

## **Standard VIII**

### **Physical and Technological Resources**

#### **Description**

##### **Physical Resources**

Western Connecticut State University has a split campus comprising nearly 400 acres, and 30 serviceable buildings with 1.9 million square feet of assignable space. Classrooms, offices, residence halls, student centers, and other facilities are located on both the original Midtown campus and the newer Westside campus. The campuses are approximately four miles apart and are served by regularly scheduled shuttle bus service during the academic year.

The 34-acre Midtown campus has five classroom buildings, a Student Center, three residence halls, the Ruth A. Haas Library, two administrative buildings, Alumni Hall, several parking lots, and two parking garages (see Appendix: Standard VIII: 1). A 122,000 square-foot Science Building was completed in 2005 on the Midtown Campus (see Appendix: Standard VIII: 2).

The 364-acre Westside campus houses a large multi-department classroom building, three residence halls, the Charles Ives Authority for the Performing Arts, the William A. O'Neill Athletic and Convocation Center, an observatory, a new Campus Center, tennis courts and athletic fields, and the 33-acre Westside Nature Preserve (see Appendix: Standard VIII: 3). A 134,000 square-foot Visual and Performing Arts Center (VPAC) is under construction and scheduled to open in May 2014 (see Appendix: Standard VIII: 4).

Together, the Midtown and Westside campuses offer 1,891,124 square feet of usable academic, administrative, residential, and support-service space.

Additionally, WCSU offers nursing and management programs in Waterbury, Connecticut on the campus of Naugatuck Valley Community College (NVCC). Western at Waterbury also offers General Education and elective classes as needed (see Appendix: Standard VIII: 5).

Major new buildings in the last 10 years added 263,000 square feet of assignable space at a cost of \$74.2 million. WCSU also constructed two large parking garages, one at each campus, during this period, at a cost of \$18.8 million. During the next five years, WCSU has plans and funding commitments to build a new police station on the midtown campus and a new 500-car parking garage on the Westside campus. We plan major renovations for three buildings (Higgins/Higgins Annex, Litchfield Residence Hall, Newbury Residence Hall) during this period, which will provide “like new” appearance and functionality to 202,000 square feet of space at a projected cost of \$53.5 million (see Appendix: Standard VIII: 6).

Total expenditures for technology (operating and capital funds) for fiscal years 2010 through 2012 remained relatively constant, at approximately \$5.8 million annually. Funding for other capital projects, however, varied significantly, ranging from \$4.5 million in fiscal year 2010 to \$32.1 million in fiscal year 2012. Expenditures for fiscal year 2013 will be even greater. The increased expenditures were driven primarily by costs associated with the design and construction of the Visual and Performing Arts Center.

Physical resources have changed considerably over the past 10 years, with the largest transformation taking place on the Westside Campus. A new Athletic Stadium opened on that campus in 2004. The Centennial Residence Hall and attached parking garage were also completed there that year. In 2008, the Westside Campus Center opened and brought dining student center services to the Westside Campus. Construction on the Visual and Performing Arts Center began in 2011 and the building is scheduled to open in 2014. The new building will provide a theatre, a concert hall, galleries, studios, rehearsal spaces and practice rooms all explicitly designed to support a high level of artistic performance and instruction. This contrasts with the current facilities used by the school on the Midtown Campus in White Hall, Berkshire Hall and Higgins Annex: These areas were, for the most part, built as general classrooms and have been converted over the years, with varying degrees of success, to serve more specialized purposes.

The Midtown Campus has also benefited from significant new construction. A new 582-car student parking opened there in 2007. Of greater importance, a new 65,000 square feet Science Building opened in 2005. . This state-of-the art building houses classrooms, laboratories and offices. It incorporates hang out spots along its hallways equipped with benches and chalkboards that facilitate impromptu small group work and tutoring. WCSU saw the number Biology and Chemistry majors jumped up significantly shortly after the Science Building opened.

In addition to new construction, several renovations were completed in the past decade. These include the Westside Observatory (2004); Warner Hall (2005); Old Main Administration Building (2005); Fairfield Residence Hall (2008); Pinney Residence Hall (2010); and Grasso Residence Hall (2011-2012). Higgins Hall underwent extensive exterior masonry and roof repair in 2010 and Higgins Annex space was reconfigured for classrooms and faculty offices in 2011. In fall 2012, WCSU replaced two fifty-year old boilers in the Midtown campus boiler house and updating Midtown's hot water production system (see Appendix: Standard VIII: 7).

Western's space usage is guided by a participatory and open master planning process mandated by the Board of Regents. Planning is conducted and updated regularly. The current (2007) update was developed by Symms Maini & McKee Associates and reflects many hours of investigation, meetings, and community feedback from faculty, staff, and students. With the passage of six years, however, conditions have changed in ways not anticipated in the master plan. Enrollment

growth has stopped, and we no longer are filling our residence halls to capacity. In addition, many members of the current administration, including the Provost, the CFO, and three of the four Deans were not in their positions at the time the master plan was created. In light of all of these changes, it is time to revise the University's master plan. The CFO chaired a task force in fiscal year 2013 that began assessing current needs and how they might be met on the Midtown Campus once the School of Visual and Performing Arts moves to the Westside campus in summer 2014. The data and recommendations from this task force will then be shared with a professional campus master planner, hired through the Regents' Office, who will create a new master plan for WCSU. Work on developing this new master plan is tentatively targeted to begin in February 2014. WCSU anticipates that the new master plan will focus more on major renovations of existing buildings than the construction of additional new buildings.

The vast majority of WCSU's classrooms and other teaching facilities accommodate 40 students or less, facilitating the smaller class sizes that allow for greater individual attention and participation. These room sizes are also consistent with the standard class sizes described in the [CSU-AAUP contract](#). Under that agreement, classes larger than 40 may be offered as long as the instructor receives incremental work load credits for each student beyond 40.

WCSU funds capital projects from four primary sources: 1.) participation in the system-wide CSUS 2020 bond program; 2.) participation through the Regent's office in the Connecticut Health and Educational Facilities Authority (CHEFA) bonding program; 3.) use of reserve funds; and 4.) use of current-year operating funds (see Appendix: Standard VIII: 8). WCSU does not issue any bonds on its own authority. Under the CSUS 2020 program, the state, conditional upon the governor's approval each year, issues \$95 million in general obligation bonds annually over a 10-year period, with the bond proceeds allocated to each of the four State Universities in accordance to a project plan developed and approved in fiscal year 2008. These bonds are a general obligation of the state of Connecticut, and neither WCSU nor the Regents is responsible for any of the debt service. The 2020 program is scheduled to expire in fiscal year 2019. It funds capital projects for academic and administrative facilities. WCSU uses CHEFA bonds to finance capital projects for residence halls, student parking garages and student centers. WCSU is responsible for a majority of debt service on CHEFA bonds, although the bonds themselves are recorded as a liability for system in whole rather than for WCSU specifically. The University uses its own reserves on a regular basis for improving residence halls and dining services and, on a more limited basis, for funding other capital projects.

As a state institution, WCSU follows all the rigorous design, permitting, and inspection requirements determined by state law (see Appendix: Standard VIII: 9). All new construction on campus is designed and built to meet the criteria for LEEDS certification, even if the certification itself is not obtained. Whenever possible, the Department of Environmental and Facilities Services uses sustainable products, including cleaning products.

Vehicle policies and regulations are designed to alleviate parking congestion. Resident students who live on Westside campus, for example, must take the shuttle bus to Midtown instead of driving.

The University has adopted and adheres to the facilities guidelines and operational standards set forth by [APPA](#) (formerly the Association of Physical Plant Administrators) in terms of cleaning and custodial standards. The Office of Facilities Operations and Environmental Health and Safety Programs manages the following functional areas:

- Maintenance Trades
- Building Services (Custodial Services)
- Grounds Operations, including routine grounds maintenance, snow removal, and landscaping
- HVAC Operations
- Health, Safety, and Environmental Affairs

Since 2007 all requests for services from these areas are managed through the [Maintenance Direct Work-Order Management System](#), also known as “SchoolDude.” This system allows management to track repeat problems, account for hours needed to complete projects, and run reports for more insight into stubborn issues.

Additionally, the university has invested in upgraded and expanded building automation, providing the ability to monitor remotely HVAC and other environmental conditions of facilities, thereby increasing efficiency.

A recent evaluation conducted by [Sightlines LLC on behalf of the Board of Regents](#) has provided the University with additional insight into its facilities and maintenance processes as compared to peer institutions. Among its major conclusions were that Western was providing service at levels equal to or greater than its peer institutions, but at much lower cost. The report also noted, however, that Western was not spending enough for ongoing adaptation and renewal of current spaces and could face a significant deferred maintenance backlog in future years.

### **Technological Resources**

WCSU maintains a strong network and technology infrastructure that insures fulfillment of the educational and administrative mandates of the university (see Appendix: Standard VIII: 10).

Western’s server and storage environment has improved dramatically in the past 10 years. A significant investment in time, money, and staff has yielded a robust virtualized environment. Servers and storage can be provided easily without additional physical hardware.

In fall 2012, the university became aware of a security vulnerability in one of its systems. Although WCSU found no evidence that records were inappropriately accessed, it offered two years of ID theft protection to everyone whose data may have been compromised.

University data and systems are backed up regularly. The encrypted tapes are stored in a secure location off-site and are readily available if needed.

Western uses the Banner college Enterprise Resource Planning system to manage core services for the university. These include student services (registration, advising, transcripts, grading), financial services (payments, financial aid), alumni relations, institutional research, and institutional advancement. Banner is widely respected in the field. The system widely used in Connecticut and across the country. A number of other software programs are used by various departments to access information (see Appendix: Standard VIII: 11).

Western also uses the Blackboard Vista and Learn learning management systems, both hosted centrally by ConnSCU IT. Blackboard Vista will be completely replaced by Learn in fall 2013.

Information Technology & Innovation and Media Services have endeavored to fully equip classrooms and lecture halls with state of the art technology. As a result, virtually all classrooms throughout Midtown and Westside campuses are now equipped with instructor station computers, projectors (older projectors are being replaced with new HD models) and wired/wireless Internet access, with the exception of a few rooms in which implementation of such equipment impossible.

Over [two dozen classrooms](#) are also equipped with student computer stations, including discipline-specific computer labs which support programs in Art, Music, Theatre, Journalism, Writing, Communication, Mathematics, Biology, Education, MIS and Nursing. Classroom technology is upgraded on a rotational basis as established by The University's [Information Technology Committee](#) (ITC).

The University provides state of the art hardware and software in faculty offices. Programs and procedures allow for regular upgrade and replacement of computing equipment. Software (including crucial virus protection) is managed remotely for desktop computers and requires no faculty intervention. Each faculty member has a desktop or laptop computer and access to network storage drives which are accessible from both on and off campus. Faculty also have access to an Instructional Technology Center for assistance with integrating technology into their curriculum.

Students bring their own computers to campus or have access to technology in one of five staffed labs: Midtown Computer Center (MTCC), Westside Computer Center (WSCC), Campus Center

Computer Center (C4), Student Technology Training Center (STTC) and the Waterbury Computer Center. Additionally, there are three 24-hour unstaffed facilities available in the Student Center, the Science Building and the Westside Classroom Building.

Internet connections are available throughout both campuses and are provided in the residence halls for students with their own computers. The campus is 100% [wireless-enabled](#).

The Information Technology & Innovation staff is responsible for keeping all computers in classrooms, labs, faculty and staff offices and the network up and running.

SmartBoards have been installed in 22 locations across both campuses, mainly in support of the teacher education program, in order to ensure that pre-service educators gain experience with the technology available in the public school systems in the surrounding areas (see Appendix: Standard VIII: 12).

In Fall 2011, a print management system, Pharos, was installed. This program has significantly reduced paper and toner use across the University. Students are able to use their ID cards to release print jobs at specially designated print stations and printers.

Specialized equipment is acquired regularly as part of the CSU 2020 Equipment Program (see Appendix: Standard VIII: 13). The University's standing Information and Technology Committee (ITC) is charged with overseeing the implementation and development of technological resources and improvements (see Appendix: Standard VIII: 14).

### **Appraisal**

Western has installed and supports a consistently high level of technology in its classrooms and laboratories. Faculty, staff and students in general report a high level of satisfaction with IT services, with some exceptions as noted below. Physical resources are satisfactory overall, but consistency is an issue, with some facilities, such as the Science Building and Westside Campus Center, able to claim excellence, while others, such as the Westside Classroom Building, are effective liabilities to the University's image and operations. The University's two-campus structure is also a challenge. It imposes additional costs (such as operating two student centers and a shuttle bus service), and separates the University community in more than simply spatial terms. When the School of Visual and Performing Arts relocates to the Westside campus in summer 2014, it will help balance student population on each campus, giving each a critical mass of students. With this relocation, two schools (Business and Visual and Performing Arts) will be on the Westside campus and two schools (Arts and Sciences and Professional Studies) will be on the Midtown Campus. Once the VPAC is complete, the university will be able to renovate vacated space on the Midtown campus. The re-uses of the Midtown Campus as

envisioned in the University's 2007 master plan, however, may no longer represent the best use for the vacated space. WCSU is compiling and evaluating a list of current and projected future facility needs at the Midtown campus and will work with a professional campus planner starting in early 2014 to develop a new master plan to guide development over the next ten years.

### **Physical Resources**

Completion of the Science Building in 2005 brought significant improvement to WCSU. Various departments benefited from new classrooms, laboratories, equipment, and faculty offices.

Planning for the building and equipment also served as an occasion for faculty to develop a new vision for the sciences at Western, including working with Danbury area schools on an annual Summer STEM (Science, Technology, Engineering and Math) Experience.

Three WCSU buildings are cause for major concern: Berkshire Hall and White Hall on Midtown the campus and the Westside Classroom Building. Berkshire Hall and White Hall are structurally sound and have efficient floor plans. Unfortunately, classrooms are small and many windows don't open and close properly. Some carpets need to be replaced in both buildings. Faculty members complain of poor air circulation in Berkshire Hall and White Hall. The air conditioning in Berkshire does not always work and White Hall is too old to allow for central-air retrofitting.

The Westside Classroom Building is structurally sound but poorly designed. In this building (as in the original Higgins Hall on the Midtown campus), air-conditioning must be installed room by room. The Westside Classroom Building presents a particular challenge given its highly inefficient configuration, its aging mechanical systems, and its vulnerability to moisture penetration. Mold growth is a recurring problem in many areas of the building, and although Facilities has eliminated major mold blooms in faculty offices and the library and has installed dehumidification systems, mold regrowth surfaces periodically. Additionally, the elevators in the building are often out of order, making it extremely difficult for those with physical disabilities to reach certain areas of the building.

The 2020 bonding program does not have funds identified for major work in either White Hall or the Westside Classroom building. The program does, however, provide funds in fiscal year 2017 to design a full renovation of Berkshire Hall (see Appendix: Standard VIII: 15).

Contra some of these problems, students and faculty are satisfied with the classrooms and facilities of new buildings and older buildings that have undergone major renovations. The upper floors of Higgins and Higgins Annex were improved after the various science departments moved into the Science Building in 2005. Other similar renovations are slated upon completion of the School of Visual and Performing Arts building and movement of several departments to Westside campus.

Adaptation and upgrade of several programs have improved overall services. Since use of the [Maintenance Direct Work-order Management System](#) was implemented in 2007, the Maintenance Department is better able to plan staff hours and make optimal use of its custodial staff. Additionally, WCSU's upgraded and expanded building automation allows for more extensive remote monitoring of campus facilities and increased efficiency.

The [Sightlines LLC](#) evaluation performed in fall 2012 has provided the University with additional insight into its facilities and maintenance processes as compared to peer institutions. Highlights of the [report](#) include:

- WCSU achieved custodial and maintenance results that were as good as or better than peer institutions and achieved these at lower costs: A strong service process, a capable staff and solid work culture have allowed Western to do more with less.
- Western has younger, more technically complex facilities than peer averages overall.
- Like many institutions, Western is not spending enough on renewal and adaptation of existing buildings. If this does not change, Western will accumulate a significant deferred maintenance backlog and, most likely, the appearance, functionality, and image of the campus will suffer. The required expenditures cannot be met from Westerns' annual cash flows or reserves. Western will need to address these issues through the upcoming new campus master planning exercise and in advocating for greater bond funding of adaptation and renewal in the bond program developed after the 2020 program ends.

Clearly, in spite of advances, some problems still need to be addressed, and some are unlikely to go away, in spite of repeated improvement. To wit: even with the new Midtown garage, students consistently express dissatisfaction with parking policies and availability.

### **Technological Resources**

Improvements to servers and storage are provided easily without additional physical hardware. This process enables the university to respond much more quickly to new technology initiatives and manage resources much more efficiently. The IT staff does an admirable job keeping the systems and network up and running, especially given its limited staff and a constantly growing system-wide project list.

Information Technology & Innovation has recently set a new goal of a 3-year (33%/year) refresh cycle for computers, in light of modern hardware having longer useful lifespans and concerns about future budgets.

Some outstanding needs grow increasingly pressing with technology innovations. For example, the Department of World Languages and Literature needs a language resource center (a discipline-specific computer lab), and the Communication Department needs better facilities.

There is an emerging need to provide services for students on their mobile devices (see Appendix: Standard VIII: 16).

Additionally, there is an undercurrent of dissatisfaction with the performance and reliability of Blackboard Vista and Learn, hosted centrally by ConnSCU IT, and some frustration with response times to Help Desk calls from Information Technology & Innovation. Although Information Technology & Innovation closes 98% of Help Desk calls each month, the current IT staffing level makes new initiatives challenging.

Data and information security is a high priority of WCSU, the ConnSCU System, and the State. The university's commendable response to the security vulnerability in fall 2012 was honest and timely in its communication with those affected, and this event has brought some positive enhancements to information security at Western. Since discovery of the vulnerability, the university has dramatically increased its information protection capacity and will continue to assess and improve in this area (see Appendix: Standard VIII: 17). Lack of formal project management, however, opens us up to risk.

While there is room to grow, WCSU continues to improve its resources, thereby saving students, faculty and staff time, money and resources. For instance, during the Fall 2012 semester, Pharos reduced the total number of pages printed by 19.5%-- amounting to a cost savings of 20.2%.

### **Projection**

Although the State of Connecticut is currently experiencing financial stress on its operating budgets, the state seems committed to the multi-year CSUS 2020 bonding program that funds major renovations, improvements, and additions to the academic and administrative buildings on campus. The CHEFA bonding program is also expected to continue, providing funds for the renovation or construction of student centers, residence halls, and student parking lots (see Appendix: Standard VIII: 18).

The CSUS 2020 program is currently scheduled to sunset in FY19, and the Board of Regents is beginning to make plans for the post-CSUS 2020 period. These plans include creating a new master plan for each of the four CSU's during the next few years, with work on Western's new plan scheduled to begin in early 2014. Unlike the previous master plans, which emphasized the creation of additional space, WCSU expects its next master plan to focus on significant renovations of current space and, in some cases, replacement of buildings (see Appendix: Standard VIII: 19).

### **Physical Resources**

The imminent completion of the Visual and Performing Arts Building on the Westside campus and the approach of a new master planning exercise creates an opportunity for Western to thoroughly review its facilities' needs as it adjusts its long-term strategy to meet new economic, demographic, and competitive realities. The Vice President for Finance and Administration recognizes the need for a wider campus conversation to address concerns and to re-think space usage and convened a group of senior and upper level leaders to identify needs during fiscal year 2013(see Appendix: Standard VIII: 20). In the meantime, Western will proceed with those major facilities already envisioned in the CSUS 2020 and CHEFA bonding programs: the construction of a new police station, the full renovation of Higgins Hall, the design work for renovation of Berkshire Hall, the full renovation of the Litchfield and Newbury Residence Halls (all at Midtown) and the construction of new 500-car student parking garage on the Westside campus. Western will use the new master planning exercise to investigate the possibility of replacing the problematic Westside Classroom Building in the future with a new, greatly more functional (and appropriate) home for its School of Business.

WCSU is dedicated to working towards greater standardization of facilities, fixtures, and furniture as it builds new classroom buildings and renovates old ones. The facilities maintenance department is striving for more carefully planned projects and realizing set goals (see Appendix: Standard VIII: 21).

Student retention is a high priority for Western, and physical and technological resources play a part in student success and satisfaction. With that in mind, the university plans to investigate national and international trends that facilitate student satisfaction and engagement in such areas as living and learning environments (learning communities). The University also plans to create a Student Success Center that will house varied support services in a convenient single location. Indeed, Western will open two facilities in fall 2013 to improve learning, advising, and retention: a Learning Emporium and an Information Commons and Advising Center (see Appendix: Standard VIII: 22).

### **Technological Resources**

To improve service to students through technology, the live chat feature currently available on the university's web site will be made available on mobile devices during summer 2013.

IT will also develop customer satisfaction surveys for students, faculty and staff to get a better understanding of areas that can be improved and to create a set of metrics for periodic self-evaluations.

Although the security vulnerability incident was unfortunate, the university will use its lessons to dedicate itself more intensely to information security and instructional and administrative

technology. The department name Information Technology & Innovation recently replaced the University Computing name to reflect a focus on using innovation to deliver better service to students, faculty and staff. Information Technology & Innovation will lead a review of business processes at the university with a goal of simplifying them by using IT solutions to replace or augment existing processes.

IBM's CISO (Chief Information Security Officer) Dr. Joanne Martin is working as a volunteer interviewing the CSU CIOs, and will develop suggestions on how we can move forward on information security. This will include online information on Security Training by the fall of 2013.

Three current critical projects reflect the University's dedication to security and technology innovation: 1) a long-term network re-architecture and equipment upgrade that will enhance network security and flexibility while replacing older equipment to meet the new networking standards (to be completed in 2015); 2) implementation of new security policies and standards, including recommendations from Dr. Martin on continuous implementation of this initiative, spearheaded by a newly appointed acting Information Security and Compliance Officer charged with putting additional focus on data security throughout the university (implemented in 2014 with ongoing review and changes); 3) disaster recovery planning in which the data center on the Westside campus will be set up as a mirror site for critical data and systems that are currently housed in the Midtown data center, thereby increasing the redundancy and availability of critical systems to the university (to be implemented by the end of 2013).

Centers of Excellence are being created as part of a new model for IT governance within ConnSCU. Centers for Security and IT policy, learning management such as Blackboard, networking infrastructure and enterprise resource planning (Banner) will be developed and used as a guide for all of ConnSCU to share.

The effectiveness of the ITC will be re-evaluated. After a thorough review, Information Technology & Innovation will re-focus personnel to better capitalize on their skills and talents (see Appendix: Standard VIII: 23). Outside training is being given to the entire IT staff in areas such as project management.

### **Institutional Effectiveness**

WCSU's physical and technological environments have improved greatly over the years, and the institution is reinvigorated. Although the University's physical resources still face significant challenges, new and renovated spaces on both campuses provide an environment highly conducive to teaching and learning in the 21st century. Recent outside assessment confirms that our infrastructure and maintenance programs are strong and competitive with our peer

institutions. We recognize that we are under-spending for mid-scale projects and we will work to rectify this problem. Refocusing and/or repurposing staff in touchstone areas such as Information Technology & Innovation will allow the institution to pursue new initiatives without incurring additional staff costs. The University's aligning strategic goals with facilities and technology priorities has guided, and will continue to guide, its response to issues of physical and technological resources.