Pratt & Whitney Stadium
Comprehensive Building Assessment
Executive Summary

As its twentieth anniversary approaches, Pratt & Whitney Stadium at Rentschler Field finds itself at a critical juncture.

Structurally, the 38,000-seat stadium is beginning to show its age. Nearly 200 major events and hundreds of smaller-scale events have been held in the building since it opened, with over three million people passing through its gates. While certain components of the Stadium have been upgraded during its nineteen years of operation, most of the building's structural and mechanical systems are original. Not surprisingly, repairs and replacements have become more prevalent and more expensive with each passing year.

Simultaneous with the twentieth anniversary, the original lease agreement between the Office of Policy and Management (OPM - the building's owner) and the University of Connecticut (UConn - the building's primary tenant) is set to expire in June 2023. Likewise, the memorandum of understanding through which the Capital Region Development Authority (CRDA) currently operates the building on OPM's behalf is also set to expire in 2023, as is CRDA's contract with OVG to manage the Stadium on a day-to-day basis.

As the future ownership/management structure of the Stadium is contemplated, a physical assessment of the building was critical to understand its needs moving forward in order to guide management and to make the most efficient use of State funds. To that end, CRDA commissioned a comprehensive building assessment to examine the Stadium's condition after twenty years - with an eye towards the next twenty years with a specific focus on the next five years. Populous, an internationally recognized leader in Stadium design, was selected in the fall of 2021 to conduct this assessment.

While Populous concluded that the Stadium has been "well maintained and (is) wearing well for a facility of its era," it cautioned that certain critical capital investments are needed. They noted that "as the stadium approaches its third decade of operation, its ability to deliver a positive guest experience is crucial for it to remain relevant both locally and nationally. It is important to keep the facility in a first-class condition and well maintained for a great experience for fans, staff, and the University of Connecticut."

The four most critical capital investments include:

1) *Roof replacement in the Tower Building and roof repairs in certain outbuildings.*
2) *Technology upgrades to make the building more compatible and user friendly for UConn, event producers and broadcasters, as well as safer, more efficient and more welcoming to patrons.*
3) *Investments to counter the wear and tear of twenty years to elevators, concourse areas, walkways, stairwell and various mechanical/electrical/plumbing (MEP) systems; and*
4) *Life cycle replacements related to irrigation and drainage systems on the playing field and to the overall site.*

Populous estimates that over the next five years, investments are expected to cost $63.3 million and can be phased over several state capital budget cycles with an initial budget projection of $24 million for the upcoming 2023-25 biennial budget.

Summary of Populous Report

The Populous team looked at all major Stadium building systems, including:

- Architectural
- Structural
- Roofs
- HVAC, Mechanical, Electrical and Plumbing Systems
- Stadium Playing Field
- Information Technology
- Food Service
- Life Safety
- Elevators

The team's recommendations were divided into three priority categories: Major Deficiencies; Repairs/Replacements (representing the bulk of the report); and Code and Facility upgrades.

Major Deficiencies

1) **Roofs** - The Stadium facility includes ten separate buildings, including the central Tower. No major deficiencies were found on seven of the building roofs. The thermoplastic polyolefin single-ply membrane on the roof of the Tower, however, is original to the building and is in very poor condition. Moisture leaks into the building's interior have occurred. The other two buildings cited are linked by an expansion joint and the membrane over that joint has detached and the area is no longer watertight.

   Populous recommends replacing the Tower roofing membrane and installing a new membrane over the expansion joint linking the other two buildings cited. Populous did caution that the need to relocate cell tower antennas currently located on the Tower roof is expected to add to the complexity and cost of the roof replacement.

2) **Technology / Security** - Capital budgets have been insufficient for the Stadium to secure and maintain the technology required for a first-class Division I facility. The presence of outdated technology impedes not only game day operations (e.g., IT, sound, video production, broadcast capabilities), but also the State's ability to operate the Stadium in a safe and responsible manner.

The most visible example is in the area of security. The Stadium's video surveillance system has been updated over the years in an ad hoc manner. It is comprised of both analog and IP-based cameras of which 18 of the 35 cameras on site are not currently functioning properly. The parking lot cameras, which were installed in 2016, do not have reliable wireless connectivity to the building network for monitoring. There is no active video recording system for surveillance, which poses an issue in operational functionality. Deficiencies in the building's access control system, intercom system and motion detectors were also noted.

Populous recommends replacing the video surveillance system management and adding new Network Video Recording (NVR). Replacement of existing cameras and cabling and the addition of new pole-mounted cameras in the parking lots were also suggested. Additional recommendations included the replacement of the existing access system and installation of new access controls to certain back of house spaces.

2) **Architecture** - Cosmetic damage caused by daily wear and maintenance operations, as well as more substantial damage caused by environmental exposure and end of life cycles, has occurred in the building. These deficiencies include rust and water damage on outside stairs, railings, ticket windows, signage and ceiling tiles, cracked asphalt and deteriorating concrete sealant. Entry lobbies and related graphics are outdated.

   Recommendations include the sanding and repainting of rusted metal stairs and railings along with the replacement of old signage and concourse asphalt. Ticket window layout should be assessed and windows replaced, while entry lobbies should be updated.

3) **Playing Field and Site** - Irrigation piping under and around the playing field is original to the building and is at the end of its useful life. Perimeter trench drains are damaged and need to be replaced. The asphalt track around the field is too narrow for maintenance and game day operations and it displays significant cracking and gaps left from the installation of underground conduits. Asphalt parking lots also display significant cracking.

   Populous recommends that the replacement of underground piping should be undertaken at such time when the playing field is next replaced. Asphalt should be repaired along the field perimeter and in the parking lots.

Repairs and Replacements

As noted in Populous' report, repair and replacement work in these categories is required due to equipment and building systems a) nearing the end of their useful life, b) requiring frequent repairs and/or c) whose parts and supplies are difficult to locate due to advances in technology or design.

1) Structure – Repairs are required to address cracked, delaminated and spalled concrete and cracked mortar on walls, as well as the deterioration of joint sealants and expansion joints.

2) Mechanical – The building's air handling system is close to the end of its useful life and Populous recommends replacement in about two years. Baseboard heaters around the building should be replaced in six years, variable air volume (VAV) boxes in seven years and exhaust fans in nine years. Populous has also recommended upgrading and including additional components in the Stadium's existing building automation system.

3) Electrical – Populous recommends replacing all fluorescent lamps with LED bulbs, as well as upgrading the Stadium's lighting controls and surge protection. Within the parking lots, Populous recommends replacing the existing lighting poles to remedy a design flaw that causes the lights to short out and replacing fixture heads with LED's. The range of the existing lights is insufficient to cover the entirety of the lots, forcing the rental of portable lights for night games and placing an additional strain on the budget. The installation of additional lighting in the lots would remedy this problem.

4) Plumbing – Recommended repairs include valve and hose bib replacement and installation of a new grease interceptor.

5) Roofs – Replacement of roof covering systems on seven outbuildings is recommended over the next 3-5 years, as well as additional roof maintenance.

6) Television / Sound – The Stadium's television cabling system is original to the building and is unreliable. In addition to upgrading that system and replacing certain sound system components, Populous recommends repairs to defective bowl loudspeakers until such time as they can be replaced.

7) Information Technology – Repairs and upgrades are recommended to the network fiber optic systems and outdated telephone system.

8) Broadcast / Video – Populous recommends that the cable plant (cabling, connection and enclosures) be replaced and upgraded to meet modern broadcast requirements and eliminate the need for broadcast trucks to run their own temporary cabling. They also note that the video production system is inadequate to meet the in-house production needs of a Division I sports stadium and should be upgraded.

9) Scoreboards / Ribbon Boards - The LED displays on the scoreboard and ribbon boards are approaching the end of their serviceable life and should be replaced. The original scoreboard was replaced in 2013 and various components have been replaced over the years as they have worn out or become obsolete.

10) Architecture - Populous has noted that expansion joints in the Stadium bowl are showing signs of age and that cracking and deterioration of sealants needs to be addressed. Bench seats in the bowl are also showing signs of wear and a significant number must be replaced after every game. Populous recommends replacing these bench seats with seatbacks to improve comfort

and the overall fan experience. New wayfinding signage, digital concession menu boards, resealing of rest room floors, replacement of certain toilet fixtures, additional diaper changing stations and suite upgrades were also included in their recommendations.

11) Elevators – The Populous report cautions that while the elevator systems are in good condition considering their age and should operate reliably for another five to seven years, certain components are now obsolete and increasingly difficult to service. Should something go wrong, parts are difficult to obtain and lengthy shutdowns could result. They recommend that the Stadium modernizes the systems within the next five to seven years.

12) Food Service Equipment – Once again, Populous noted that equipment has been well-maintained and these areas appear to be in good condition despite the age of the facility. They noted that refrigerant evaporators in one of the commissary coolers needs to be replaced, while rusted electrical chases need to be repaired.

13) Playing Field – The Stadium playing field was resodded in 2011 and 2013 and then stripped and reseeded in 2018. Populous recommends replacement of the grass playing field within the next five years. When that occurs, certain deficiencies in the irrigation and drainage systems (including those noted under "Major Deficiencies" above) can be addressed. Per their recommendations, the perimeter track and trench drains should also be replaced at that time and a new synthetic turf apron installed. Replacement of the goal post sleeves and netting system is also recommended.

14) Site Landscaping – Landscaping improvements outside the Stadium bowl are also recommended, including the replanting of certain turf areas.

Code and Facility Upgrades

1) Life Safety – In the event of a major Stadium renovation, certain improvements will be required to meet the current building code, including installation of an automatic mass notification system for evacuation of the Stadium bowl in an emergency. Changes to stair handrails, stairwell and exit signage, safety striping, sprinkler coverage, fire hose connections and ramp inclines will also need to be addressed.

2) Architecture – Populous recommends certain facility upgrades to improve the fan, athlete and staff experience. These include both operational and physical improvements, including installation of canopies over the entrance gates to shield patrons and staff, utilization of the end zones for pre- or post-game activities and construction of a permanent recruiting space in lieu of the tent space currently used. Renovation of the UConn locker room was also suggested.

3) IT / Video / Sound – Replacement of bowl loudspeaker amplifiers, new televisions and presentation equipment and other upgrades were also included in Populous' report.

4) Mechanical / Electrical /Plumbing – Recommendations here include an upgrade of emergency and event lighting in the bowl and increasing electrical power to the concession stands and food truck area. Additional surge protection in certain areas was also discussed.

5) Food Service Equipment – Suggested upgrades include cosmetic refreshes in both the Stadium Club and the concession stands. Utilization of kiosks or apps through which patrons could place concession orders, self-service beverage stations and additional "grab-n-go" stands were also recommended.

6) Roofs – Additional lightning protection and safety/fall protection are recommended.

7) Playing Field – Recommended upgrades include installation of grow lighting and a rootzone support system for the field, as well as construction of a dedicated ground operations and storage facility.

8) Site Landscaping – In addition to replacement of the asphalt paving around the building, Populous recommends new site landscaping, including resodding of turf areas and the use of shade trees, ornamental plants, decorative bollards and bench seating. The lack of site and wayfinding signage at the Stadium was also noted.

About Pratt & Whitney Stadium at Rentschler Field

Pratt & Whitney Stadium at Rentschler Field is a 38,000-seat, open-air facility located on the site of a former airfield in East Hartford, CT. Opened in 2003, the Stadium serves as the home field of the University of Connecticut Husky football program and hosts other athletic, cultural, entertainment and civic events throughout the year. Currently, the second largest natural grass facility in New England, the stadium has also welcomed a variety of international soccer matches, as well as rugby and lacrosse.

The stadium's upper and lower bowls include 31,700 bench seats and 4,000 premium chair backs. A wide concourse, ringed by 20 concession stands and restroom facilities, separates the two bowls. Locker rooms, as well as the stadium kitchen, administrative offices and storage, are located beneath the southeast side of the facility. The south side of the stadium is framed by the "Tower," a dramatic five-story structure which houses a 650-seat Club Room and 38 luxury suites, as well as press facilities and radio/TV broadcast rooms. The Club Room can seat up to 500 people in a banquet setting and is available year-round for catered events, corporate meetings and other functions.