



Pedestrian-Friendly, Sustainable Campus Emerges at Phillips Exeter Academy

By Mark Leighton, P.E., CEFM, and Peter Reiss, AIA, LEED AP



Preserving the fabric and tradition of a great institution's campus while modernizing it to move forward into future generations is a "high-wire experience." For each us involved in planning, designing, and managing these campus-wide initiatives, every decision, however minor, carries a larger meaning and consequence.

Our journey on the high wire encompassed the master planning and implementation for a new South Campus district within the 673-acre Phillips Exeter Academy in Exeter, New Hampshire. Founded in 1781, Exeter is a coed, independent school for students in grades 9 through 12.

The central mission of Exeter's South Campus master plan and building program was to create a vibrant new campus neighborhood with a reimagined landscape, new buildings, and

a future-focused evaluation of the physical layout of the site and its three existing athletic and recreation buildings. Also in the plans for the South Campus was a new performing arts center, the David E. and Stacey L. Goel Center for Theater and Dance.

ENVISIONING AN ARTS, CULTURE, ATHLETICS, AND WELLNESS DESTINATION

Between the main campus and the Exeter River is the academy's South Campus parcel. For generations, it was a back-of-the-house site, home to the school's athletic buildings and fields and a set of service and maintenance buildings nestled into the wooded terrain. The immediate objective of the master plan was to transform the aging complex and its surrounding natural environment into a strategically different destination. Exeter's trustees envisioned a creative hub where current and future generations could enhance their classroom learning with activities in the arts, culture, athletics, wellness, and the outdoors. Among the goals of the South Campus planning process:

- Modernize/reimagine the South Campus athletic buildings and the surrounding landscape
- Create a natural relationship and symmetry between dissimilar facilities built independently during the previous five decades
- Enhance pedestrian safety by reimagining pedestrian and vehicle movement and establishing safer, pedestrian-friendly connections with the main campus
- Improve open-space utilization and explore new outdoor and landscape features
- Look for opportunities to include onsite power generation in keeping with Exeter's environmental mission statement

To accomplish these goals, Exeter facilities and operations teamed with architects, engineers, landscape designers, and sustainability consultants. Taking an integrated, collaborative approach, the shared goal was to transform the South Campus student experience for current and future generations.

Aerial view of Thompson Field House and the 1,500 solar panels. Pictured is a tour led by Peter Reiss with Academy students on climate action day.





Southeast view of Thompson Field House and south campus.

BALANCING CONTENDING DYNAMICS OF PEDESTRIAN AND VEHICLE MOVEMENT

Finding a new way forward began with a familiar dilemma. Because the new performance center would host outside audiences, additional parking was needed. Another concern was adding vehicular traffic to Gilman Street, the access road into the expanded South Campus district. Gilman Street serves as the southernmost extension of the access “spine” connecting the main campus to the athletic complex and South Campus. The spine’s winding pathway crosses Court Street, a town-owned road that separates the two Exeter campuses.

A longstanding issue for Exeter, as with many campuses, was determining where to accommodate parking and how to separate parking areas and automobiles from pedestrian pathways. In the context of planning the new Exeter campus, there was a clear contradiction between the desire to establish a close connection to nature with a peaceful landscape that contributed to the health and well-being aspirations of students, faculty, and staff, and the reality of expanding surface parking.

None of the initial options were appealing. Finding new surface parking required carving into the natural landscape, removing trees, and shoehorning paved lots into the South Campus. At least 300 cars would be moving into the site, a potential permitting issue with the Town of Exeter. A new access road would need to be built to bring these cars to the lots. Separating pedestrians and automobiles would be problematic given the geography and layout.

OPPORTUNITY IN PLAIN SITE

During brainstorming sessions, the field house architects proposed a potential solution. Why not take advantage of the large footprint of the proposed new field house and shift all new parking, plus some existing parking, underground below the

field house? Making use of a significant grade change at the rear of the field house, the adapted design could create 170 below-ground parking spaces. Because the new field house location was further south than the Gilman Street access road, and because there is a public roadway behind the field house, auto traffic could be taken off that pathway altogether and the need for paved parking lots could be eliminated.

This solution was adopted, and it put both new facilities—the theater arts and the field house—on a parallel track for completion. The amended configuration of pedestrian and vehicular traffic means a safer, quieter, and more enjoyable environment for students. In addition, the ripple effect of new parking capacity creates options to decrease the daytime parking demand throughout the campus and on the town-owned streets around the school.

Today, there is a pedestrian-only main pathway providing safe access and a new continuous walking spine that connects the new campus district with the main campus and offers students an inviting route to the field house, adjacent athletic facilities, and sports fields. There is still a street crossing at Court Street where the two campus districts meet. Public access to the riverfront, an important tradition for town residents, has been preserved.

COMBINING OLD AND NEW

In determining the feasibility of keeping and restoring the aging athletic facilities, a key criterion for the team was the projected cost of operation and maintenance. While the front-end costs of a replacement building will always seem more expensive than renovating an existing facility, the true investment needs to be seen in terms of life-cycle cost projected over a 50- to 75-year basis.

On Exeter’s South Campus, the building program ultimately included the new construction of two new buildings, the renovation and façade restoration of an existing historic

building, and the integration of an existing 50-year old gymnasium with one of the newly built, adjacent buildings. The three existing South Campus athletic facilities included in the master planning and implementation were:

- The 1918 Thompson Gymnasium and pool
- The 1931 Thompson Cage Field House
- The 1969 Love Gymnasium

The Thompson Gymnasium, with its classic limestone

exterior, distinctive arched-windows, and column patterned façade, was preserved. New double-glazed windows, a new roof, and exterior restorations helped return the iconic structure to its stately original presence. A new fitness center was built in its lower level, creating a lively destination for all Exeter students.

Also preserved and creatively integrated with its adjacent athletic buildings is the Love Gymnasium. A new entrance was created, replacing an obsolete ramp entrance. The Thompson Cage Field House was demolished and replaced with a larger, multipurpose building now called the William Boyce Thompson Field House. The wooden running surface from the original elevated 1931 running track in the Thompson Cage was reutilized as flooring in the new field house.

ACHIEVING SUSTAINABLE OBJECTIVES

A U.S. Department of Education Green Ribbon School, Exeter has increasingly utilized green building practices, including sustainable design and construction. Opened in 2018, the Goel Center for Theater and Dance, which is expected to earn a Leadership in Energy and Environmental Design (LEED) Gold certification, utilizes geothermal energy to heat and cool its 63,100 sq.-ft. center. The new 85,000 sq.-ft. William Boyce

Pictured to the left is former Gilman Street which was transformed to a pedestrian walkway pictured below.



Thompson Field House holds 1,500 solar panels on its 200 × 300-ft. rooftop, generating enough power to offset the majority of the building's electric load.

Also a LEED Gold certified facility, the field house is projected to save the academy \$2 million over the system's lifetime. Inside, its sustainable design includes abundant daylighting, LED lighting, and natural ventilation instead of air conditioning. Most of the interior space is cooled by large, quiet-running ceiling fans.

BENEFICIAL INTEGRATED TEAMING IN PLANNING, DESIGN, AND BUILDING

Today, South Campus hosts thousands of visitors each year and benefits every member of the academy community. Students, teachers, and staff learn, play, and build community in new ways enabled by the district's new buildings, grounds, and amenities. Green spaces provide new venues for outdoor events and exhibits, extracurricular activities, and personal recreation.

The success of the campus is no accident, however. Early on, the pivotal decisions on team composition and integration set the stage for resolving the challenges ahead. During a presentation we made last year at the ERAPPA (Eastern Region APPA) conference, someone asked us about team selection and utilization. The takeaway

lesson is to get the right people around the table as early as possible.

In that regard, the decision to use the same civil, landscape, and sustainability consultants throughout a series of overlapping design and building projects and in support of two different architects gave us a highly committed and informed team for the South Campus project. This arrangement also provided consistency in our relationships with municipal and regulatory officials.

To make the new South Campus district project work as planned, the cross-disciplinary team applied empathetic values—exploring ideas as a group, listening to other points of view, and harnessing the potential of team problem solving in ways not often seen in traditional planning, designing, and building. By taking an inclusive, collaborative approach, we overcame a series of challenges to realize the collective vision of a new, vibrant student and staff experience. ☺

Mark Leighton is director of facilities management at Phillips Exeter Academy, Exeter, NH; he can be reached at mleighton@exeter.edu. Peter Reiss is associate principal with ARC/Architectural Resources, Cambridge, MA; he can be reached at preiss@arcusa.com. This is their first article for *Facilities Manager*.



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