

Standard III.B. Physical Resources

III.B.1.

The institution assures safe and sufficient physical resources at all locations where it offers courses, programs, and learning support services. They are constructed and maintained to assure access, safety, security, and a healthful learning and working environment.

Evidence of Meeting the Standard

The College Assures Safe Physical Resources that Support a Healthful Learning and Working Environment at All Locations

Mt. San Antonio College (Mt. SAC) assures safe physical resources by planning, designing and constructing quality facilities and infrastructure and by effectively maintaining and operating all physical resources according to College goals and the Strategic Plan ([I.A.3-1](#)).

Mt. SAC assures safety as an element of quality facilities design by employing an extensive team of professionals to oversee the planning, design, and construction of all facilities projects, including three, in-house licensed architects ([III.B.1-1](#)). New and modernized facilities and infrastructure are designed by experienced licensed architects and engineering consultants, including several that have provided service to the College for over ten years. Facilities planning and design work is reviewed monthly by a cross-functional and representative team, the Facilities Advisory Committee (FAC), to assure that the safety and security of College physical resources is a priority for

all new and modernized facilities ([III.B.1-2](#)). The facilities operations team works closely with the planning, design, and construction team to ensure that the ongoing maintenance of new and modernized facilities can be completed safely and efficiently ([III.B.1-3 pg. 2](#)).

Building and Safety Code compliance is assured by a team of certified inspectors tasked with reviewing construction plans and specifications prior to submittal to the Division of the State Architect (DSA) and with providing continuous inspection for all campus construction ([III.B.1-4](#), [III.B.1-5](#)). The College also utilizes DSA certified inspectors to provide quality assurance for maintenance work that is not under the jurisdiction of DSA. A construction safety consultant is on campus two days per week to visit all active construction projects, ensuring that contractor and public safety is maintained at all times. Weekly safety reports are reviewed by in-house project managers and by the Director of Facilities Planning and Management. The safety consultant has authority to direct the contractor and College staff to correct non-compliant conditions immediately, and reports weekly to the Director of Facilities Planning and Management ([III.B.1-6](#)).

The maintenance of College physical resources is the primary responsibility of the facilities operations team ([III.B.1-1](#)). All facilities staff are authorized and encouraged to submit work requests through the School Dude computerized maintenance management system. Representatives from all instruction,

student services, and administrative offices may also access the system directly to submit service requests. Requests with safety implications are given the highest priority. Minor service requests such as slip hazards receive immediate attention from custodial services, and most other requests are completed within 24 hours ([III.B.1-7](#)). A member of the facilities operations team is on call at all times to respond to urgent conditions and Public Safety Officers are empowered to contact the on-call facilities manager or the Director of Facilities Planning and Management, at any time, day or night, should they encounter an unsafe condition ([III.B.1-8](#), [III.B.1-9](#)).

The Health and Safety Committee exists as a cross-functional and representative team to ensure compliance with laws and regulations affecting safety and to maintain safe working conditions ([III.B.1-10](#)). Two facilities managers are permanent members of the committee to report progress on safety improvements related to the College's physical resources, and to ensure that concerns about safe working conditions are addressed in a timely manner. Classified staff from both the Facilities Planning and Management Team and the Public Safety department provide ongoing input and resources for the committee ([III.B.1-11](#)). The committee reviews periodic safety and security inspection and assessment reports and monitors efforts to correct deficiencies ([III.B.1-12](#)).

Facilities Planning and Management and the Risk Management departments share administrative responsibility for hazardous materials management. A

database has been developed to identify locations of asbestos containing building materials within campus facilities. All construction and maintenance projects that require demolition are evaluated prior to the start of construction using the database as a guide. Whenever asbestos, mold, or lead paint abatement is required, a third party consultant provides continuous monitoring to ensure compliance with relevant codes and best practices and that the public is protected from potentially hazardous activities. Reports are produced for all abatement activities and reviewed by the risk manager. Hazardous materials produced by the College in the regular course of operations, such as chemical and medical waste, are removed regularly by qualified consultants. The removal activities are overseen by facilities management and monitored for compliance by the Director of Risk Management.

The College Assures Secure Physical Resources at All Locations

The Facilities Planning and Management team works closely with the Public Safety and Risk Management departments to ensure that buildings and infrastructure are constructed and maintained in a manner that minimizes risk to persons and property in accordance with College goals and Strategic Objectives ([I.A.3-1](#)). The Health and Safety Committee monitors security improvements identified as concerns in the Articulated Site Security Assessment prepared by the Crime Prevention through Environmental Design report in October 2010. The report also serves as a guide for facilities planning, design, and operations, with the goal of reducing existing and potential security concerns. The Public Safety

Department provides ongoing design review input for major construction projects to further reduce existing security concerns ([III.B.1-3 pg. 2](#)). Public Safety Officers and facilities managers and staff identify emerging security concerns such as security lighting outages and landscape materials that limit the natural surveillance ([III.B.1-7](#)). Officers and facilities staff are empowered to initiate service requests through the School Dude computerized maintenance management system to minimize response time to emerging issues. The Health and Safety Committee tracks and monitors issues that are not quickly resolved.

The College has placed a high priority on the development of emergency response and communications infrastructure. In 2014, a new Emergency Operations Center (EOC) was opened, providing a secure location for emergency management and training activities. The EOC is equipped with a robust technology package, redundant power and data systems, and capabilities to expand communications capabilities as technology evolves ([III.B.1-13](#)). If there is a significant event, the EOC will be staffed by a trained internal team structured according to the State Emergency Management System (SEMS) ([III.B.1-14](#)). In 2015, the College added a management position to provide expertise and support for campus emergency response and training efforts.

Current efforts to expand the College's emergency communications infrastructure include the implementation of the Alertus emergency notification system. A cross-functional team, led by the Technical Services Department with

support from Information Technology, Public Safety, Risk Management, Purchasing, and Facilities Planning and Management departments drafted design criteria for a system that will provide emergency communication to all campus teaching spaces, office suites, and public areas ([III.B.1-14](#)). The system includes a radio communication back-up to ensure that it will operate effectively should the campus data communications infrastructure fail ([III.B.1-15](#)). Funds have also been allocated for an emergency communications infrastructure project to add a communications tower adjacent to the EOC. The tower will facilitate redundant radio, cellular, and video systems to improve emergency communications and response across campus ([III.B.1-16](#)).

The College Assures Accessible Physical Resources at All Locations

Mt. SAC employs an interdisciplinary approach to assuring accessible facilities throughout the planning, design, construction, operation, and decommissioning of buildings, grounds, and infrastructure according to College goals and Strategic Objectives. The Facilities Planning and Management Team works closely with the Campus Master Plan Coordinating Team (CMPCT), the FAC, the Safety Committee, and other representative groups that meet both formally and informally to monitor the performance of existing College facilities and to construct and modernize buildings and infrastructure according to universal design principles. Universal design can be defined as the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized

design. Mt. SAC has embraced universal design principles and has expanded its application beyond minimum building code compliance ([III.B.1-17](#)).

In 2012, the College completed a new Americans with Disabilities Act (ADA) transition plan. The plan identified barriers to access in many areas of the campus, including the physical environment ([III.B.1-18](#)). A comprehensive database of accessibility concerns was developed and continues to provide guidance for the design and construction team as new and modernized facilities and infrastructure are planned ([III.B.1-19](#)). The College has funded and completed a number of significant ADA improvement projects since the completion of the transition plan and continues to improve accessibility across campus by utilizing local bond funds to replace and upgrade facilities constructed prior to the ADA ([III.B.1-20](#)). The College also provides ongoing funding to remove barriers to access through an annual general fund allocation targeted improving classroom standards ([III.B.1-21](#)).

Facilities planning, design, and construction efforts, including master planning, individual project planning and design work products, are reviewed monthly by the FAC, which makes recommendations to CMPCT and reports to the President's Advisory Council ([III.B.1-2](#)).

The FAC was created in 2010 to provide a representative group to review and assess progress on the many ongoing facilities improvement projects funded through local bonds, energy funds, and general fund sources. The committee is chaired by

the Director of Facilities Planning and Management, and includes management, faculty, classified staff and student representatives ([III.B.1-2](#)). Agendas and notes for FAC meetings are prepared and distributed at each meeting and regularly posted on the College website ([I.A.1-24](#)).

FAC goals include an ongoing review of the campus building standards that provide guidance to the facilities planners and design professionals responsible for constructing safe, accessible, and healthy facilities ([III.B.1-21](#)). Group review and ownership of these standards assures that emerging issues affecting the teaching and learning environments across campus are promptly addressed. A tracking log of updated standards is maintained in the Facilities Planning and Management shared files, and the standards are accessed by the Facilities Planning and Management Team ([III.B.1-22](#)).

Mt. SAC Assures Sufficient Physical Resources at All Locations

The College prioritizes facilities projects according to College goals, Strategic Objectives, and Administrative Policy 6610 ([III.B.1-23](#)). Major building, infrastructure, and energy conservation projects are prioritized through the comprehensive master planning process ([III.B.1-24](#), [III.B.1-25](#)). The 2012 Facilities Master Plan (FMP) was developed using data from the Educational Master Plan (EMP) developed in 2009 and information taken from the previous FMP ([I.A.1-26](#)). The 2009 EMP developed growth forecasts for each academic division from which space needs projections were created in terms of assignable square footage (ASF). The ASF needs were used to forecast the number of each room type

needed by each division. This comprehensive master planning work has guided the project specific planning for a locally funded 100,000 gross-square-foot business and computer technology building currently under construction, the first phase of a new athletics complex set to begin construction in early 2017, and final project proposals submitted and approved by the California Community College Chancellors Office for a 170,000 gross square foot (GSF) Technical Education Building and the second phase of the athletics complex.

A Utility Master Plan was completed in 2012 to guide the design and construction of major utility and infrastructure systems, and a campus wide study to determine food service needs was completed in 2010, guiding the design and construction of a new 25,000 GSF food service facility completed in 2015.

With the passage of the Measure R local facilities bond in 2002, the College instituted a special leadership group, CMPCT, to oversee and provide administrative direction for the building program. The team is chaired by the College President/CEO, and membership includes the Vice Presidents of Administrative Services, Instruction and Student Services and the Director of Facilities Planning and Management. CMPCT meets twice per month to review reports on ongoing planning, design, and construction activities, approve budgets for new projects, and review design and construction contract awards prior to submission to the Board of Trustees for approval.

Minor building improvement projects and alterations to specific rooms or

operational areas are prioritized annually at several levels within each operational area on campus as part of the institutional planning process. A prioritized list of project requests, approved by the appropriate vice president, is submitted to the Director of Facilities Planning and Management each year ([III.B.1-26](#)). After each project is evaluated for feasibility and cost, the list is refined and presented to FAC for review ([III.B.1-2](#)). A combined list is then reviewed by CMPCT for funding approval ([III.B.1-27](#)). The project prioritization process allows for urgent facilities needs to be addressed in a timely fashion with vice-president approval.

Strategic goals that include significant facilities elements are given higher priority with approval of CMPCT. Examples include a 3,000 GSF renovation of the Professional and Organizational Development offices and teaching spaces in response to College Goal #10 and the addition of two new modular buildings to provide space for the Technology and Engineering Resource Center in response to Strategic Objective #1.2. Both projects were completed in 2015 ([III.B.1-28](#), [III.B.1-29](#)).

Analysis and Evaluation

Mt. San Antonio College (Mt. SAC) assures that all physical resources that provide courses, programs, and learning support services, are accessible, safe, secured, and provide a healthful learning and working environment.

Accomplishments and Outcomes

- Mt. SAC has architects, engineering consultants, certified inspectors, a facilities operation team, health and safety and a Facilities Advisory

Committee, Public Safety and Risk Management Departments, and emergency response and communication infrastructure in place in order to ensure that the College is able to assure safe physical resources at all locations.

- Experienced experts in construction and maintenance provide appropriate recommendations for structural changes.
- Operations allow requests for maintenance to be made by facilities

staff, representatives from instruction, student services, and administrative offices.

- Through several shared governance committees, the College is able to ensure that all new or altered infrastructure changes maximize the use of the facility.
- The College has an emergency response system that provides communication, power and data backup systems which will be expanded as technology evolves.

List of Evidence

I.A.1-24	Campus Committees
I.A.1-26	Facilities Master Plan
I.A.3-1	Strategic Plan 2015-17
III.B.1-1	Facilities Planning and Management Organizational Chart
III.B.1-2	Facilities Advisory Committee Purpose, Function, and Members
III.B.1-3	Design Meeting Minutes pg. 2
III.B.1-4	The Vinewood Company Code Compliance Review
III.B.1-5	The Vinewood Company Organizational Chart
III.B.1-6	Business and Computer Technology (BCT) Safety Reports
III.B.1-7	School Dude Report
III.B.1-8	On-Call Rotation
III.B.1-9	On-Call Process
III.B.1-10	Health and Safety Committee (HSC) Purpose, Function, and Members
III.B.1-11	Committee Structure
III.B.1-12	HSC Meeting Minutes 4-5-2016
III.B.1-13	Emergency Operations Center Project Description
III.B.1-14	Emergency Operations Center Organizational Chart
III.B.1-15	Emergency Communications Request for Proposals
III.B.1-16	Emergency Communications Project Budget
III.B.1-17	Student Success Center Project Description
III.B.1-18	ADA Transition Plan
III.B.1-19	ADA Database Proposal
III.B.1-20	ADA Project List
III.B.1-21	Classroom Standards Project Data Form
III.B.1-22	Facilities Planning & Management Campus Standards Log
III.B.1-23	Administrative Procedure 6610
III.B.1-24	Measure R and RR Bond Project Lists 8-2-2016
III.B.1-25	Measure R and RR Bond Project Lists 8-3-2016
III.B.1-26	2015 Project Lists
III.B.1-27	2016 Project List CMPCT Notes
III.B.1-28	Professional and Organizational Development Project Scope and Budget
III.B.1-29	TERC Project Scope and Budget

III.B.2.

The institution plans, acquires or builds, maintains, and upgrades or replaces its physical resources, including facilities, equipment, land, and other assets, in a manner that assures effective utilization and the continuing quality necessary to support its programs and services and achieve its mission.

Evidence of Meeting the Standard

The College Plans Its Physical Resources to Assure Effective Utilization to Support Its Programs and Services and Achieve Its Mission

Mt. San Antonio College (Mt. SAC) plans new and modernized facilities and infrastructure according to College goals, strategic objectives, and the California Community College Chancellor's Office Facilities Planning Manual ([I.A.3-1](#)). In 2001, the Measure R local facilities bond was approved in the amount of \$221 million; and in 2008, the Measure RR local facilities bond was approved in the amount of \$353 million. Since the passage of the Measure R local facilities bond, the College has constructed 20 new permanent buildings and completed full building modernization on 17 other major buildings ([III.B.2-1](#)). Through this effort, the College has increased the number of classrooms and laboratories from 320 to 405, modernized the College's largest student services building, and constructed a new Student Success Center ([III.B.2-2](#)).

Since 2002, the gross square footage (GSF) of the College has grown from approximately 1.2 million GSF to over 1.7 Million GSF, while the lecture space

capacity load ratio has improved from 220 percent to 120 percent ([III.B.2-3](#), [III.B.2-4](#), [III.B.2-5](#)). Laboratory capacity load ratios have improved from 65 percent to 88 percent, while library capacity load ratios have improved from 48 percent to 78 percent ([III.B.2-6 pg. 2](#), [III.B.2-7](#)). These significant improvements in space utilization can be attributed to a concerted effort to design space efficient buildings, correctly sized classrooms, and a focus on laboratory and library space.

A room utilization matrix was developed in 2014 and 2015 that identifies under-utilized teaching space ([III.B.2-8](#)). The matrix is used as a guide to identify classrooms that can either house more student workstations or that require alteration to align space with appropriate class sizes. The College has committed to a space utilization project that will right-size the remaining inefficient rooms on campus not included as part of a planned new construction or modernization project. The work will include an upgrade of audio-visual technology installed early in the measure R building program and improvements to interior finishes needed to ensure a quality teaching space ([III.B.2-9](#)).

The College Builds, Upgrades, or Replaces Its Physical Resources to Assure Continuing Quality

Mt. SAC assures the quality of facilities and infrastructure design and construction according to College goals. Facilities Planning and Management successfully completed the transition away from a program and construction management consultant to in-house program

management and now uses a construction management firm for only the largest construction projects ([III.B.1-1](#), [III.B.2-10](#)). Project planning and design management for all projects are overseen by a highly qualified team of College managers and staff. The College Design and Construction Team includes three licensed architects, a licensed mechanical engineer, a project accounting manager, and staff experienced with construction administration. The team oversees a group of architect and engineering consultants to produce quality construction plans and specifications.

Architects and engineering consultants are selected for each project through a detailed request-for-proposal process conducted by the Facilities Advisory Committee (FAC) with support from the Purchasing Department. The FAC reviews and scores proposals submitted by qualified firms and recommends finalists to the Campus Master Plan Coordinating Team (CMPCT) ([III.B.2-11](#)). CMPCT recommends the top firm to the Board of Trustees ([III.B.2-12 pg. 4, 41](#)). This participatory process ensures that the best firms are selected to design each project. Once the design consultants are set, an inclusive design team with specialized knowledge about the project requirements is established ([III.B.2-13](#)).

A similar process was used to select a construction management firm to manage the largest, multiple-prime construction projects and to support the College team by providing constructability review and cost estimating input at the mid-point of design and prior to submittal to the Division of the State Architect (DSA) ([III.B.2-14](#)). Code compliance reviews are

conducted by the College's construction inspection consultant at the mid-point of design and prior to submission to the DSA to ensure that construction documents fully comply with building code areas not reviewed by DSA, such as mechanical, plumbing, and electrical ([III.B.2-15](#)). The integration of the construction management and inspection teams into the design process, along with the College project manager and design team and the design consultants ensures that the project design requirements are fully addressed in the design phase and that projects are constructable within allowed budgets.

Construction documents are also reviewed internally by the Facilities Planning and Management Operations team, including representatives from the building and infrastructure maintenance group, custodial services, grounds, and energy management ([III.B.2-16](#), [III.B.2-17](#), [III.B.2-18](#), [III.B.2-19](#), [III.B.2-20](#), [III.B.2-21](#), [III.B.2-22](#)). With ongoing input from facilities staff, campus standards are updated on a regular basis. Updated standards are added to baseline design standards developed at the beginning of the Measure R building program, and a log is maintained to ensure that current standards are available for use by design teams on all College projects ([III.B.1-22](#)). Campus standards are reviewed by FAC to ensure that they are applicable for use in all areas across the College.

Mt. SAC assures that College facilities and equipment are maintained in a manner that supports its mission according to College goals and Strategic Objectives. The Facilities Planning and Management Operations team is primarily responsible

for maintaining and efficiently operating buildings, grounds, infrastructure, and the College fleet of vehicles and maintenance equipment ([III.B.1-1](#)). A new computerized maintenance management system that includes modules for preventative maintenance and a robust system for submitting and tracking work requests by building and operational area was implemented for use by the maintenance, grounds, custodial services, and energy management teams in 2012 ([III.B.2-23](#)). A similar system was implemented that same year to track ongoing maintenance for the College's fleet of over 200 vehicles. These systems provide the basis for a shift away from reactive maintenance by providing a platform for the expansion of preventative maintenance ([III.B.2-24](#)). The College has provided financial support for the expansion for preventative maintenance by funding a special projects manager position to oversee the transition ([III.B.2-25](#)). Expanded preventative maintenance of buildings, infrastructure, and the College fleet of vehicles reduces down time and failure rates and will increase the service life of critical equipment and infrastructure ([III.B.2-26](#)). The Facilities Condition Index provides a broad perspective of the deferred maintenance backlog, while the Internal Facilities Assessment Report provides a detailed look at the status of mechanical, electrical, and plumbing equipment and the condition of architectural finishes throughout the campus. The 30-year capital expenditure plan for each campus building and the inventory and condition

assessment developed for each of over 2,300 pieces of equipment provide guidance in developing project lists that reflect the most current equipment replacement and finishes upgrade needs on campus ([III.B.2-27](#)). The assessment data indicates that College facilities are well maintained.

Facilities Planning and Management also provides support for instructional and student services efforts to upgrade or replace critical instructional equipment such as classroom and office furniture and equipment items that require permanent installation or concurrent facilities alterations.

Analysis and Evaluation

Mt. San Antonio College (Mt. SAC) builds, maintains, and upgrades its physical resources. Changes are made to facilities, equipment, land, and other assets, in order to provide venues that are effectively utilized and are maintained at a level of quality that supports its programs, services, and aids in achieving its mission.

Accomplishments and Outcomes

- Gross square footage of the College has expanded, providing more classroom and laboratory space.
- Classrooms and laboratory spaces have been modernized.
- Several College departments and committees work together to identify construction firms that will construct the best facilities for the services they provide.

- Code compliance reviews indicate that construction is in compliance with building codes including areas such as mechanical, plumbing, and electrical.
- A maintenance management system tracks work requests and preventative maintenance on grounds, buildings, and College fleet vehicles to ensure proper working order.

List of Evidence

I.A.3-1	Strategic Plan 2015-17
III.B.1-1	Facilities Planning and Management Organizational Chart
III.B.1-22	Campus Standards Log
III.B.2-1	Completed Project Report to CMPCT
III.B.2-2	Classroom and Laboratories by Year Report
III.B.2-3	Space Inventory 2002
III.B.2-4	Space Inventory 2016
III.B.2-5	2016 Five Year Construction Plan
III.B.2-6	Capacity Load Ratio Summary Report to President's Cabinet Item #6 pg. 2
III.B.2-7	Capacity Load Ratio Summary Report to President's Cabinet
III.B.2-8	Classroom Utilization Matrix
III.B.2-9	Audiovisual Technology Phase 1 Project Budget and Scope of Work
III.B.2-10	Tilden-Coil Constructors Organizational Chart
III.B.2-11	Architect RFP Student Center
III.B.2-12	Agenda Item Student Center pg. 4, 41
III.B.2-13	Student Center Design Team
III.B.2-14	Business and Computer Technology (BCT) Constructability Review and Cost Estimate
III.B.2-15	Business and Computer Technology (BCT) Code Review
III.B.2-16	Business and Computer Technology Review Notes 101314 Turn AV
III.B.2-17	Business and Computer Technology Review Notes 101314 Plumbing
III.B.2-18	Business and Computer Technology Review Notes 102214 Electronics
III.B.2-19	Business and Computer Technology Review Notes 102214 Mechanics
III.B.2-20	Business and Computer Technology Review Notes Door Hardware 102914
III.B.2-21	Business and Computer Technology Review Notes Design Development Page Turning 32414
III.B.2-22	Business and Computer Technology Review Notes Vinewood Company
III.B.2-23	School Dude Product Data
III.B.2-24	RTA Product Data
III.B.2-25	New Resources Report Phase II
III.B.2-26	McKinstry Report Executive Summary
III.B.2-27	McKinstry Capex Summary

III.B.3.

To assure the feasibility and effectiveness of its physical resources in supporting institutional programs and services, the institution plans and evaluates its facilities and equipment on a regular basis, taking utilization and other relevant data into account.

Evidence of Meeting the Standard

Mt. San Antonio College (Mt. SAC) assures the feasibility and effectiveness of its physical resources according to College goals, Strategic Objectives, and the institutional planning process ([I.A.3-1](#)). Major building projects are assessed for feasibility and effectiveness as part of the educational and facilities master planning process. Educational and facilities master planning provide the College with a long range assessment of facilities needs that align with the College mission and vision and the relevant demographic data that supports planned program growth. A new comprehensive Educational and Facilities Master Plan effort began in summer 2016, with completion and Board of Trustees approval set for early 2018 ([III.B.3-1](#)). Approved master-planned projects are evaluated according to the California Environmental Quality Act (CEQA) process to ensure feasibility and to consider environmental impacts and appropriate mitigation measures ([III.B.3-2 pg. 19-36](#)). Utility infrastructure is evaluated periodically through a utility master planning process ([III.B.3-3 pg. 4](#)). A new landscape master plan will be developed as part of the comprehensive master planning process currently underway ([III.B.3-4](#)).

Space utilization is reported as part of the Five-Year Capital Outlay Plan submitted annually to the California Community College Chancellor's Office ([III.B.3-5](#)). The campus space inventory is updated annually according to the California Community Colleges Space Inventory Handbook ([III.B.3-6](#)). All building floor plans are maintained electronically using computer-aided design software and updated to reflect changes to building space or use by construction activities or reassignment of space ([III.B.3-7](#)). Updates are reflected in subsequent space inventory reports. Accurate space inventory data ensures that the capacity load ratio for each space type is correct and that space utilization is considered in project planning efforts, including initial and final project proposals. The College continues to improve space utilization by planning and designing space-efficient buildings and through a targeted effort to identify and improve utilization of inefficient space ([III.B.2-7](#), [III.B.2-8](#)).

The College evaluates all campus facilities every three years as part of the Foundation for California Community Colleges Facility Condition Assessment Program. Data from the assessment effort provides estimates of repair costs and replacement costs for each building ([III.B.3-8](#)). The repair costs expressed as a percentage of replacement cost for each facility provides a guideline in evaluating facilities for repair, modernization, or replacement.

Facilities Planning and Management also completed a comprehensive assessment of current facilities and equipment in 2014. The effort evaluated and tagged

over 2,300 pieces of mechanical, electrical, and plumbing equipment and assessed the condition of architectural finishes in over 3,000 rooms ([III.B.2-26](#)). The report provided a basis for a capital equipment renewal and preventative maintenance plan and identified staffing requirements necessary to maintain critical equipment over a 30-year time period. The findings are reflected in the current Planning for Institutional Effectiveness report for Facilities Management ([III.B.3-9](#)).

Each year, as part of the College's Planning for Institutional Effectiveness process, instructional, student services, and administrative units evaluate and report facilities resource needs, including equipment needs that require installation and start-up support from Facilities Planning and Management. Resource requests are prioritized at various levels, approved by the appropriate vice-president, and submitted to the Director of Facilities Planning and Management for review and analysis ([III.B.3-10](#)). Proposed projects are considered for feasibility and cost, reviewed by the Facilities Advisory Committee, and submitted to the Campus Master Plan Coordinating Team for approval ([III.B.1-2](#), [III.B.1-27](#)).

Analysis and Evaluation

Mt. San Antonio College (Mt. SAC) regularly evaluates all facilities and equipment, assuring the effectiveness of these physical resources in supporting institutional programs and services. The College also determines feasibility of institutional plans for new or altered facilities taking utilization and other relevant data into account.

Accomplishments and Outcomes

- Educational and facilities master planning provide assessments of facility needs, feasibility, environmental impact, and relevant demographic data that supports program growth.
- The space inventory gives updated and correct information about capacity load ratio of all spaces and ensures that those spaces are utilized efficiently.
- Assessment of College facilities provides information on what facilities need repairs, replacement, or modernization and stores information regarding estimated repair and replacement cost for each building.
- The Facilities Planning and Management Department assesses mechanical, electrical, and plumbing equipment to ensure proper working order and identifies staffing requirements needed to maintain this equipment.

List of Evidence

I.A.3-1	Strategic Plan 2015-17
III.B.1-2	Facilities Advisory Committee Purpose, Function, and Members
III.B.1-27	2016 Project List CMPCT Notes
III.B.2-7	Capacity Load Ratio Summary Report to President's Cabinet
III.B.2-8	Classroom Utilization Matrix
III.B.2-26	McKinstry Report Executive Summary
III.B.3-1	Ed Plan RFP
III.B.3-2	2015 SEIR Executive Summary pg. 19-36
III.B.3-3	UMP Executive Summary pg. 4
III.B.3-4	BOT Agenda for CMP
III.B.3-5	5 Year Capital Outlay Plan
III.B.3-6	2015 Space Inventory
III.B.3-7	List of Updated Floor Plans
III.B.3-8	Capacity Load Ratio Report to Cabinet
III.B.3-9	2015-2016 PIE Managers Summary
III.B.3-10	PIE Projects List

III.B.4.

Long-range capital plans support institutional improvement goals and reflect projections of the total cost of ownership of new facilities and equipment.

Evidence of Meeting the Standard

Mt. San Antonio College (Mt. SAC) develops long-range capital plans according to College goals and Strategic Objectives ([I.A.3-1](#)). Long-range capital planning includes facilities master planning and the Five-Year Construction Plan submitted annually to the California Community College Chancellor's Office. Facilities master planning identifies major projects required to support the College's mission, vision and goals and includes an examination of potential academic and institutional support programs including: expansion of existing programs; potential for maximum growth and build-out for the campus, and a capital program that will identify preferred land use, potential building sites, circulation plans, as well as capacity and massing plans to support the academic and institutional support program needs of the campus ([III.B.4-1](#)). Academic and institutional support program needs are identified through the educational master planning process, the Strategic Plan, and the annual Planning for Institutional Effectiveness process. The Five-Year Construction Plan identifies and prioritizes projects that may be supportable with state capital outlay funds.

Projects approved as part of the Facilities Master Plan are prioritized and reviewed for feasibility and costs are estimated prior to award of design contracts ([III.B.1-2](#)). Each project design effort complies with a detailed list of design requirements for each phase, including basis of design reports for critical building systems such as heating, ventilation and air conditioning, lighting systems, and building envelop ([III.B.4-2](#)). These reports provide the basis for life-cycle cost analysis of critical building elements. In 2016, the College shifted from standard fluorescent lighting to light-emitting diode (LED) lighting systems. A life-cycle cost analysis was developed for this system showing that LED lighting provides a more flexible and better quality teaching and learning environment with a lower life-cycle cost ([III.B.4-3](#)). Major mechanical and electrical improvements are analyzed to evaluate long-term reliability and energy savings, with consideration for the life-cycle cost of the system. Examples include the 2.2 megawatt solar power generating plant, the new two-million-gallon thermal energy storage facility, and the replacement of the 400-ton, air-cooled chiller equipment in the Performing Arts Center ([III.B.4-4](#), [III.B.4-5](#), [III.B.4-6](#)).

The College also participates in the Foundation for California Community Colleges Facility Condition Assessment Program. All College building facilities are analyzed every three years to update the

facilities condition index for each building ([III.B.4-7](#)). The index is developed in consideration of the expected life-cycle for critical building systems, and repair and replacement costs are estimated for equipment and building systems resulting in a ratio of repair costs to estimated costs. A low ratio indicates a building that is in good repair, and a high ratio indicates a building that requires significant modernization. The College considers removal or replacement of facilities with a ratio greater than 75 percent.

Analysis and Evaluation

Mt. San Antonio College (Mt. SAC) has long-term plans in place that support institutional improvements to facilities and equipment and has information on the total cost of those improvements.

Accomplishments and Outcomes

- Long-range capital plans are used to identify major projects that will support the College’s mission, vision, goals, academic programs, and campus growth.
- LED systems were installed to provide a more flexible and better quality teaching and learning environment with a lower cost than the previously used fluorescent lighting.
- New solar power and energy storage systems are in use as they were determined to provide energy savings and have greater long-term reliability.
- The facilities condition index is used to determine equipment and buildings that need repair or replacement. This index also indicates how much these alterations will cost.

List of Evidence

I.A.3-1	Strategic Plan 2015-17
III.B.1-2	Facilities Advisory Committee Purpose, Function, and Members
III.B.4-1	FMP RFP
III.B.4-2	Design Requirements by Phase
III.B.4-3	Life Cycle Cost for LED Lighting
III.B.4-4	Edison Analysis of Solar
III.B.4-5	SCE Permanent Load Shifting Program Incentive
III.B.4-6	Building 2 Chiller and Cooling Tower Evaluation
III.B.4-7	FCI Reports