

SOUTH DAKOTA BOARD OF REGENTS

Budget and Finance

AGENDA ITEM: 7 – N
DATE: March 29-30, 2023

SUBJECT

DSU Athletics Events Center – Revised Facility Design Plan (FDP)

CONTROLLING STATUTE, RULE, OR POLICY

[SDCL § 5-14-1](#) – Classification of Capital Improvements

[SDCL § 5-14-2](#) – Supervision by Bureau of Administration of Capital Improvement
Projects – Payment of Appropriated Funds

[SDCL § 5-14-3](#) – Preparation of Plans and Specifications for Capital Improvements –
State Building Committee – Approval by Board or Commission in Charge of
Institution

[BOR Policy 6:4](#) – Capital Improvements

[BOR Policy 6:6](#) – Maintenance & Repair

BACKGROUND / DISCUSSION

Dakota State University (DSU) requests approval of a revised Facility Design Plan for the construction of the new Athletics Events Center. This revised Facility Design Plan primarily increases the overall budget for the facility. Per BOR Policy 6:4, since the budget has changed, it is necessary to resubmit the Facility Design Plan for approval of the project.

The Athletics Events Center Preliminary Facility Statement was approved by the Board of Regents in December 2016. The Facility Program Plan was approved by the Board of Regents in October 2021 and the original Facility Design Plan was approved March 2022.

IMPACT AND RECOMMENDATIONS

This project would enable DSU to develop plans for an on-campus facility that will provide a new Event Center and adjoining fields for competition, practice, academic space, and support space. The facilities would also allow for growth in academic programs, such as biomechanics and an Institute on Human Performance and Aging. This project is the first phase of a larger scale Athletics Masterplan. The goal of the DSU Athletics Masterplan is to create a state-of-the-art sports campus for both men’s and women’s sports with new and renovated facilities to advance Trojan sports and foster recruitment of topflight athletes, coaches, and staff. The athletics district will include a football stadium with both indoor

(Continued)

DRAFT MOTION 20230329_7-N:

I move to approve the Revised Facility Design Plan for DSU’s Athletics Event Center with construction cost estimates of \$40,750,000 using private donations.

and outdoor suites, an interactive hall-of-fame, team lockers, and training facilities. A future phase would include a multi-purpose/competition Arena and an indoor sports training complex with a 300-meter track. The masterplan also includes a softball field, baseball field, soccer field, and various training facilities. The planning of this project aims at creating adjacencies in the design to share hospitality, support, and training spaces between the existing Memorial Fieldhouse, indoor and outdoor track, football stadium, and future Arena.

The additional spending authority for the project was granted with the passage of SB93 during the 2023 legislative session.

TOTAL CONSTRUCTION COST ESTIMATES

Description	Budget amount
Construction Costs	\$37,000,070
Total Contingency	\$751,930
Professional Fees	\$1,918,000
OSE Fee	\$75,000
FF&E	\$805,000
Commissioning	\$100,000
Geotechnical, Survey, and Construction Testing	\$90,000
Miscellaneous Fees	\$10,000
Total	\$40,750,000

PROPOSED FUNDING SOURCES

Total project cost is \$40,750,000 including construction, fees, and furnishings as identified in the table. This is \$7.75 million greater than the amount in the Facility Program Plan from March 2022. The increase consists of \$7 million from private funds guaranteed by the DSU Foundation and \$750,000 from Sodexo investments and other funds dedicated to the project. It is anticipated that that the \$40.75 million budget will not complete the entire interior of the building, thus requiring some spaces to be unfinished or “shelled” space.

ATTACHMENTS

Attachment I – DSU Athletics Events Center Revised Facility Design Plan

Dakota State University Athletics Events Center

Facility Design Plan - Revised



Dakota State University requests approval of the updated Facility Design Plan to construct a new Athletics Events Center on the campus. The [Preliminary Facility Statement](#) for this project was approved by the Board of Regents in December 2016 and the [Facility Program Plan](#) was approved October 7th, 2021. The original [Facility Design Plan](#) was approved March 30th, 2022. This updated Facility Design Plan primarily increases the overall budget for the facility.

A. Architectural, Mechanical, and Electrical Schematic Design

Architectural:

The planned facility will consist of spaces for student athletes, administration, coaches, academics, fans, and flexible hospitality spaces.

The building structure is planned to be a structural steel columns and beam framing with non-load bearing light gage metal studs to infill between steel columns. Typical floor framing will be concrete over composite floor deck on steel wide flange purlins. Typical roof framing will be metal roof deck on steel bar joists support by steel beams and columns.

The exterior cladding will be a combination of phenolic or metal panels and masonry. Window will be an aluminum storefront system. The roof will be adhered EPDM.

Athlete spaces

Lockers rooms are provided for football, baseball, softball and men's and women's soccer. The locker rooms are designed to use space efficiently by combining baseball and men's soccer in one space and softball and women's soccer in another space. With separate seasons for these sports, the design will take advantage of this efficient use of space. Locker rooms will accommodate lockers, toilets, sinks and showers. Direct outside access is provided out of each locker room to reduce debris from cleats tracking through the building.

Athletics support spaces

The building will include a strength and conditioning for athletics, a rehabilitation, and a therapy space.

E-sports athlete spaces

The Esports space features a PC café and a viewing area for over 100 people to gather and watch the events. The viewing area will also be used by the other sports teams.

Administration and coaches

Offices are provided in this space for the Athletics director, assistant athletics director, events director, sports information director, assistant sports information director, football head coach, football assistants, offensive assistant coaches, defensive assistant coaches, softball head coach, softball assistant coaches, baseball head coach, baseball assistant coaches, and an administrative assistant.

Academics

A biomechanics lab, two classrooms, and space to accommodate the Institute on Aging are provided in this facility.

Fans and flexible hospitality spaces

The general admission fan spaces consist of outdoor bleachers, with seatbacks located in the middle section. These bleachers are connected to a field level concourse along the building with two concessions spaces located at open gathering areas. Restrooms are centrally located to serve these fans. Suites are inside the building on the second level with a suite lounge centrally located to provide drink service, food, and socializing. The suites spaces will be used as conference and meeting rooms on non-game days. Another hospitality space is located on the south end of the facility for the Trojan Athletics Club members with a deck open to the field. This space is also sized to support events separate from game day. The two classrooms are located along the east façade, facing the field for flexible use during game time. A team store space is being planning to sell Trojan merchandise.

Kitchen and Catering

The building contains a kitchen with freezer and cooler space on second floor that will be able to service the suites and hospitality areas on game days. This will also provide catering services for other events and activities within the facility.

Future planning

The building is being designed to accommodate future connections to an arena (basketball, volleyball, and other sports) to the southwest and an indoor track and turf field facility to the north. The building contains a kitchen that will be able to service the suites and hospitality areas on game days, and also provide catering services for other events and activities within the facility.

Mechanical:

HVAC System:

The individual spaces will be conditioned with terminal heat pump units as manufactured by Bulldog Heat Pump or approved equivalent, similar to the system currently installed in East Hall and Heston Hall on campus. Each terminal heat pump will be connected to a two-pipe condenser water system. Dedicated outside air (DOAS) units will be used to temper ventilation air to be furnished into each individual space and will operate independently from the heat pump units. Addressing the ventilation air separately will save fan energy and improve indoor air quality. Heating will be provided by high efficiency condensing boilers.

Plumbing System:

Plumbing Fixtures:

Plumbing fixtures to be high efficiency low water consumption fixtures to meet the requirements for the Water Use Reduction Green Globe credits. Wall mounted 1.28 gpf water closets with automatic battery flush valves and wall mounted 0.125 gpf urinals with automatic battery flush valves will be installed. The facility will also have dual height electric water cooler sets with integral bottle fillers. Lavatories will have manual single lever 0.5 gpm faucets with thermostatic mixing valves at each lavatory.

New wall hydrants and hose bibs will be provided as needed in exterior and interior locations. All exterior hydrants shall be freeze-less type. A wall hydrant will be provided near the new chiller for cleaning purposes.

Domestic Water Piping & Insulation

New domestic water piping will be installed and distributed appropriately throughout the facility. It is anticipated that the domestic water service will be 4". The domestic water will be brought into the Field Level (Level 100) mechanical space parallel to the fire protection service. Plans for a water softening system will be incorporated. All mains & branch piping shall be insulated with fiberglass with vapor barrier.

Domestic Hot Water System

Domestic hot water will be provided to the facility via three gas-fired hot water heaters located in a Field Level (Level 100) mechanical room. Two of the hot water boilers will meet the required demand while the third hot water boiler will provide redundancy.

Sanitary Waste/Venting

All sanitary waste and venting shall be PVC piping and cast iron when within return air plenums.

Natural Gas Piping

All natural gas piping shall be schedule 40 black pipe with isolation valves and pressure reducing valves as necessary serving high efficiency hot water boilers & water heaters.

Storm Drainage

Room drainage will include piped primary drains with overflow scuppers. Interior piped drains will be PVC piping encased in insulation piped down to below grade to the site detention system.

Fire Sprinkler System:

A new fire protection service, anticipated to be 6", will enter the facility in a mechanical space. The new system and all components will be installed to meet NFPA 13 standards. This system will serve the entire building.

Electrical:

Lighting System:

Building Lighting

The lighting system shall include the provisions, installation and connection of lighting panels, lighting contactors, grounding, light fixtures, switches, and other material required for a complete installation. Lighting in general will be LED. No incandescent fixtures will be used. Light level will be determined per the IES recommended illumination levels for the various categories-tasks. Calculations will be done using "zonal cavity" method. Occupancy sensors will be utilized to provide energy conservation and comply with IECC and per ASHRAE 90.1. The project shall consist of a full lighting control system that will have capability of reporting energy usage to a central system.

Exterior Lighting

Exterior lighting on the building will be LED type with full cut-off fixtures.

Field Lighting

New LED energy efficient field lighting will be furnished and installed. The new football field and soccer/track lighting will be designed to IES level 2 class of play standards. The field lighting will provide an average of 50 horizontal footcandles with a maximum uniformity (max to min) of 2.0. It will provide a minimum of 40 vertical footcandles. The field lighting for the football field will consist of LED fixtures mounted to poles on the east side and mounted above the building on poles on the west side. This lighting shall also be used to illuminate the new and existing spectator seating. The average of 10 horizontal footcandles will be provided on a plane parallel to the stairs on the floor of the stands.

Fire Alarm System / Life Safety Systems:

The fire alarm system shall be installed to meet the present code requirements and meet DSU's standards. A fully addressable system will be used. The fire alarm system shall be able to communicate with existing fire alarm system. Exit and emergency lighting will be placed according to life safety codes.

Data / Phone System:

The data system will be installed by a BICSI certified installer. The new data/cabling system will meet the requirements of the latest edition of the DSU Technology Specifications, Building Infrastructure Requirements for DSU-Owned Buildings. The data and phone systems will be connected to the campus system using fiber optic cable.

Security System:

The security system will consist of rough ins for the cameras and door accesses systems. The locations would be coordinated with the owner. Rough ins would consist of conduits, terminated and tested cabling, and boxes. The security equipment would be by owner.

Power System:

Electrical Service will be a standalone feed from the City of Madison's North substation. The main service will be in the mechanical room on the first floor. 480v panelboards, step down transformers, and 208v panelboards will be installed in the first-floor mechanical room with additional panels located on the second floor as needed. Panelboard locations will be coordinated with other trades to minimize conflicts and allow for future electrical power needs. Common area lighting, power, and equipment will be metered according to the Green Globe's requirements.

All electrical devices (switches, outlets) will be commercial grade. All wiring will be in accordance with the National Electrical Code and the South Dakota State Electrical Commission Wiring Bulletin. EMT conduit will be used throughout the project for homeruns and for conduit runs between floors. There will be no PVC electrical conduit installed inside the building. Flexible metal conduit will be used for wiring light fixtures and motors.

B. Changes from Original Facility Design Plan (March 2022 version)

Changes include:

- Budget increase from \$33 million to \$40.75 million. This change is an increase of \$7 million from private funds guaranteed by the DSU Foundation through additional fundraising. The university also has up to \$750,000 that would be from capital investment from Sodexo and other funds dedicated to the project.

C. Impact to Existing Building or Campus-wide Heating/Cooling/Electrical Systems

The new building will have stand-alone heating system, thus will not impact the current boiler plant facility. DSU is still determining if the new building will connect to the campus electrical loop or direct connect to the utility provider, similar to how the Courtyard/LEC is connected.

D. Total Construction Cost Estimates

Total project cost is approximately \$40,750,000 including construction, fees, furnishings as identified in the following table. This is approximately \$7.75 million greater than the original amount in the original Facility Design Plan. The increase consists of \$7 million from private funds guaranteed by the DSU Foundation through additional fundraising and up to \$750,000 from investments from DSU's food service provider and other funds dedicated to the project.

It is anticipated that that the \$40.75 million budget will not complete the entire interior of the building, thus requiring some spaces to be unfinished or "shelled" space.

The Facility Design Plan budget is as follows:

Description	Budget amount
Construction Costs	\$37,000,070
Total Contingency	\$751,930
Professional Fees	\$1,918,000
OSE Fee	\$75,000
FF&E	\$805,000
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Total	\$40,750,000

E. Changes from Cost Estimates for Operational or M&R Expenses

There are no significant changes from the Facility Program Plan for operational costs estimates of the facility. M&R Expenses are anticipated to be a similar amount as estimated previously. The total sq. ft. of the building has been reduced, which reduces some M&R needs in the future, but that is anticipated to be offset by increased costs of the project.

F. Planned Project Timeline:

Project Phase	Dates
Schematic Design	January 4, 2022 – February 24, 2022
Design Development <i>Board of Regents – Facility Design Plan Approval</i>	February 28, 2022 – April 29, 2022 March 29-30, 2022
GMP from Construction Manager	Final GMP March 2023
Construction Documents	May 2, 2022 – March 10, 2023
Construction (Building)	November 14, 2022 – July 14, 2024
Occupancy	July 15, 2024

Attachment I – Site Plan:



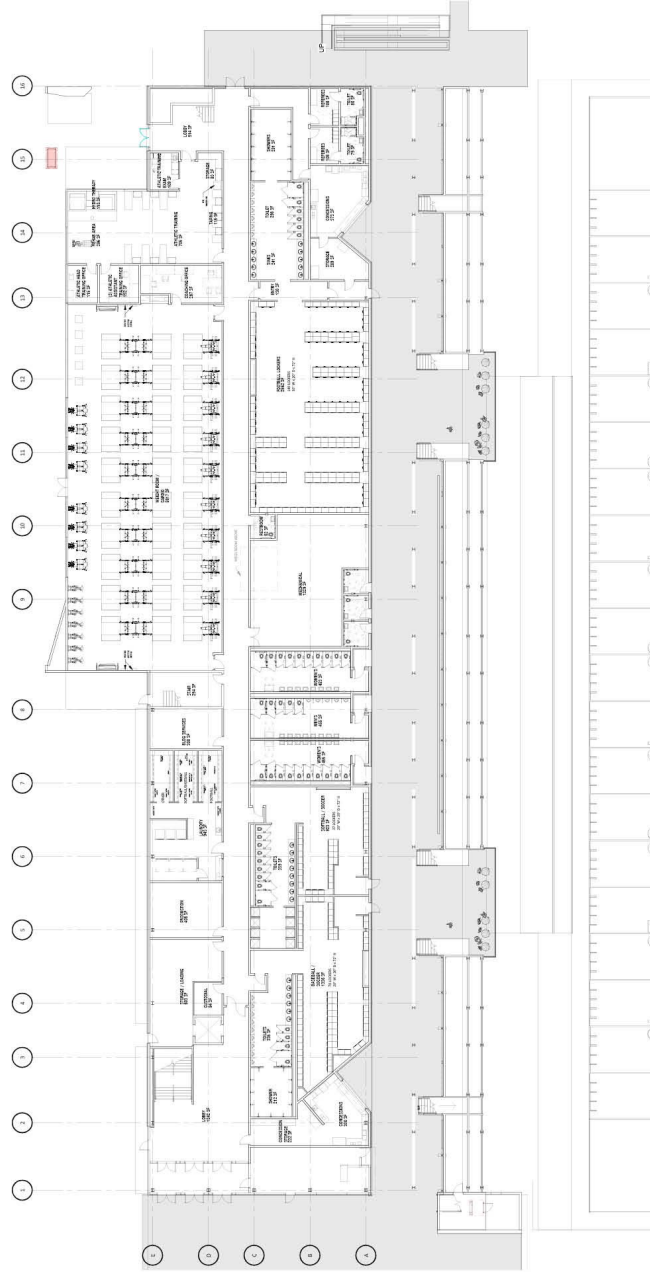
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Dakota State University Athletic Complex
Schematic Site Plan

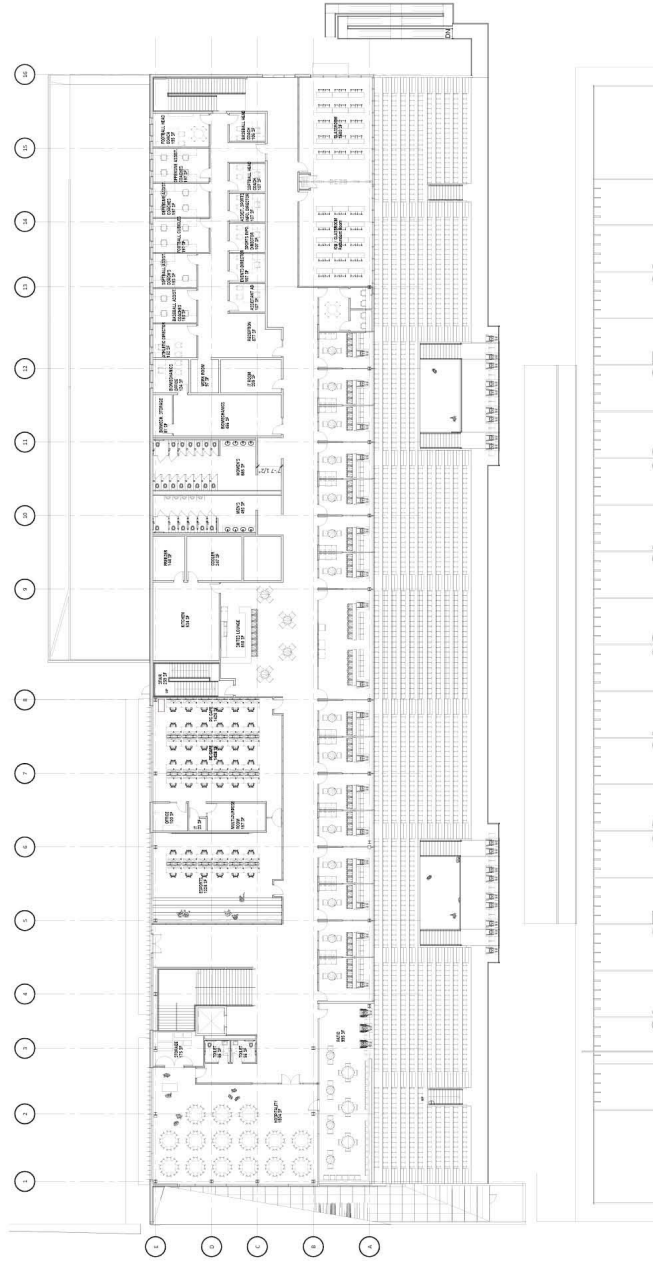
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Attachment II – First Floor:



DSU ATHLETIC EVENT CENTER

Attachment III – Second Floor:



DSU ATHLETIC EVENT CENTER

Attachment IV – Aerial Views:



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DESIGN FOR LIFE

DSU ATHLETIC EVENT CENTER 1