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Salem State University Earns Parksmart Bronze

By Daniel L. Ocasio, AIA, NCARB

THE NORTH CAMPUS TRANSPORTATION CENTER at Salem State University in Salem, Mass., constructed in 2015–2016, was awarded Parksmart Bronze certification in 2017. Thanks to the environmentally sustainable design principles employed in the design of the site and the garage, the Massachusetts State College Building Authority issued a series of green bonds to fund the project; this represented the first time that any independent public authority in the U.S. issued Green Bonds to fund the construction of a building project.

History of the University

Salem State University was established in 1854 as Salem Normal School, a commuter-based institution focused on training public school teachers. Today it is one of the largest state universities in Massachusetts, with a graduate and undergraduate population of approximately 10,000 students. In the early 20th century, Salem State moved to its current location in South Salem.

The university expanded in the 1970s and the 1990s to include Central Campus, South Campus, the O’Keefe Athletic Complex, and the Cat Cove Marine Biology Center. Its campus is now spread out over five different locations and 102 acres of land.

In partnership with the Massachusetts State College Building Authority for more than 50 years, the university has invested in on-campus housing and now provides living facilities for approximately 2,400—or one-third—of its attending student body. Non-residential students still represent a majority of its student population; early parking studies indicated the university had a shortfall of more than 2,000 parking spaces.

In addition to insufficient capacity, there was a considerable concern that students and faculty were circling around the surrounding neighborhood looking for and occupying on-street spaces. The building authority teamed with Salem State University to fund and build the first structured garage on campus. The team was rounded out by the addition of DESMAN consultants and builder Dimeo Construction.

Like many older, urban institutions, Salem State’s campus is fully developed. Because of this, recent academic and residential facilities were constructed on surface parking lots,



View of northern vehicle exit, pedestrian entrance, and glass enclosed elevator/stair core



PHOTOS BY AARON LUSHER III PHOTOGRAPHY



reducing the available parking capacity. A multi-level parking structure was required to recover lost parking capacity from previous development projects as well as from the loss of surface spaces from the site selected for the garage.

The Transportation Center

Using the standards of U.S. Green Building Council and the Parksmart Certification Program, the project was designed from the ground up to be as environmentally sustainable as possible. This design process started with an already disturbed site, which was located where the deficiency for parking was the greatest for all users: faculty, staff, and commuter students. The runoff from the former surface lot was replaced with stormwater treatment, preventing vehicle contaminants and deicing materials from entering the local wetlands, waterways, and the Atlantic Ocean.

The precast concrete structure was manufactured within the region of the project site and the completed facility includes high-efficiency lighting controlled by timers and occupancy sensors. The exterior was designed to minimize the mass of the building and provide for sufficient free air to eliminate the necessity, cost, and energy for a mechanical ventilation system.

The campus shuttle bus system originates at the project, which includes designated spaces to encourage multiple-occupant and alternate-fuel vehicles. Electric-vehicle charging and tire-inflation stations are included. In addition, bike racks are provided to encourage bicycle use on campus.


The parking structure represents a nominal increase in campus parking supply and yet puts the



Consultants Involved in Project

DESMAN, Architecture, Structural Engineering, Parking Consulting, and Parksmart Advisors
Nitsch Engineering, Civil Engineering
R.W. Sullivan Engineering, MEP and FP
Leftfield, owner's outside project manager

spaces where they are needed most, eliminating the need for drivers to circle campus looking for convenient spots in the neighborhood, and returning street parking back to the community. Of the 799 spaces in the new garage and surrounding site, 351 were pre-existing on the site, 167 make up for former surface spaces dislocated from a recent residence hall construction project, and 250 were built to accommodate students who were parking on city streets.

The building authority worked with the state's Electric Vehicle Incentive Program (Mass EVIP) to contribute to the capital cost of the electric-vehicle charging station equipment, through a grant to encourage workplace charging programs. The university designated four spaces within the garage and two additional spaces outside for a combined total of six electric-vehicle charging stations. An exhibit is provided by the garage elevator to help educate the public using the garage about the commitment of the university to reduce its carbon footprint and to combine several energy- and resource-saving transportation ideas in one place. 



DANIEL L. OCASIO, AIA, NCARB, is senior project manager with the Massachusetts State College Building Authority. He can be reached at docasio@mscba.org.