox"/>	<u>Wayfinding</u>
D.02	<input type="checkbox"/>	<u>Building Performance and Certification Standards Compliance</u>
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 checked="" 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)

D.04 See DFD "BIM Guidelines and Standards for AE" (<https://doa.wi.gov/Pages/DoingBusiness/BIM.aspx>)"
D.06 Provide Level 2 Commissioning for HVAC and BAS systems.

SUPPLEMENTAL SERVICES

Board of Regents Evaluation Criteria Support

ID	Y/N?	Description	Comments and Clarification Notes
F.00	<input type="checkbox"/>	Pre-Requisite Considerations	
F.01	<input type="checkbox"/>	<u>Surge Space(s) Identification and Suitability Determination</u>	
F.02	<input type="checkbox"/>	<u>Utility Infrastructure Impact(s) Identification and Strategy Recommendation</u>	
G.00	<input type="checkbox"/>	Capital Plan Considerations	
G.01	<input type="checkbox"/>	<u>Project Sequence Dependency Identification</u>	
H.00	<input type="checkbox"/>	Physical Development Impacts	
H.01	<input type="checkbox"/>	Code Compliance Resolution	
H.02	<input type="checkbox"/>	Health & Safety Condition Resolution	
H.03	<input type="checkbox"/>	Environmental Protection Condition Resolution	
H.04	<input type="checkbox"/>	Facility and/or Program Standards Condition Resolution	
H.05	<input type="checkbox"/>	Space Profile (Demolition/Renovation/New Construction)	
I.00	<input type="checkbox"/>	Programmatic Impacts	
I.01	<input type="checkbox"/>	Energy Use and Cost Impacts	
I.02	<input type="checkbox"/>	Space Quality, Performance, and Suitability Determination	
I.03	<input type="checkbox"/>	Space Quantity, Availability, and Capacity Determination	
I.04	<input type="checkbox"/>	Space Utilization Profile and Benchmarking	

Capital Project Request 2021-23 Biennium

<u>Agency</u>	<u>Institution</u>	<u>Facility ID</u>	<u>Facility Name</u>
University of Wisconsin	Madison	285-0A-0678	WVDL – Barron

<u>Project ID</u>	<u>Project Title</u>
2112Q	Wisconsin Veterinary Diagnostic Laboratory Renovation and Expansion – Barron

Project Intent

This project seeks to expand and renovate the Wisconsin Veterinary Diagnostics Laboratory-Barron (WVDL-Barron), Wisconsin to create a modern scientific facility that meets the laboratory and space needs of the University and the State of Wisconsin, Department of Agriculture, Trade and Consumer Protection (DATCP). The recommended solution allows the WVDL to remain operational during a two-phase project. Phase I constructs two separate additions that incorporate the existing under-utilized storage shed into the facility, and Phase II is an extensive renovation of the interior of the facility to increase lab space and accommodate anticipated staff increases.

Project Description and Scope

This project has undergone Advanced Planning (Pre-Design) and has been split into two phases to allow for operations to continue throughout construction.

Phase I: Building additions and storage building renovation. Includes mail/receiving, bacteriology, media prep, washroom, office addition, and storage. (1) On the east side of the building, an addition provides space for a mail/receiving room directly adjacent to the serology lab. The east addition will serve as the new public access into the building. The entry allows for a drop-off window for samples, along with a new one-way vehicular circulation driveway. (2) To the north, a second addition incorporates an existing storage barn and provides space for an upgraded bacteriology lab, office space, a data room, a small storage room, and a second mechanical room to accommodate the HVAC requirements of two new biosafety-level 2 (BSL-2) labs, one of which will be convertible to a BSL-3 lab. The connection and renovation of the existing storage barn will allow for back-of-house items to move out of the public view, allowing for more streamlined storage and contributing to overall facility efficiency.

Phase II: Renovation scope includes two BSL-2 labs (one which will be convertible to a BSL-3 lab) and related spaces, open office area, break room, staff entry, and upgrades to necropsy, serology, the existing toilet rooms, and other remaining spaces.

Due to the critical nature of the testing that occurs in the facility, construction will need to be carefully phased under one construction contract with no operational downtime. Existing spaces must remain operational during construction of adjacent areas. The east and north additions comprise Phase I to allow the existing office and bacteriology functions to remain operational during construction. These functions will relocate when the new spaces are complete. After occupancy of the new spaces, Phase II can begin, including interior demolition of the existing office area, completion of the corridor linking the existing building to the north addition, and modest upgrades to the remaining spaces.

Demolition:		ASF	GSF	\$	
Renovation:	4,051	ASF	5,395	GSF	\$
New Construction:		ASF	5,665	GSF	\$
Project Total:	4,051	ASF	11,060	GSF	\$ 7,372,000

Cost values (far right column) should reflect construction costs only.

Background

The Mission of the WVDL is to promote animal and human health and the vitality of the state and national agricultural economy through the delivery of high-quality veterinary diagnostics and exemplary customer service. The duties of the WVDL are described in Wis. Stat. § 36.58(2).

Capital Project Request 2021-23 Biennium

UW-Madison has a long history of veterinary diagnostic activities, dating back to the 1930s. The Wisconsin Animal Health Laboratory in Barron opened in 1958, moved to its current facility in 1992, and in 2000 was transferred from the state DATCP to UW-Madison and renamed the WVDL. In 2002, the laboratory became a core laboratory in the National Animal Health Laboratory Network (NAHLN) of the US Department of Agriculture. This designation permits the laboratory to be a full partner of state and federal agencies in protecting animal agriculture

Analysis of Need and Project Justification

The existing facility in Barron is inadequate in size and function. Labs do not meet current standards and need to be upgraded. The need for BSL-2 and BSL-3 laboratories in that part of the state is high. Market for the WVDL has increased roughly 80% over the last few years.

Through the advanced planning efforts several functional issues were also noted:

1. Existing offices are shared and/or serve multiple functions (storage and office).
2. Mail/receiving should be adjacent to serology for improved efficiency. The existing mail/receiving room includes the network server room, which also houses a freezer and storage.
3. The toilet and shower rooms currently serve as storage and laundry. The storage should be relocated so the showers can be used and accessibility requirements can be met.
4. The serology lab is adequate in size and layout. Ideally, it would be located next to mail/receiving.
5. Bacteriology, media prep, and the washroom should be located adjacent to each other. All of these spaces are currently undersized.
6. The existing necropsy space is adequate in size and layout and the hoist equipment, while present, is adequate to meet the facilities need. The north exterior doors facing the storage building could be eliminated.
7. Storage is currently located in several areas. One centralized location is preferred. Not having a BSL-3 lab is a concern. Currently, molecular testing and other testing requiring a BSL-3, are sent out-of-state for processing
8. Existing BSL-2 labs do not allow for molecular testing and cannot be converted to BSL-3 laboratories as needed.
9. There is no information available for the existing structure in the Wisconsin Asbestos and Lead Management System (WALMS). Because the building was constructed around 1992, the DFD hazardous materials manager does not believe asbestos or lead abatement work will be necessary.

Consultant Requirements

The desired consultant should have experience with design and construction of multi-phase projects in occupied structures in higher education and research laboratories of scope and size similar to the project. Experience within the design and construction of BSL-2 and BSL-3 facilities, specifically within the state of Wisconsin, is also preferred. Consultant work will include verifying as-built conditions to assure accurate development of design and bidding documents and production of necessary design and bidding documents. Consultants should indicate specific projects from past experience (including size, cost and completion date) in their letter of interest and when known, include proposal consulting partners and specialty consultants.

Capital Project Request 2021-23 Biennium

Project Budget

Construction:	\$	7,372,000
Hazardous Materials:	\$	
Total Construction:	\$	7,372,000
Design Fees (Basic):	\$	518,000
Design Fees (Other):	\$	74,000
Total Design Fees:	\$	592,000
Contingency:	\$	737,000
Management Fees:	\$	324,000
Furnishings/Fixtures/Eqpt:	\$	530,000
Total Budget Estimate:	\$	9,555,000

Funding Sources

GFSB:	\$	9,555,000
PRSB:	\$	0
Cash:	\$	0
Gifts:	\$	0
Grants:	\$	0
BTF:	\$	0
Other (Please Describe):	\$	0
Other (Please Describe):	\$	0
Other (Please Describe):	\$	0
Total Funding Sources:	\$	9,555,000

Project Schedule

A/E Selection:	Feb 2022
Design Report:	Feb 2023
Approval:	Jun 2023
Bid Opening:	Jun 2024
Start Project:	Mar 2025
Substantial Completion:	Aug 2026
Project Close Out:	Feb 2027

Project Contact (Institution)

Contact Name: Angela Bollinger
 Contact Email: angela.bollinger@wisc.edu
 Contact Phone: 608-263-3003

Previous Action

For this project, \$9,555,000 was enumerated in 2021 Wisconsin Act 58, section 9104(1)(h)1.i., Non-statutory provision; Building Commission.