

# Leveling UP

BY PAUL TAYLOR SE, PE, AND

MELISSA JURGENS



Strong, open steel design drove a university football facility project built to raise the profile of an already successful program.



**Paul Taylor** ([ptaylor@saul.engineering](mailto:ptaylor@saul.engineering)) is a senior engineer and **Melissa Jurgens** ([mjurgens@saul.engineering](mailto:mjurgens@saul.engineering)) is a client development engineer, both with Saul Engineering.

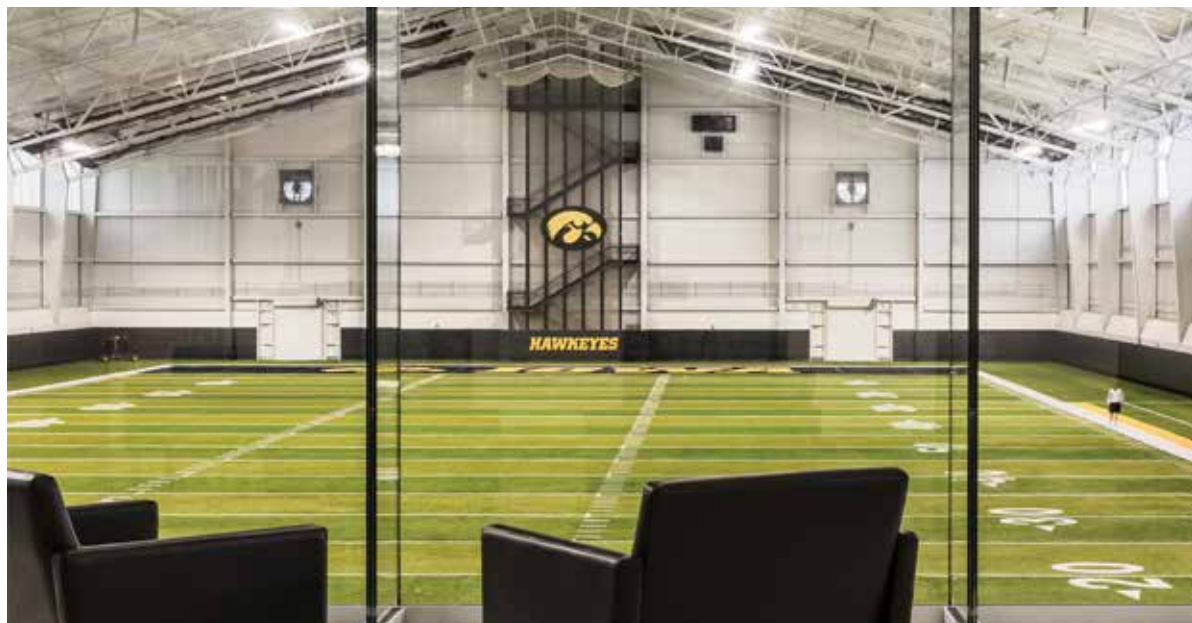
**WHEN IT COMES TO ATHLETICS** at the collegiate level, facilities are increasingly becoming part of the package to woo potential recruits to campus.

For the University of Iowa's Hawkeye football program, the school is banking on its new Stew and LeNore Hansen Football Performance Center to be one component in getting talented athletes from around the country and beyond to come play for Iowa. The new facility consists of three components: an indoor practice facility, the renovated Ronald and Margaret Kenyon Outdoor Practice Facility and the Richard O. Jacobson Football Operations Building.

The indoor practice facility and supporting storage spaces replace an inefficient air-supported structure that had outlived its useful life. This facility is connected directly to the operations building, which provides updated training and classroom spaces for the team as well as exhibit space dedicated to the history and success of Iowa football. Public exhibits in the entry hall extend along a "recruiting



- ▲ The operations building uses a steel framing system that addresses its aesthetic considerations.
- ◀ The building's 42-ft-high roof cantilevers 14 ft, 6 in. above the main entrance.
- ▼ The indoor practice facility replaces an inefficient air-supported structure that had outlived its useful life.



Photos by Paul Crosby  
Architectural Photography

path” through the building, connecting the program’s history with its current achievements and ongoing goals. The facility includes a large reception area opening onto a multiuse meeting and press space with views to Kinnick Stadium, which is located across the street. It also houses strength and conditioning space, athletic training facilities and hydrotherapy, team meeting rooms, position group rooms, equipment and locker rooms, video production and offices for coaches and staff members. All aspects of the football program are physically connected and planned around efficient interaction between student-athletes and coaches, and are easily accessible.

While the indoor practice facility uses a pre-engineered metal framing system, the bright, open operations building uses structural steel to address the project’s design and aesthetic considerations—and the sleek, muscular framing system is prominently displayed. Branding and overall experience were important aspects of the design (the tiger hawk logo represent-

ing the school’s athletic program is prevalent), and the expansive glass exterior entry is mirrored on the interior, welcoming people into a large two-story volume of glass and steel. The exposed steel columns in this space are W10×88, creating the appearance of an equal flange-to-depth ratio. This 10-in. rhythm is mirrored at the beam to column connections as well with the exposed framing of W16×67 beams, matching the column’s flange widths. The interior glazing system abuts the column flanges to visually incorporate the emphasized symmetry within the defined space.

To continue to meet the architectural intent of visual balance, the strength and conditioning space roof is framed with single pitched top chord open-web steel roof joists (7 ft at the low end; the high end depth varies by span), which provides a large, flexible column free space. Although the spans of the roof joists decrease in the triangular shaped room, the depths and web members of the joists are identical.

- ▼ The interior glazing system abuts the column flanges to emphasize symmetry within the space and put the steel framing on prominent display.



One of the building's signature steel elements is the 42-ft-high roof over the reception and meeting space, which cantilevers 14 ft, 6 in. from the supporting interior column gridline above the main entrance. To maintain a thin roofline, cantilevering HSS18×6×½ LDH members were used, and an HSS8×2×¾ LDH member was welded to the underside of the members to brace the

top of the exterior glazing system. An additional canopy overhang was provided at the mezzanine height of the entry ramp. Independent columns support the lower steel and glass canopy, with a slotted connection bracing the canopy back to the mezzanine story. Tapered and sloping WT8×18 sections allowed the visible edge of the 4-ft, 3-in. cantilevered canopy at the entry to appear as a thin ¾ in.



On the exterior, the red brick and cast-in-stone sills and jambs of the windows required varied detailing. This included HSS members ranging from 10 in. to 14 in. in depth spanning the 24-ft column spacing to support the sill and jambs of the ribbon windows on the east façade of the building. The red brick façade echoes that of Kinnick Stadium, while the building’s precision in design and execution echoes the goals of the team it supports.

The Hansen Football Performance Center is the final component of The Iowa Football Legacy Campaign, which began in 2002. With its strong, open aesthetic, it elevates the program’s physical home to a

- ◀ The multiuse meeting and press space.
- ▼ Public exhibits in the entry hall connect the program’s history with its current achievements (including a mostly full case displaying trophies from this year’s rivalry games) and ongoing goals.



- ▲ All aspects of the football program are physically connected and planned around efficient interaction between student-athletes and coaches.



new level, which will hopefully translate to increased success on the field. ■

**Owner**

University of Iowa, Iowa City

**General Contractor**

McComas-Lacina Construction, Iowa City


**Architect**

Substance Architecture, Des Moines

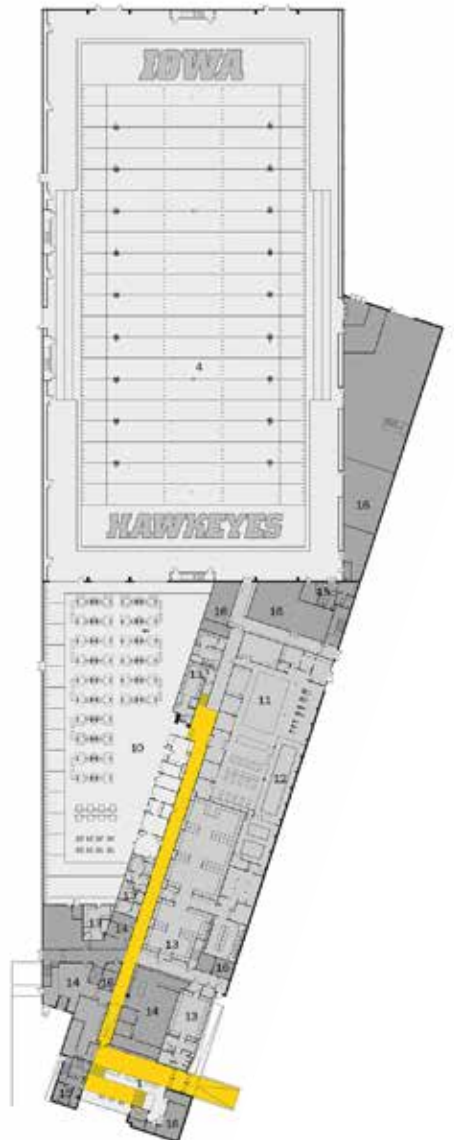
**Structural Engineer**

Saul Engineering, Des Moines

**Steel Fabricator**

Johnson Machine Works, Inc., Chariton, Iowa 

- ▲ The building's red brick façade echoes that of Kinnick Stadium.
- ▼ The weight and strength training area, topped with steel joists.



- ▲ The facility layout.
- ◀ The expansive glass exterior entry is mirrored on the interior, welcoming people into a large two-story volume of glass and steel.