

Yosemite Community College District District Fiscal Advisory Council (DFAC)

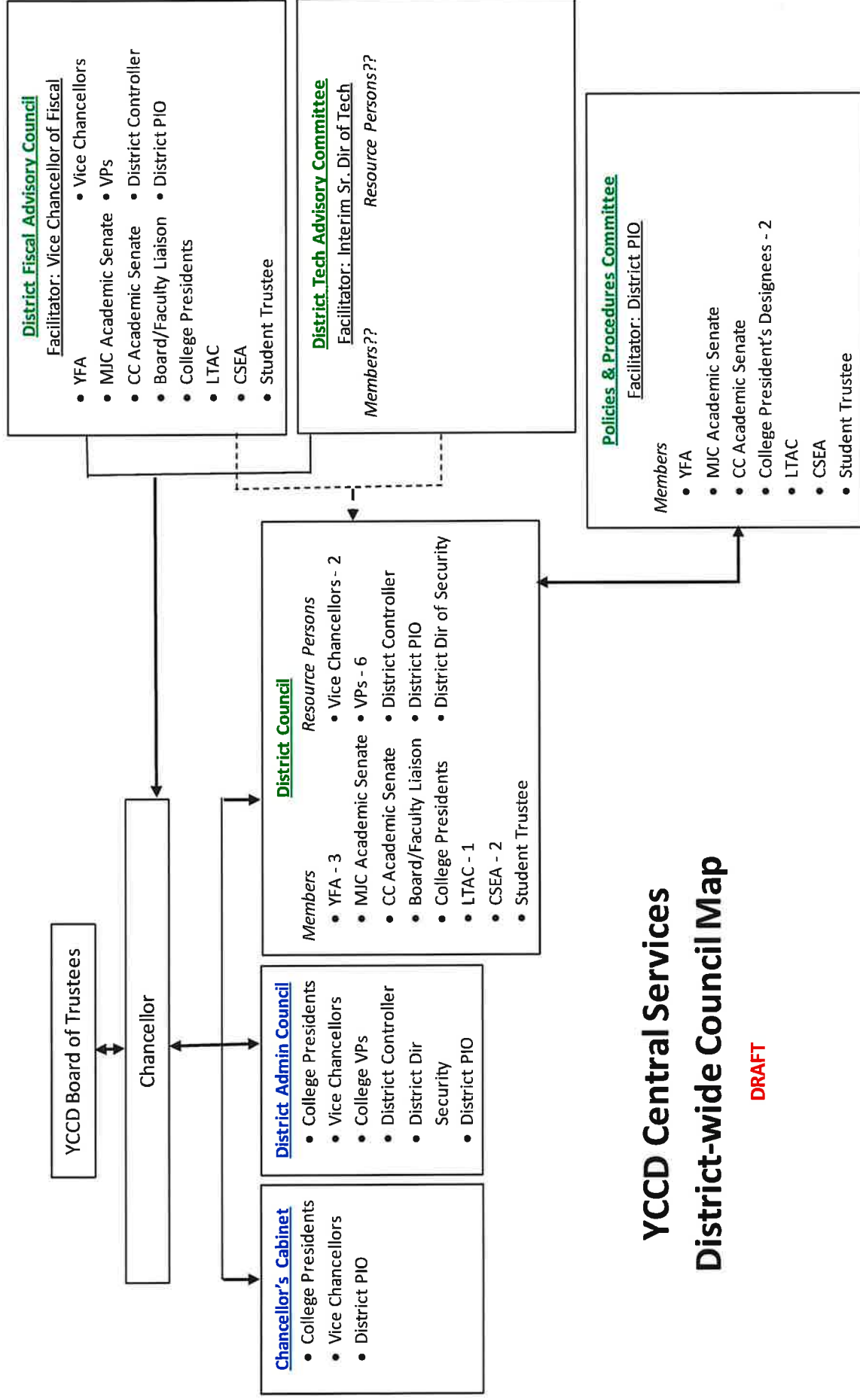
Thursday, January 31, 2019

12:00 p.m.

District Office Building, Conference Room A

Agenda

12:00 p.m. - 12:30 p.m.	Introductions
12:30 p.m. - 1:00 p.m.	Membership
1:00 p.m. - 1:30 p.m.	PRT Menu of Options
1:30 p.m. - 2:00 p.m.	Charter
2:00 p.m. - 2:45 p.m.	2018-2019 Committee Priorities <ul style="list-style-type: none">• 2019-2020 Budget Development• New Resource Allocation Model<ul style="list-style-type: none">○ Facilities Total Cost of Ownership○ Information Technology Total Cost of Ownership
2:45 p.m. - 3:45 p.m.	2018-2019 State and District Budget
3:45 p.m. - 4:00 p.m.	Close
Next Meeting:	To be determined



YCCD Central Services District-wide Council Map

DRAFT

KEY:

Operational

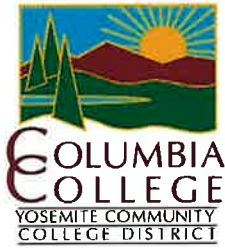
Participatory Governance

Constituent

These descriptive characteristics are noted only to assist in understanding the general relationship between committees.

NOTE:

- While all committees are not identified as "participatory governance," many follow the same structure in terms of representation.
- This Committee map is not a comprehensive listing of all Central Services District-wide Committees.



District Fiscal Advisory Council (DFAC)

YCCD Mission Statement: The Yosemite Community College District is committed to responding to the needs of our diverse community through excellence in teaching, learning and support programs contributing to social, cultural, and economic development and wellness.

The District Fiscal Advisory Council provides a process specifically for the consideration of Fiscal Services issues, such as budget development, facilities, total cost of ownership, revenue generation, resource prioritization and allocation and other fiscal issues. The Council is designed to allow for discussion and input from committee members regarding fiscal matters and is aligned with the goal of continued building of strong relationships between Central Services and the Colleges. The Council will also be used to promote the dissemination of information between Central Services and the Colleges. The DFAC is an administrative body that provides recommendations to the Chancellor and works collaboratively with other shared governance bodies.

District Governance

The District Fiscal Advisory Council meets monthly to:

- Address resource recommendations based on program review and District planning to improve student learning outcomes and/or institutional effectiveness
- Ensure that YCCD resources are tied to the District-wide Strategic Plan
- Monitor YCCD's fiscal solvency
- Review and discuss implementation of policies related to fiscal resources
- Coordinate practices as needed, related to fiscal services
- Serve as a forum or dialogue for ongoing fiscal activities and reporting
- Review and share information on the state budget including capital outlay funds involving the formulation of budget assumptions that contribute to the creation of a tentative and final budget, submitted to the Board of Trustees
- Review and draft budget in its developmental stages
- Monitor student centered funding formula (SCFF) data elements
- Enrollment management strategies in collaboration with the Colleges
- Develop and periodically review a Resource Allocation Model

2019-2020 Budget Planning Timeline

December 2018

- **January 4** – Controller “Authorizes” new fiscal year in Colleague
- **January 31** – Budget Analyst sends salary and fringe benefit data to Vice Presidents of College and Administrative Services and Central Services Budget Managers via Excel spreadsheet
- **February 28** – VP’s of Administrative Services & Central Services Budget Managers return final changes to salary and fringe benefit data to Budget Analyst
- **March 8** – Vice Chancellor of Fiscal Services distributes budget targets
- **March 15** – Budget Analyst imports salary and fringe benefit data into Colleague
- **April 15** – VP’s of Administrative Services & Central Services Budget Managers submit budgets for operational/discretionary expenses (e.g., supplies, services, equipment) to Budget Analyst
- **April 22** – Budget Analyst imports operational/discretionary expenses into Colleague
- **May 21** – Deadline for Board Agenda items
- **June 12** – June Board Meeting – TENTATIVE BUDGET
- **September 11** – September Board Meeting – FINAL BUDGET



California
Community
Colleges



INSTITUTIONAL EFFECTIVENESS
PARTNERSHIP INITIATIVE

**Institutional Effectiveness Partnership Initiative
Mini-Partnership Resource Teams
List of Primary Successes and Menu of Options for Institutional Consideration**
Date of Visit: September 19, 2018

Name of Institution: Yosemite Community College District

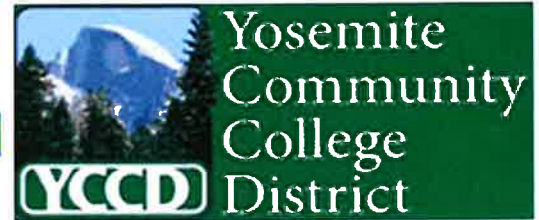
Mini-Partnership Resource Team Members: Gregory Stoup, Paula Demanett, Davit Khachatryan

Primary Institutional Successes

Description of Primary Institutional Successes	Notes and Comments
The District appears to have been responsive in identifying gaps in districtwide planning and communication, especially with regard to fiscal matters between the district and the colleges. Furthermore, the district has been proactive in crafting a response strategy with this proposal for a new participatory body to address the communications and planning gaps.	The dialogue from the PRT visit seemed to confirm from the attendees the need for some modifications to existing planning and communications conventions and structures. Furthermore, there appeared to be broad agreement among attendees with the formation of the new participatory fiscal planning body to address current gaps.
The District has displayed foresight in the need for new approaches to help both of their colleges respond to the emerging mandates of the state Chancellor's Office. The new mandates are likely to create additional strains on the current planning and fiscal structures, and the district has been astute in anticipating the need for modifications before the new state mandates created new real-time challenges that threatened performance.	Given the broad number of new mandates and the regular amending of operational directions from the state Chancellor's Office, it seems appropriate to anticipate the need for flexibility in the district's response strategy and messaging. Without good planning and messaging, even appropriate changes in response to evolving state mandates can be interpreted by the colleges as improper planning or execution on the part of the district.

Menu of Options for Institutional Consideration for Its Innovation and Effectiveness Plan

Area of Focus	Options for Institutional Consideration: Ideas, Approaches, Solutions, Best Practices	Models, Examples, and Comments
Fiscal and Strategic Planning	<ul style="list-style-type: none"> • Establish a Workgroup or Task Force to identify and draft a formal charge document that articulates the purpose and need for the new Fiscal Committee. Membership of the Task Force should include representatives of each of the colleges' primary governance bodies and constituency groups. • Have the Task Force develop a decision-making flow chart model or graphic that demonstrates how the New Committee complements and interacts with the other existing District Committees and Councils and clearly articulates which bodies are administrative versus governance in their primary function. • Establish a communication and dissemination plan for the Task Force's charge document and flow chart model. Such a plan might include requesting that a discussion item be placed on the agendas of the college primary governance bodies, in addition to posting the documents on the District website. • Consider performing a midway assessment of the District Strategic Plan, and in the process take the opportunity to demonstrate how the new Fiscal Committee will meet a current need and/or help operationalize the plan. Engage all constituency groups meaningfully in the assessment, communicate the results effectively District-wide, and implement improvements as the findings warrant. 	<ul style="list-style-type: none"> • The afternoon dialogue appeared to be helpful in identifying an approach for the drafting of the charge document for the new fiscal committee that met the desired criteria of the colleges, in terms of both the team to draft the charge document and the individuals responsible for editing and approving the document. The proposed charge development strategy seems to be in harmony with the local culture. There was, however, some discussion as to whether the label Fiscal Committee was appropriate. There may be value in floating and testing other labels for the committee. • The afternoon dialogue also yielded a draft organizational flow chart model that displayed the role of the new fiscal body in relation to existing governance and administrative structures. The attendees expressed the importance of having some form of model to explain the role of the new fiscal body and its function in relation to existing governance and administrative bodies. Furthermore, while the draft model must still be formally vetted and endorsed by the district and colleges, it did appear to capture the general agreement of attendees in terms of both the function of the new fiscal body and its relationship to existing structures. The draft model appears to be a good starting point for further discussions. • Given the strong cultures of both colleges, it is recommended that the district use the preferred communication and dissemination strategy from each college for endorsement of the charge document that incorporates the flow chart model/graphic. • It is good practice among both districts and colleges to do a mid-term assessment of their strategic plans, and to listen to all voices in that assessment. The district is entering the mid-term of their existing planning cycle and could benefit from undertaking a mid-term assessment, and in so doing, articulate how the new fiscal body would help further the goals embedded in the strategic plan.



YOSEMITE COMMUNITY COLLEGE DISTRICT
TOTAL COST OF OWNERSHIP-FACILITIES PLAN
DRAFT NOVEMBER 13, 2018

YOSEMITE COMMUNITY COLLEGE DISTRICT
TOTAL COST OF OWNERSHIP PLAN

TABLE OF CONTENTS

SECTION 1- EXECUTIVE SUMMARY

SECTION 2- BACKGROUND INFORMATION

SECTION 3- TOTAL COST OF OWNERSHIP DEFINITIONS

SECTION 4- TOTAL COST OF OWNERSHIP PROGRAM

4.1- FACILITY DEVELOPMENT COST

4.2- ANNUAL OPERATING COSTS

4.2.1-UTILITY COSTS

4.2.2- MAINTENANCE AND OPERATIONS OPERATING EXPENSE

4.2.3-TOTAL ANNUAL OPERATING COSTS

4.3- LONG TERM INVESTMENT

SECTION 5- PERFORMANCE REVIEW

5.1- PERFORMANCE BENCHMARKS

5.2- PERFORMANCE TO ACCREDITATION SECTION 3 STANDARDS

SECTION 6- ACTION PLAN

APPENDICES

Columbia Reference Documents
Modesto Junior College Reference Documents
List of Tables and Charts

SECTION 1- EXECUTIVE SUMMARY

Introduction

The Yosemite Community College District (YCCD) staff reviewed several Total Cost of Ownership (TCO) models from other community college districts throughout the state. To meet time constraints and mitigate costs, the decision was made to use a combination of industry standards plans, best practices, and templates for YCCD's TCO document. However, the narrative, data and recommendations have been revised to reflect conditions found at Central Services, Columbia College, and Modesto Junior College (MJC).

The Yosemite Community College District is implementing a TCO process to establish a data driven procedure to assure adequate, well maintained capital assets to meet the educational mission of the District. The TCO process considers all costs associated with an asset from acquisition to demolition, including facility development, annual operations, and long-term management.

The TCO plan for the YCCD provides information and an awareness of all costs expended over the life-cycle of a building. The TCO is a data driven document that establishes guidelines and factual costs to assist in future budgeting and funding decisions at Columbia College, Modesto Junior College, and Central Services. For the purposes of this study, Central Services is included within MJC West Campus and MJC East Campus facilities data, which are referenced as "Modesto Area". The data within the TCO ensures that all facilities costs are considered from conceptual planning, date of occupancy of the facility, through the life-cycle and demolition of a building. Within the TCO, the Total Cost projection for each building has been added, which breaks down the cost to operate, maintain and refurbish each building by identifying the dollar per gross square foot value associated with each asset. Data provided in the plan compares and contrasts utility costs between years and includes an assessment of custodial, maintenance and grounds staffing. The TCO will be implemented in all future planning of new facilities by the Yosemite Community College District.

The Yosemite Community College District has identified the following goals in the TCO:

- Establish total costs for each building to evaluate the costs per gross square foot for future planning of specific buildings
- Establish a planning document for future budgeting and financial decisions
- Establish a method to evaluate the life cycle costs of facilities for operations and maintenance
- Establish a definable standard of care for custodial, maintenance and grounds staffing
- Establish operational cost benchmarks and goals for improvement
- Establish data for long-term funding needs for facility repair, renovation and upgrades

Key Findings

The key findings explained in detail in this TCO are as follows:

- The custodial evaluation for both colleges indicates a level of service between APPA (the profession organization formerly known as the Association of Physical Plant Administrators) standards Level 4 (Moderate Dinginess) and Level 3 (Casual Inattention). Bringing both colleges to a Level 3 standard of custodial service would require the addition of approximately 11 custodians.
- Maintenance staff at both colleges meets or exceeds the APPA Level 3 (Managed Care) standard.
- The grounds staffing at both colleges meets the APPA Level 3 (Moderate Level of Maintenance) standard.
- Operating expenses have increased from \$0.51/GSF to \$0.77/GSF at MJC since 2010 and from \$0.61/GSF to \$0.99/GSF at Columbia College during the same time period.
- The 2017 APPA national EUI performance benchmark is 114 indicating the colleges are more energy efficient than the APPA national averages. Fluctuation in temperatures and energy rates have an impact on the overall energy costs.

- Industry standard is that an institution should plan on investing 1-2% of current replacement value of total building assets per year for maintenance, renovation or replacement projects. YCCD has been able to achieve this standard for the last ten years due to Measure E bond funds. Moving forward, YCCD would need to invest \$6-13 million annually to meet this standard.

SECTION 2- BACKGROUND INFORMATION

With the passage of the \$326M Measure E Bond in 2004, the Yosemite Community College District embarked on a program to provide new and/or updated facilities at Modesto Junior College East and West Campuses and Columbia College. The program was developed through the combination of educational program needs and sustainability guidelines. The Educational Program defined space needs from which the 2004 Facility Master Plan was developed. Infrastructure system improvements were developed as part of the Facilities Master Plan, including upgrades and expansions to the overall campus roadway and utility systems.

The recently adopted 2014 Accreditation Standards of the Accrediting Commission for Community and Junior Colleges- Western Association of Schools (ACCJC) instituted accreditation standards for development and long-term management of a college's physical assets. The relevant standards are from Section III- Physical Resources:

III - PHYSICAL RESOURCES

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.
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.
3. To assure the feasibility and effectiveness of 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.
4. Long-range capital plans support institutional improvement goals and reflect projections of the TCO of new facilities and equipment.

Since the adoption of these new standards by the ACCJC, the District has demonstrated full compliance in its implementation of Measure E. However, the District is implementing a TCO program to formalize the process of planning and managing the development and long-term operational costs of the District's physical assets. The District has funded new facility development from local and state bond sources. Annual operating expenses, including maintenance and operations staff, expenses and utilities, are funded from annual General Fund allocations. Major repairs, renovations and updates have been funded from state programs and Measure E bond funds. Regardless of funding source, all investment in District assets are accounted for through the District Fund Budgets. This centralized accounting system provides a means to transparently identify, track and report on total investment in District facilities.

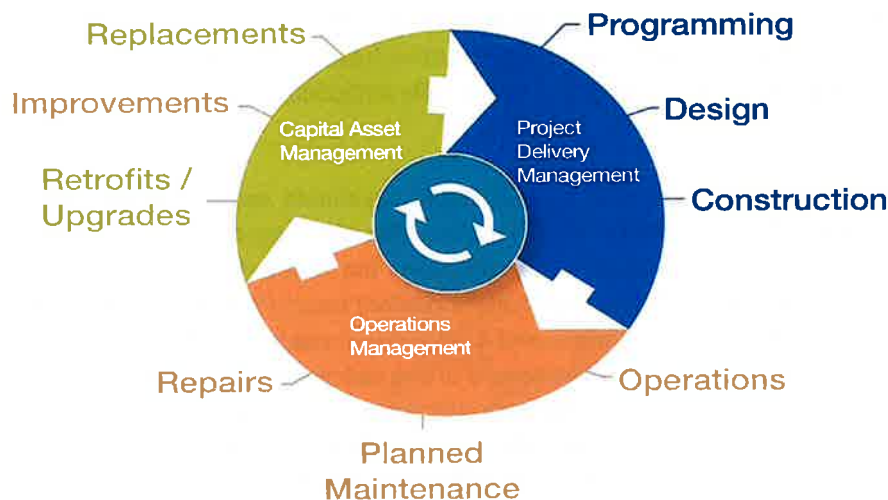
SECTION 3- TOTAL COST OF OWNERSHIP DEFINITIONS

The TCO process considers all costs associated with an asset from acquisition to demolition. TCO provides a means to evaluate initial development costs with long-term operational costs and ongoing repairs, renovations and upgrades. The TCO process provides data to compare the District's costs to operate, maintain and refurbish with state and national averages to identify areas for potential improvement. The TCO provides estimates of future costs to operate and maintain facilities providing information to inform future budgeting and funding decisions. Integral to the TCO process is the assessment of custodial, maintenance and grounds staffing levels needed to maintain

facilities to the standard of care desired by the District and the Colleges.

The TCO process provides a structured means to measure the effectiveness of the programs implemented and to chart program improvements. The TCO program focuses on three primary facility ownership phases:

- Facility Development- Planning, Design, Construction
- Annual Operations – Maintenance and Operations staffing, building utilities, maintenance costs, repairs.
- Long-Term Management- Scheduled Maintenance, Renovation, Updating and Reuse.



The APPA (formally the Association of Physical Plant Administrators) has developed a number of Key Performance Factors that can be evaluated and tracked to judge performance against local and national performance of peer organizations. Some of these Key Performance Factors are:

Facility Planning

- Building Utilization Capacity/Load Ratio
- Project Development Cost per Square Foot
- Custodial Staff per Building Gross Square Foot
- Maintenance Staff per Building Gross Square Foot
- Grounds Staff per Acre
- Electrical- Cost and Use per Gross Square Feet
- Natural Gas- Cost and Use per Gross Square Feet
- Use Intensity- Total Energy Use per Gross Square Feet
- Total Utility Cost per Gross Square Feet
- Annual expense for maintenance and custodial materials, supplies and vendors

Long-Term Management

- Facility Condition- Facility Condition Assessment
- Facility Condition- Amount of Scheduled Maintenance
- Average investment for Renovation, Upgrades, Repurpose

DEFINITIONS

The facilities management industry has developed some standardized terms and definitions relating to the TCO. An APPA partnership published a Glossary and Definitions of Terms associated with the TCO Management. In addition, the California State Community College Chancellor's Office has defined terms relating to the ownership and operation of community college facilities. Some of the key terms are:

Total Cost of Ownership (TCO)-Lifecycle Cost Management

TCO is a dollar per gross square foot value (\$/GSF) associated with a facility. It is a calculation of all facilities-specific costs (not including furnishings or non-facility specific equipment) divided by estimated lifespan of the building (30 to 50 years) and the total gross area.

Facilities-specific costs include all construction, preservation, maintenance, and operations costs. TCO is a strategic asset management practice that considers all costs of operations and maintenance, and other costs, in addition to acquisition costs. TCO, therefore includes the representation of the sum total of the present value of all direct, indirect, recurring and non-recurring costs incurred or estimated to be incurred in the design, development, production, operation, and maintenance of a facility/structure/asset over its anticipated lifespan. This is also inclusive of site/utilities, new construction, scheduled maintenance, preventive/routine maintenance, renovation, compliance, capital renewal and occupancy costs. Land values are specifically excluded.

Capacity/Load Ratio

The Capacity to Load ratio is an indicator used to determine how efficiently available space is being used. The California Community College Chancellor's Office's (CCCCO) FUSION system lists the Capacity Load Ratio for five key space types for each college in the state. The Cap Load Ratio compares the amount of educational space required to support a college's enrollment as measured by weekly student contact hours (WSCH) with the CCCCCO's established utilization factor for lecture, laboratory, office, library and Audio/Visual spaces on the college campus. The calculations are based on assignable square feet, which is a measure of the space within a building that can be used for instruction. It does not include hallways, mechanical spaces or other non-educational space. A 100% Cap Load Ratio indicates that the available space matches the needs of the student classroom hours. A Cap Load Ratio exceeding 100% indicates more available space than needed to support the calculated need.

$$\text{Capacity Ratio} = \frac{\text{Actual Assignable Square Footage}}{\text{Calculated Required Square Footage (based on student population)}}$$

Lifecycle Cost Analysis

Lifecycle Cost Analysis is an estimating procedure used to determine the cost of facility system/component renewal based on the average useful life of an individual component. This procedure is typically based upon visual observations, via a facilities conditions assessment/audit, to determine the remaining useful life of a system and the development of cost models for the facility. This process enables multi-year budgeting of future replacement costs and timing for replacement.

Facility Operating Cost per Gross Square Foot (GSF)

The Facility Operating Cost per GSF is an asset management practice that considers the yearly costs of facilities operations and maintenance per gross square foot of space using the APPA Facility Operating Gross Square Foot national averages as a Performance Indicator. The annual costs are evaluated on a square foot basis:

- Custodial Costs
- Grounds Keeping Costs
- Maintenance Costs
- Energy Use
- Utility Costs
- Facility Maintenance Expenses (including the annual costs of materials, equipment, service providers to maintain the facilities)

Energy Usage

This performance indicator is expressed as a ratio of British Thermal Units (BTUs) for each Gross Square Foot (GSF) of facility, group of facilities, site or portfolio. This indicator represents a universal energy consumption metric that is commonly considered a worldwide standard. This energy usage metric can be tracked over a given period of time to measure changes and variances of energy usage. Major factors that affect BTU per gross square foot are outside ambient temperature, building load changes, and building envelope and equipment efficiencies. The total energy usage includes the amount of energy it takes for heating, cooling, lighting and equipment operation per

grosssquare foot. The indicator is traditionally represented as total energy consumed annually or monthly. All fuels and electricity are converted to their respective heat, or BTU content, for the purpose of totaling all energy consumed.

$$\text{Energy Usage} = \frac{\text{British Thermal Units} = \text{BTUs}}{\text{Gross Area} = \text{GSF}}$$

Energy/Utility Terms

Terms used when listing energy usage include:

KBTU- Thousand British Thermal Units

MBTU- Million British Thermal Units

kW- Kilo Watts- Thousand Watts (electrical power) MW-Mega Watt (million watts)

kWh- Kilo Watt Hours (electrical energy usage)

MWH-Mega Watt (million watt) Hours (electrical energy usage)

CCF- One Hundred (C) Cubic Feet- Water Measure, 748 gallons

Normal/Routine Maintenance and Minor Repairs (Work Order Plan in progress)

This applies to work activities that are cyclical, planned activities funded through the annual budget cycle, and done to continue or achieve either the originally anticipated life of a fixed asset (i.e., buildings and fixed equipment), or an established suitable level of performance. Normal/routine maintenance is performed on capital assets such as buildings and fixed equipment to help them reach their originally anticipated life. Deficiency items are typically low in cost to correct and are normally accomplished as part of the annual Operation and Maintenance (O&M) funds. Normal/routine maintenance excludes activities that expand the capacity of an asset, or otherwise upgrade the asset to serve needs greater than, or different from, those originally intended.

Repair(s)

Repairs refer to work that is performed to return equipment to service after a failure, or to make its operation more efficient. This is the restoration of a facility or component thereof to such condition that it may be effectively utilized for its designated purposes by overhaul, reprocessing, or replacement of constituent parts or materials that have deteriorated by action of the elements or usage and have not been corrected through maintenance.

Preventive Maintenance

Preventive Maintenance (PM) consists of a series of maintenance requirements that provide a basis for planning, scheduling, and executing scheduled maintenance, which is planned versus corrective in nature. The purpose of PM is to improve equipment life, to avoid any unplanned maintenance activity and minimize equipment breakdowns. These PM activities can be defined through a Maintenance Plan (MP) or Work Order Plan. The purpose of a Maintenance Plan is to describe the best means to maximize equipment operational availability, while minimizing equipment downtime. Once developed, the MP will typically identify PM task descriptions and schedules, troubleshooting, corrective maintenance (repair) task descriptions, spare parts identification, stock (quantity), and any unique storage requirements. This information will be incorporated into the manual, both as tabular data and text.

Scheduled Maintenance

Scheduled Maintenance is the total dollar amount of existing maintenance repairs and required replacements (capital renewal), not accomplished when they should have been, not funded in the current fiscal year or otherwise delayed to the future. These needs are typically quantified by a comprehensive facilities condition assessment/audit of buildings, grounds, fixed equipment and infrastructure and have not been scheduled to be accomplished in the current budget cycle and thereby are postponed until future funding budget cycles. For calculation of facility condition index (FCI) values, scheduled maintenance does not include code generated renovation or renovation for a new use.

Facility Condition Assessment (FCA)/Audit

A Facility Condition Assessment Audit is the structured development of a profile of existing facilities conditions, typically placed in an electronic database format, and populated with detailed facility condition inspection

information. A detailed FCA typically involves an assessment team of three professionals (architect, mechanical engineer, electrical engineer). The assessment team depends upon robust, scalable methodologies to assure accurate and consistent information. It is recommended that a FCA be done on a regular basis, approximately every three years, or to conduct a portion of the overall portfolio annually. The FCA identifies existing deficient conditions (requirements), in a logical grouping, with priorities, and associated recommended corrections and corrective costs. Costs are generally based upon industry standard cost databases (e.g., Building News, Craftsman Book Company, Richardson General Construction Estimating Standards, RSMeans).

Facility Condition Index (FCI)

A Facility Condition Index is a comparative industry indicator/benchmark used to indicate the relative physical condition of a facility or group of buildings. The FCI is expressed as a ratio of the cost of remedying existing deficiencies (scheduled maintenance (SM)) and capital renewal (CR) requirements to the current replacement value (CRV), i.e., $FCI = (SM + CR) / CRV$. The FCI provides a corresponding rule of thumb for the annual reinvestment rate or reserve account to prevent further accumulation of scheduled maintenance deficiencies. The FCI value is a snapshot in time, calculated on a periodic basis. The FCI is represented on a scale 0% to 100%, with higher FCI values, representing poorer facility conditions. A "fair to good facility" is generally expressed as having an FCI of less than 20%.

Facilities Deterioration Rate

Each element in a facility has an effective useful life. The replacement of these elements over time may be expressed as a percentage of current total building replacement value per year. A benchmark deterioration rate for a reasonably well maintained facility is approximately 1-2% of the total building replacement value per annum.

Current Replacement Value (CRV)

The CRV is the total expenditure in current dollars required to replace any facility at the institution, inclusive of construction costs, design costs, project management costs and project administrative costs. Construction costs are calculated as replacement in function vs. in-kind. The value of design (10%), project management (5%), and administrative costs (5%) can be estimated at 20% of the construction cost.

Recapitalization/Reinvestment Rate

A facility, system, or component with existing deficiencies will deteriorate at a faster rate than a component that is in good condition. The recapitalization or reinvestment rate is the level of annual funding for facility renewal and scheduled maintenance expressed as a percentage of facility replacement values. Altering the recapitalization/reinvestment rate has direct impact upon the facility condition index (FCI) and associated scheduled maintenance levels over time.

Adaptation/Renovation/Modernization

The adaptation/renovation/modernization of facilities includes any improvement, addition or expansion of facilities by work performed to change the interior alignment of space or the physical characteristics of an existing facility so it can be used more effectively, be adapted for new use, or comply with existing codes. This includes the total amount of expenditures required to meet evolving technological, programmatic or regulatory demands.

APPA Maintenance, Custodial and Grounds Level of Care Standards

APPA has defined standards for five levels of care for the maintenance of facilities and grounds in conjunction with their Key Performance Indicators. The standards can be used by institutions to develop staffing levels based on the institutions desired level of care for each of the three areas of facility maintenance. The standards are described as follows:

Element	Level 1	Level 2	Level 3	Level 4	Level 5
Maintenance	Showpiece Facility	Comprehensive Stewardship	Managed Care	Reactive Management	Crisis Response
Custodial	Orderly Spotlessness	Ordinary Tidiness	Casual Inattention	Moderate Dinginess	Unkempt Neglect
Grounds	Well-Manicured Landscape	High Level of Maintenance	Moderate Level of Maintenance	Moderately Low Level of Maintenance	Minimum Level of Maintenance

SECTION 4- TOTAL COST OF OWNERSHIP PROGRAM

The District's adoption of a TCO program recognizes the need to formalize and integrate a number of current independent facility development and operations initiatives and programs. The TCO Program provides a number of benefits to the District including:

- Providing a structured approach to the stewardship of the District's assets
- Providing benchmarks to measure facility operations performance against goals and identifying opportunities for improvement
- Creating a proactive rather than reactive approach to project development and facility operation
- Providing an objective means to set custodial, maintenance and grounds staffing using defined standards of care.
- Developing performance information to establish facility operating budgets
- Identifying long-term funding needs and sources to support a structured facility renovation and replacement program

The District's Total Cost of Operation program is divided into three major elements:

- **Facility Development Cost**- the cost of planning, designing, constructing, and furnishing new facilities.
- **Annual Operating Costs**- the cost of staff, utilities, and maintenance and operations expenses to maintain the facilities in operating condition with buildings and grounds clean and maintained.
- **Long-Term Investment Costs** – the costs of planned and scheduled maintenance, renovation and replacement and facility repurpose and upgrades.

SECTION 4.1 -FACILITY DEVELOPMENT COST

The TCO process begins with the initial planning of a new facility or renovation of existing facilities. While the Facility Development Cost typically only represents 10%-15% of the TCO, the cost must be well managed to assure long-term value of the facility.

The District uses an integrated master planning approach that aligns the Educational Master Plan with the Facility

Master Plan. The Educational Master Plan is developed from educational program reviews that articulate needed and desired facility attributes to support the projected educational program. Facility projects define how space needs will be met through new facilities or renovation of existing space. The Facility Master Plan combines facility projects with supporting infrastructure improvements, adding scheduled maintenance needs, upgrades required by code or technology and management. The plans include:

- Educational Master Plan for Modesto Junior College (MJC),
- Educational Master Plan for Columbia College/Strategic Goal and Objectives (CC),
- Facilities Masterplan for both campuses
- District-wide Facilities Assessment and Central Services Master Plan
- Scheduled Maintenance Plan

Once a project is approved by the Board of Trustees, a project team is assembled to define the project. The project team includes user groups, designers, facility development management, college management, operations and maintenance staff. The project definition includes educational programs' unique space requirements and special needs, cost, budget, schedule and specialized operation and maintenance requirements.

Facility Development Process

The process to plan, design, construct, commission and open a new facility includes:

- Develop the facility space program to meet the Educational Plan - define space needs by assessing anticipated student enrollment usage (WSCH), Capacity to Load Ratio, multi-use space, special equipment, room and furnishings requirements and long-term care of the facility.
- Evaluate the impact of the new facility on the Capacity to Load Ratio by calculating the Capacity to Load Ratio when the space will be available for use.
- Evaluate the impact of the new facility on the campus infrastructure, including the cost to expand or modify campus utilities or services to support the new or remodeled facility.
- Evaluate options to integrate renovation, upgrades or scheduled maintenance projects, including planned or identified adjacent renovation or scheduled maintenance projects or required upgrades in the new space project.
- Define the project including specific use, budget, schedule and level of quality - Develop the project budget and schedule based on the space program, and the quality based on District and campus standards.
- Develop and evaluate Life Cycle Cost Model- evaluate options for development using long-term life cycle cost including operations cost rather than first cost only.
- Direct the design team to integrate District standards of materials and systems into the design, including equipment, materials and systems to reduce maintenance and operations training and spare parts inventory.
- Perform Value Engineering as systems are selected, update Life Cycle cost analysis, as necessary, and evaluate major systems for performance against cost to select the best value, not just the lowest initial cost.
- Use national sustainability guidelines such as LEED and California Building Code-CAL Green during the design and construction phases. Identify goals and integrate certification choices in the planning and design process.
- Develop and evaluate current landscape and incorporate drought-tolerant plantings throughout the campus.
- Manage the design process by performing detailed reviews at each design milestone to confirm compliance with program, design basis and project budget. Reviews should include representatives from user groups, Maintenance & Operations, Campus Safety, Information Technology and college administration.
- Select the appropriate contracting method and comply with all public contracting regulations to select building general contractor.

- Inspect the construction work to ensure compliance with design and codes. Test and document by maintaining a structured inspection process with comprehensive testing.
- Commission building systems to ensure performance of integrated systems. Employ expanding commissioning involving the commissioning agent throughout the design and construction to provide another long-term operations perspective in the development process.
- Collect, organize As-Built documents, warranties, operations manuals spare parts records as the facility is being constructed.
- Develop operations plan that includes custodial and maintenance staffing as well as specialized service contractors consistent with levels of maintenance acceptable to the Colleges.
- Establish preventative maintenance and scheduled maintenance scope, timing and budget involving maintenance and operations staff in the design and construction process for training and operations planning.

Capacity to Load Ratios

Part of the new space or renovation decision is an evaluation of the effective use of existing facility assets. The California Community College System has established the Capacity to Load Ratio (Cap Load Ratio) as the state standard for effective space utilization on community college campuses. The Cap Load Ratio compares space required to support student enrollment calculated using Weekly Student Contact Hours (WSCH) by the type of space (classroom or laboratory) compared to amount of that type of space existing on campus. A Cap Load Ratio of 100% indicates the effective use of available space. Either new or remodeled space solutions should result in an improvement of the Cap Load Ratio at project completion. The Capacity Load Ratio is a key Performance Metric.

Modesto Junior College Cap Load Ratios

The Modesto Junior College bond program focused on development of new space to replace aging facilities and accommodate a growing student population at the College. As State funding and student enrollment dipped during difficult economic times, some newer programs did not grow as anticipated and aging facilities have not been removed resulting in an excess of classroom and office space.

Chart 4.1.A- Modesto JC WSCH Projection Comparison- FY 2008/09 to FY 2017/18

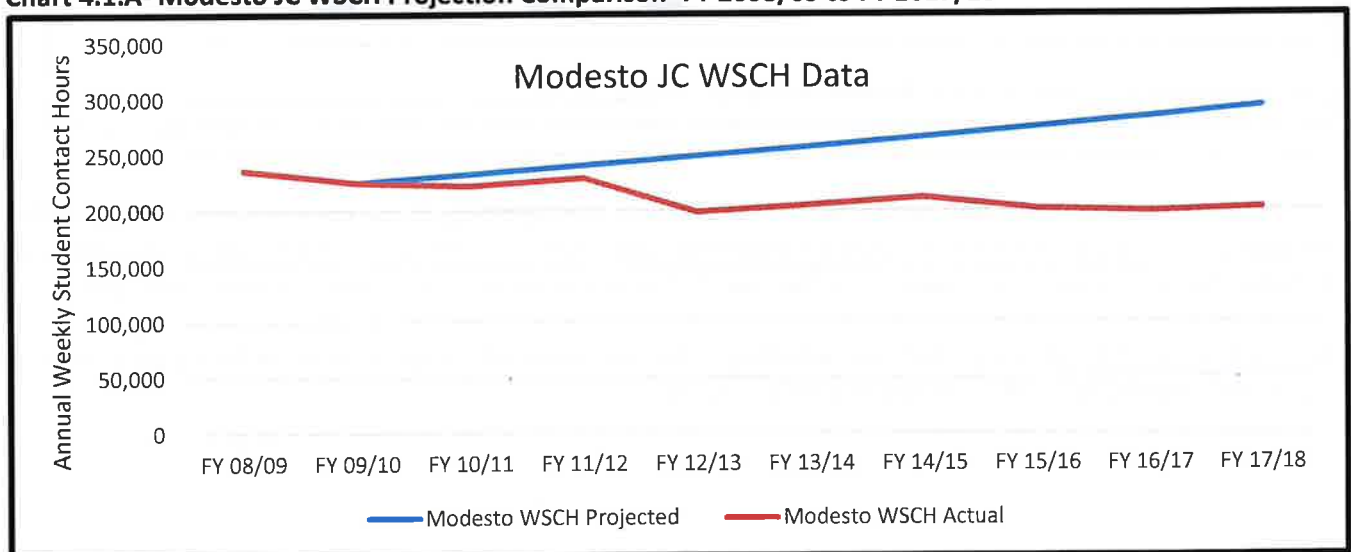
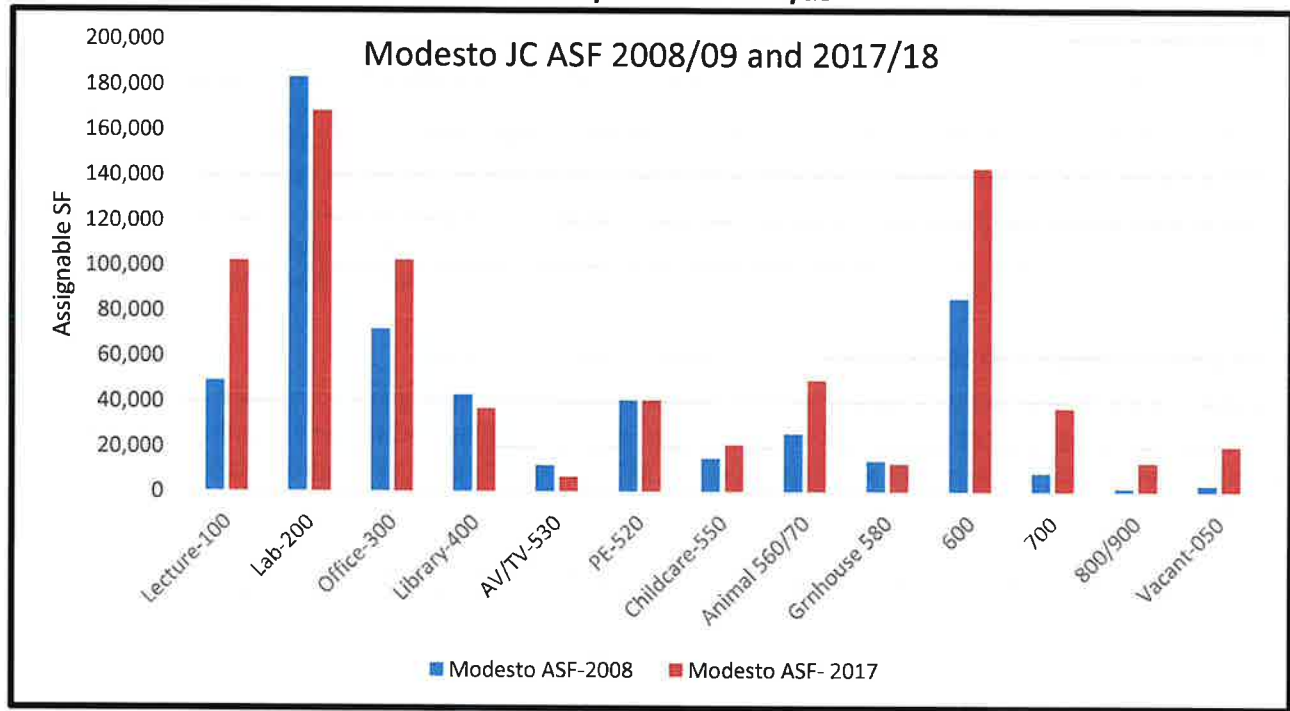


Table 4.1.A Modesto Junior College Capacity Load Ratio FY 2008/09 and FY 2017/18

	Modesto JC 2008/09	Modesto JC 2017/18
Lecture	69%	186%
Laboratory	99%	98%
Office	107%	183%
Library	64%	67%
Audio Visual/ TV	71%	44%

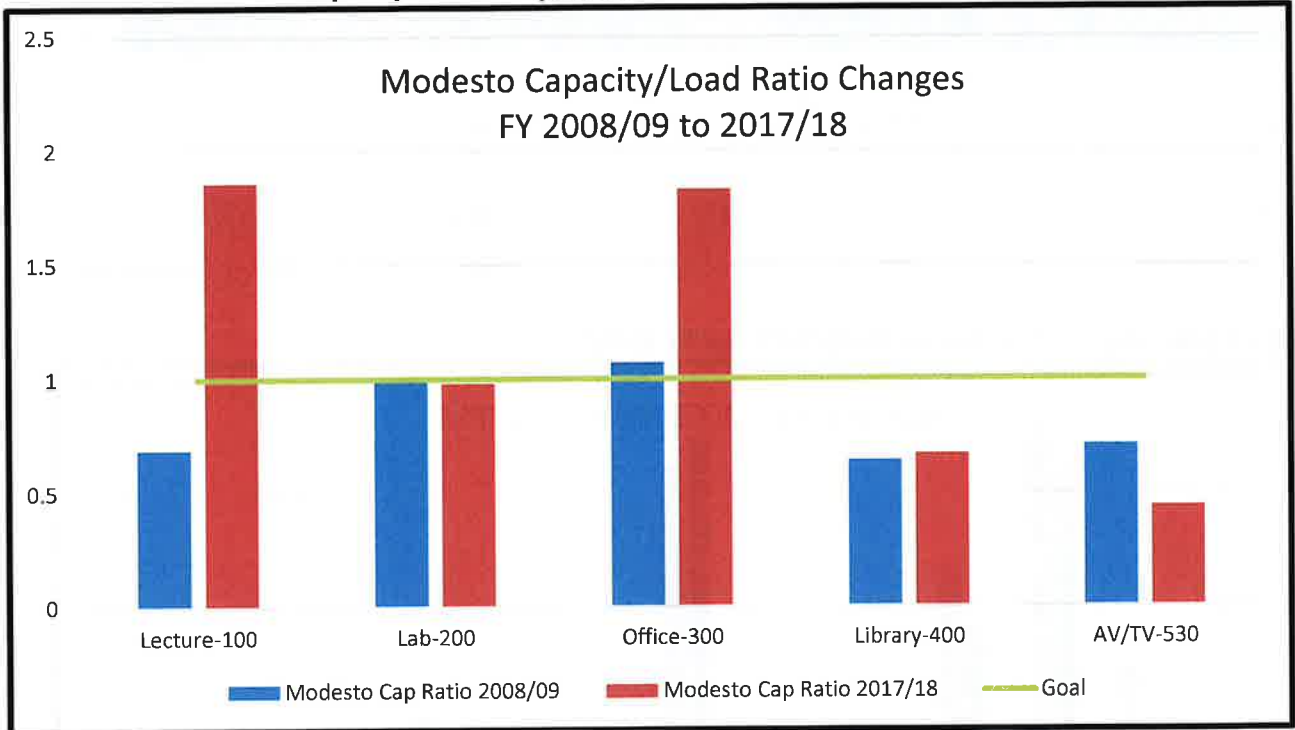
Chart 4.1.B Modesto JC ASF Distribution FY 2008/09 and FY 2017/18



The comparison of the assignable square feet (ASF) between the beginning of the bond projects in FY 2008/09 and the end in FY 2016/17 indicates a focus on expanded classroom and offices. The amount of laboratory space remained fairly consistent. The addition of the new Performing Arts Center increased the 600 space type

As illustrated in the following chart the additional classroom and office space resulted in capacity load ratios significantly exceeding 100% in lecture and office spaces.

Chart 4.1.C- Modesto JC Capacity Ratio Comparison- FY 2008/09 to FY 2017/18



Columbia College Capacity Load Ratios

The Columbia College bond program balanced renovation and limited additional new space. The Educational Plan anticipated that the high capacity load ratios would gradually reduce with increased student enrollment. For example, the College anticipated a high capacity load ratio in lecture space in FY 2008/09 would decrease due to enrollment growth through FY 2017/18; however, this anticipated enrollment growth did not occur, resulting in a continuing overbuilt status in FY 2017/18 in all space types except AV/TV

Chart 4.1.D- Columbia WSCH Projection Comparison FY 2008/09 to FY 2017/18

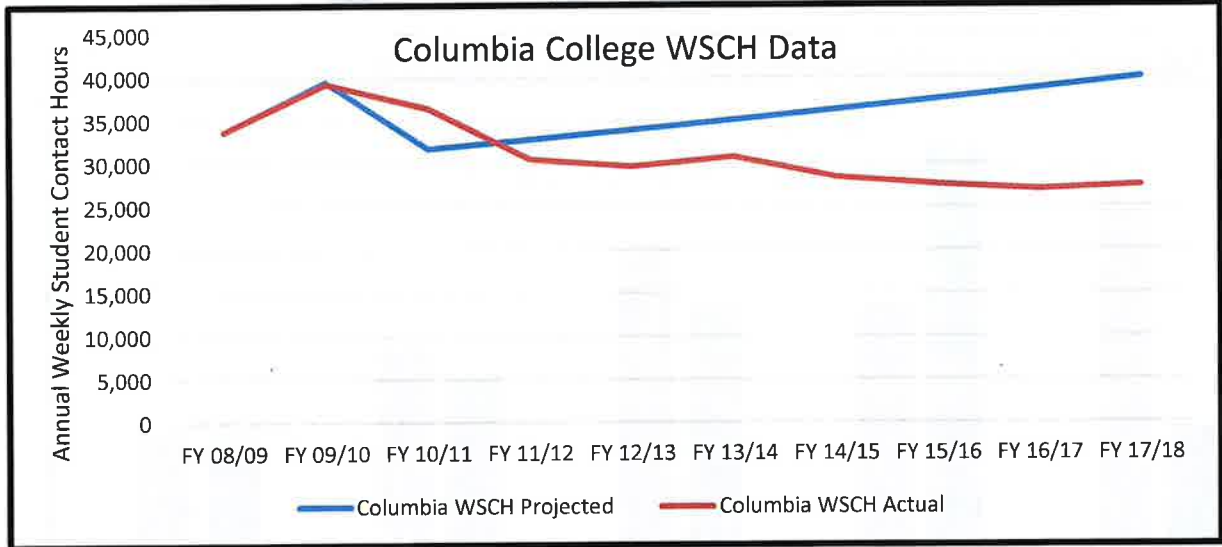


Table 4.1.B- Columbia College Capacity Load Ratio Comparison FY 2008/09 and FY 2017/18

	Columbia FY 2008/09	Columbia FY 2017/18
Lecture	85%	214%
Laboratory	233%	149%
Office	147%	182%
Library	115%	128%
Audio Visual/TV	78%	80%

Chart 4.1.E Columbia ASF Distribution FY 2008/09 and FY 2017/18

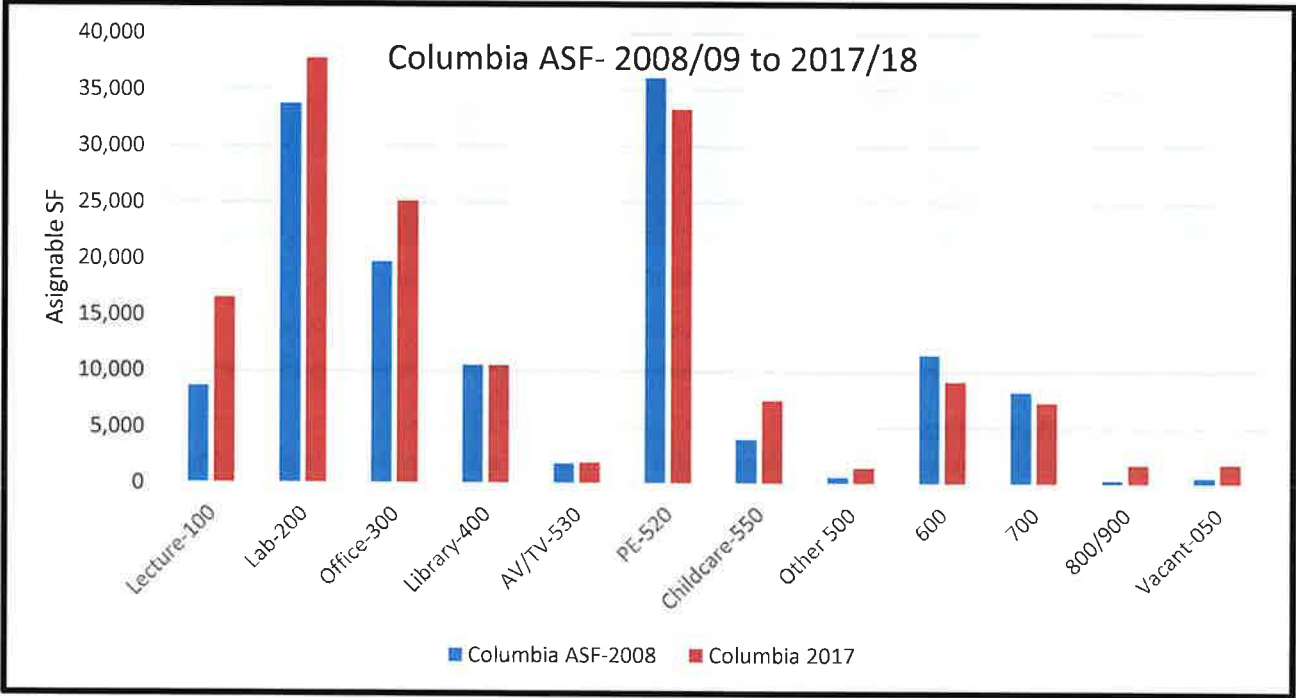
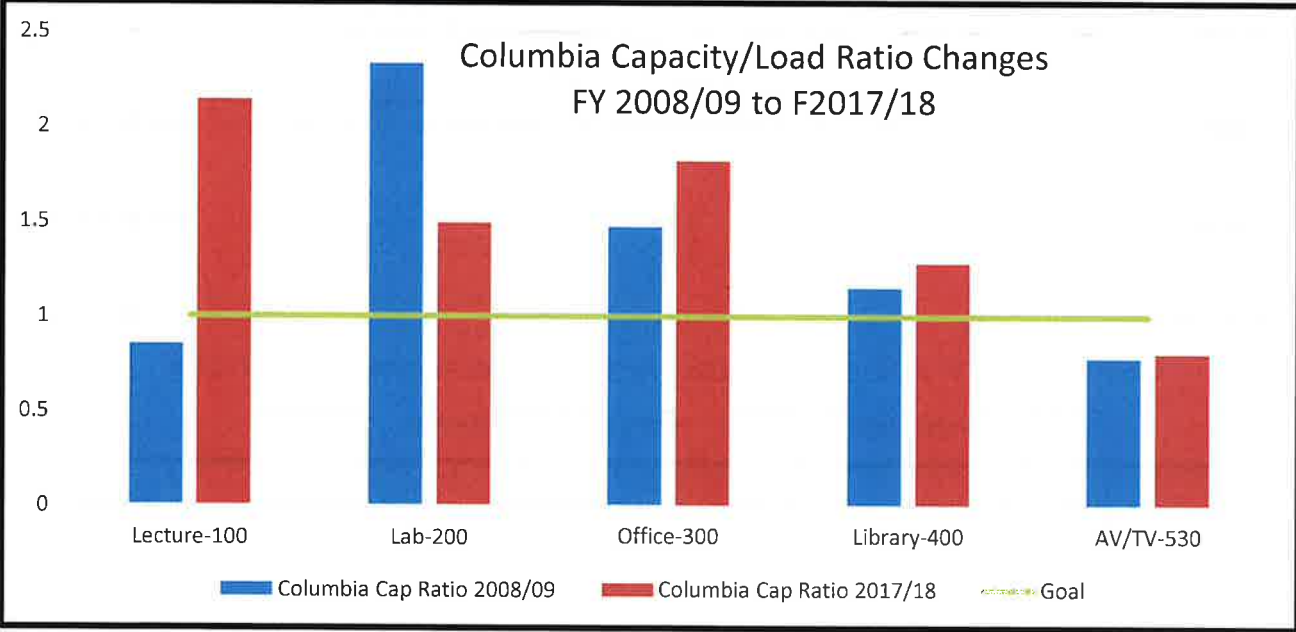


Chart 4.1.F- Columbia Capacity Load Ratio Comparison FY 2008/09 to FY 2017/18



SECTION 4.2- ANNUAL OPERATIONS COST

The Annual Operations Cost includes costs to operate, repair and maintain District Facilities, including:

- Maintenance and operations staff wages including maintenance, custodial, grounds and management staff,
- Utilities including gas, electrical, water and sewer, trash and recycling
- Facilities maintenance expenses including materials, parts and service vendors

The Annual Cost analysis groups information into two groups:

- 1) Modesto Area facilities including the Modesto Junior College East and West Campus and the Central Services office
- 2) Columbia College

The custodial staffing analysis is based on only buildings maintained by custodial staff. Buildings not included in the custodial analysis include buildings closed for renovation, inactive buildings, the fire tower, and animal-related facilities. However, all these facilities are included in maintenance staffing, M&O expenses and all utility evaluations.

Maintenance and Operations (M&O) Staffing

The staffing evaluation begins with the 2017 M&O organization chart showing the M&O staffing and management and administration staff Districtwide. The M&O organization is a Central Services resource that is assigned to the colleges. The M&O staff in Modesto move between the Modesto JC East and West campuses and Central Service facilities as needed and their time at each work location is not tracked. Therefore, this analysis combines the Modesto JC East and West campuses and Central Services facilities in a single group noted as the Modesto Area. Each college has a full-time campus M&O manager to coordinate the M&O operations on the campus. The M&O staff also includes part time/on-call custodial and grounds staff to respond to workload changes and backfill full-time employees due to vacation and sick leave. The Maintenance and Operations organization has maintained essentially the same staffing levels for the past 10 years.

The Association of Physical Plant Administrators (APPA) has developed staffing guidelines for maintenance, custodial and grounds staff based on building space type and use intensity. The guidelines suggest staffing levels for APPA's five defined Service Level levels. The five levels range from Level 1- excellent to Level 5- marginal or poor. APPA and others have developed calculators that calculate staffing for each of the five APPA levels based on a building configuration and type of space and intensity of use. Many institutions establish the APPA Level 3 as the benchmark to gage their staffing levels.

This report used a calculation tool developed by Goshen College. The facilities staff at Goshen College created an Excel spreadsheet to develop a macro-model for custodial staffing for each of the five APPA service levels:

- Level 1- Orderly Spotlessness
- Level 2- Ordinary Tidiness
- Level 3- Casual Inattention
- Level 4- Moderate Dinginess
- Level 5- Unkempt Neglect

The spreadsheet combines the APPA standard task hour matrix with specific characteristics of the facilities. The facilities are defined by square feet by use type and flooring materials. The spreadsheet sets a Level 2 for restrooms and cafeterias, level 4 for non-student areas such as storage and utility area. The remaining spaces are calculated at Levels 1 to 5 to compare staffing levels. The spreadsheet calculates staffing for all five APPA levels of custodial staffing. Input to the model combines California Community College defined assignable square footage spaces based on the educational use category with lobbies, corridors and other non-assignable space to calculate Gross Square Feet (GSF). The model adds adjustments for areas of heavy use and various flooring types.

APPA custodial staffing is calculated as full-time equivalents. The APPA staffing numbers also do not include administrative, clerical or support staff. The custodial staffing evaluation indicates a predicted Service Level between

APPA Level 3 (Casual Inattention) and 4, (Moderate Dinginess) for both the Modesto Area and Columbia College.

TABLE 4.2.A- Calculated Custodial Staffing Levels and Actual Staffing

	Level 1	Level 2	Level 3	Level 4	Level 5	Actual FY 16/17
Modesto Area	104.0	58.1	43.8	34.0	28.5	35.5
Columbia	24.5	12.3	10.5	7.5	6.8	7
Total			53.9	41.5		43.5

Custodial Staffing per Gross Square Feet

A key performance indicator is the total building gross square feet divided by the number of custodial staff. The higher the gross square feet per staff, the lower the level of cleanliness and maintenance. Adding new buildings without adding staff has increased the work load of the custodial and maintenance staff. The current custodial staffing is below the APPA Service Level 3 performance level.

The charts below illustrate as new buildings were added to both campuses without adding custodial staff, their workload increased and the level of service or level of care decreased. Over the past 10 years the GSF maintained by custodial staff has increased by 30% from 23,053 GSF/staff to 30,177. This can be compared to the calculated Level 3 (Casual Inattention) service level of 25,000 GSF/custodian. Similarly, custodians at Columbia work load has increased by 35% over the past 10 years from 25,961 GSF/custodian to 35,027 GSF/staff. This can be compared to the calculated Level 3 service level of 23,300 GSF/custodian.

Table 4.2.B- Modesto Area Custodial Staff per Gross Square Feet Historical data

Modesto	FY 08/09	FY09/10	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17
Gross SF	818,389	819,349	804,815	921,455	888,290	1,017,379	1,007,779	1,071,280	1,071,280
Custodial	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5
GSF/Custodian	23,053	23,080	22,671	25,956	25,022	28,659	28,388	30,177	30,177

Chart 4.2.A- Modesto Area GSF per Custodian Historical data

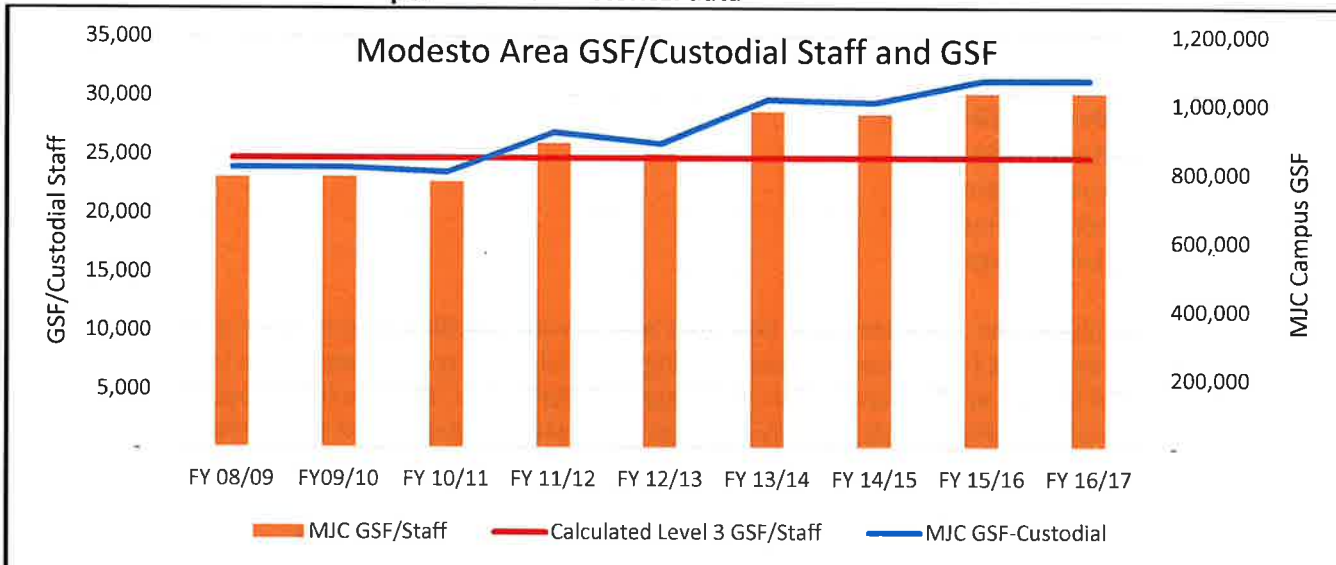
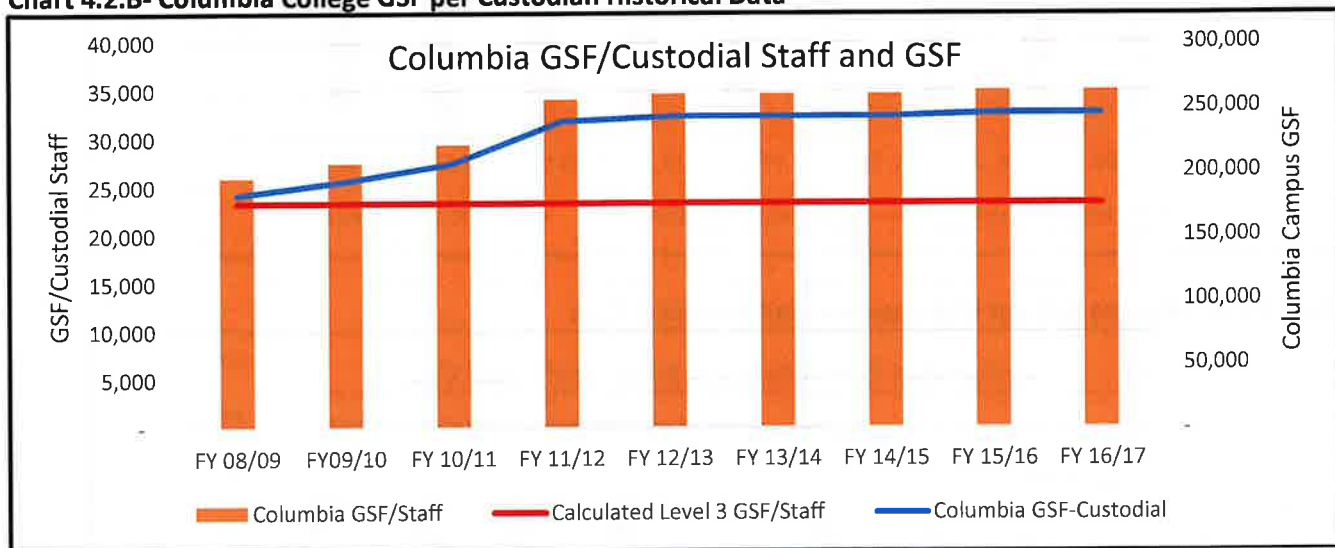


Table 4.2.C- Columbia Custodial Staff per Gross Square Feet Historical Data

Columbia	FY 08/09	FY09/10	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17
Gross SF	181,725	192,463	206,174	238,763	242,643	242,643	242,643	245,187	245,187
Custodial	7	7	7	7	7	7	7	7	7
GSF/Staff	25,961	27,495	29,453	34,109	34,663	34,663	34,663	35,027	35,027

Chart 4.2.B- Columbia College GSF per Custodian Historical Data**Maintenance Staffing Per Gross Square Feet**

Staffing projections for maintenance and ground staff were calculated using APPA based calculations and the specific type of space, intensity of use with adjustments for the age of the facility. The maintenance staffing indicates staffing at a Service Level 3 (Managed Care).

The graphic below indicates maintenance staffing approached Level 2 (Comprehensive Stewardship) at the beginning of the period and gradually decreased to a Level 3 (Managed Care). Previously, the District maintenance staff handled major renovation work that would have typically been contracted out, in addition to the normal daily repair and minor maintenance work. For example, the painting crew repainted the exterior and interior of multiple buildings. As a result, the maintenance staffing exceeded a Level 3 in FY 08/09, but as space was added, and staffing remained the same, the staffing approached Level 4 (Reactive Management) in FY 16/17. The maintenance staffing at Columbia continues to exceed Level 3; however, this is largely due to the small staff size.

Table 4.2.D APPA Calculated Maintenance Staff and actual FY 2016/17

Maintenance	Level 1	Level 2	Level 3	Level 4	Level 5	Actual 16/17
Modesto Area	27.6	21.2	14.8	10.6	7.4	15
Columbia	5.7	4.5	3.4	2.3	1.1	5
Combined	33.3	25.7	18.2	12.9	8.5	20

Chart 4.2.C Modesto Area GSF per Maintenance Staff Historical Data

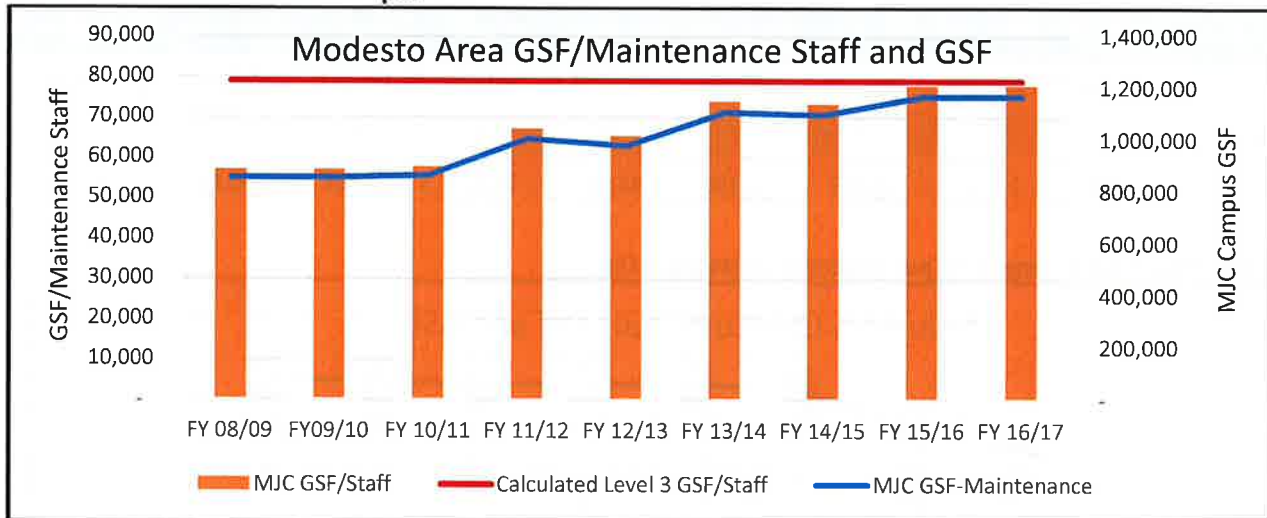
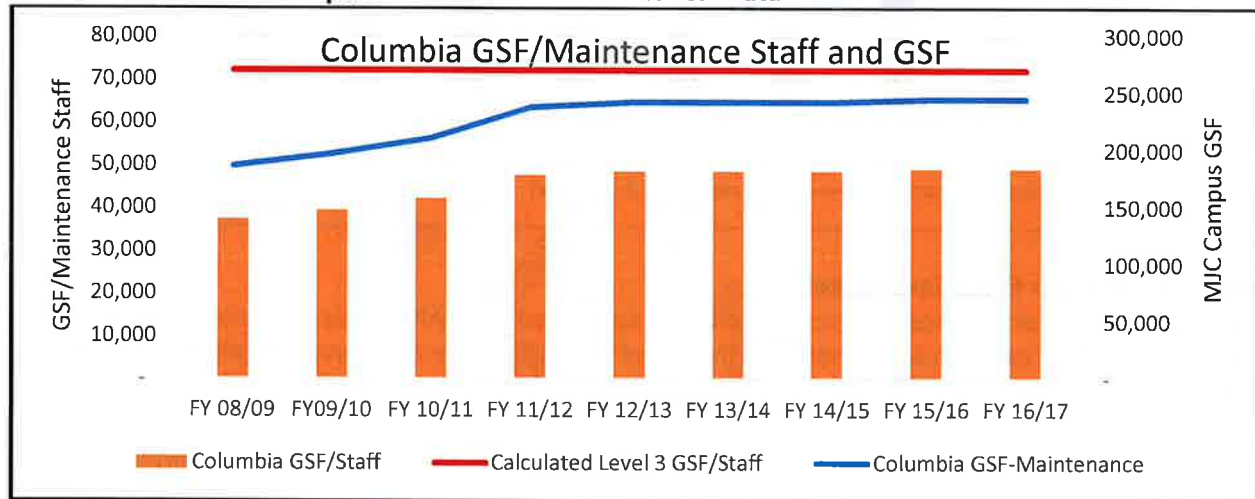


Chart 4.2.D Columbia GSF per Maintenance Staff Historical Data



Grounds Staffing Levels

The grounds staff maintains the exterior grounds including the hardscape such as sidewalks and landscaping including lawn, shrubs, trees and flowering plants. The Modesto East campus is 58 acres, the Modesto West campus is 167 acres and the Columbia campus is 280 acres. The grounds staff is also responsible for the maintenance of the athletic fields. The athletic field maintenance includes mowing, irrigation, striping and repairs after events. The APPA spreadsheet calculated current staffing levels meet a Level 3 service level (Moderate Level of Maintenance).

Table 4.2.E- APPA Model Calculated Grounds FTE Staff

Grounds Staff	Level 1	Level 2	Level 3	Level 4	Level 5	Actual 16/17
Modesto Area	25.7	14.7	11.3	5.9	3	10
Columbia	4	2.8	2	1.5	0.6	2

Calculated Combined Colleges M&O Staffing Levels

The following table summarizes the calculated staffing levels combining the models for custodial, maintenance and grounds. The staffing models are based on Full Time Equivalent positions. Extra work includes exterior clean up performed by custodial staff in addition to the interior custodial activities. The last column contains the actual Modesto Area and Columbia actual staffing for FY 2016/17. These M&O staffing numbers do not include managers, supervisors and administrative staff.

TABLE 4.2.F- Modesto Area APPA Calculated M&O Staffing Levels and Actual

Modesto Area	Level 1	Level 2	Level 3	Level 4	Level 5	Actual 16/17
Maintenance	27.6	21.2	14.8	10.6	7.4	15
Custodial	104	58.1	43.8	34	28.5	35.5
Grounds	25.7	14.7	11.3	5.9	3	10

Table 4.2.G- Columbia APPA Calculated M&O Staffing Levels and Actual

Columbia	Level 1	Level 2	Level 3	Level 4	Level 5	Actual 16/17
Maintenance	5.7	4.5	3.4	2.3	1.1	5
Custodial	24.5	12.3	10.5	7.5	6.8	7
Grounds	4	2.8	2	1.5	0.6	2

Total Maintenance and Operations Staff Cost

The total cost of Maintenance and Operations staff is a key performance indicator. The M&O staff are accounted within three account codes. The maintenance staff for Modesto JC and District facilities are in account code 7150. Custodial and Grounds staff for Modesto JC and the District are in account code 8150. All Maintenance, Custodial and Grounds staff at Columbia College are in account 9150. The following staff cost includes salary, fringe benefits, overtime for regular classified staff, supervisors, managers and hourly staff. The charts and tables indicate consistent staffing levels with increased costs due to normal salary step and range increases.

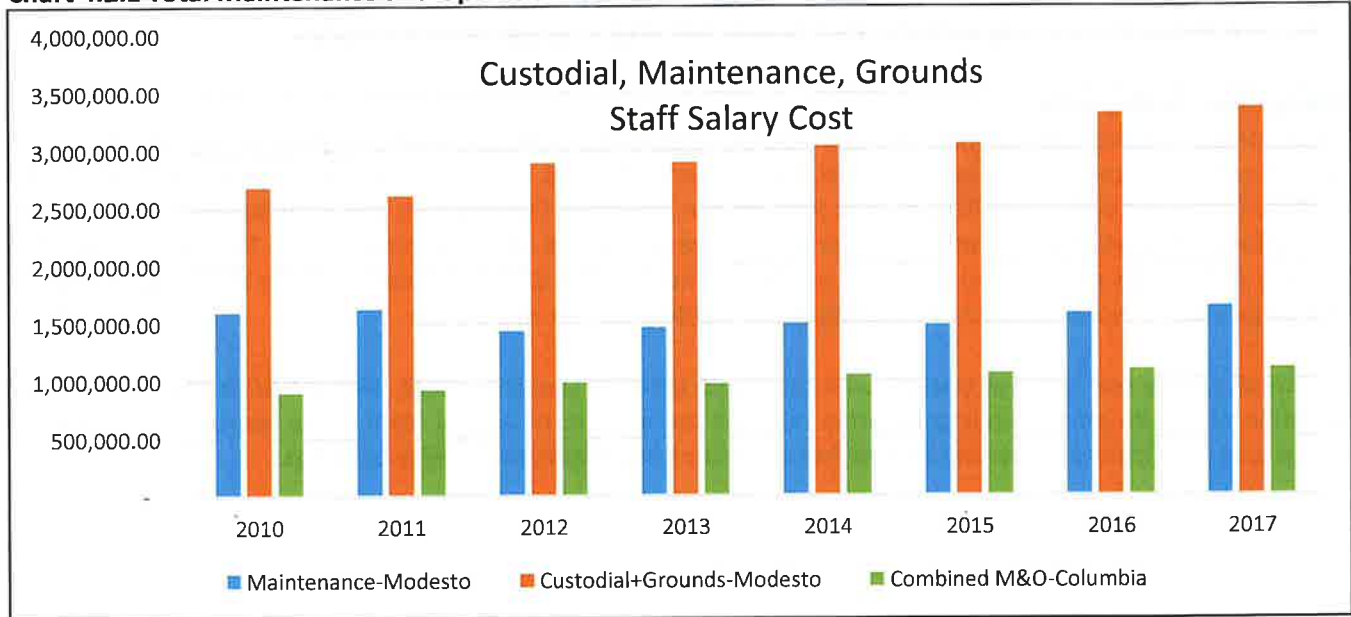
Chart 4.2.E Total Maintenance and Operations Staff Costs

Table 4.2.H- Total Modesto JC+ District M&O Staff Cost and Unit Cost

Modesto JC + District	2012/13	2013/14	2014/15	2015/16	2016/17
Gross SF	979,175	1,108,264	1,098,664	1,168,265	1,168,265
Custodial + Grounds	\$2,892,898	\$3,034,158	\$3,053,872	\$3,315,830	\$3,363,588
Maintenance	\$1,459,420	\$1,490,688	\$1,479,119	\$1,578,313	\$1,637,631
Management	\$521,414	\$562,448	\$526,913	\$511,356	\$462,400
Admin/Clerical/Movers	\$349,347	\$366,177	\$365,323	\$361,673	\$382,025
Management	\$521,414	\$562,448	\$526,913	\$511,356	\$462,400
Total	\$5,223,079	\$5,453,470	\$5,425,227	\$5,767,173	\$5,845,644
Cost /GSF	\$ 5.33	\$ 4.92	\$ 4.94	\$ 4.94	\$ 5.00

Table 4.2.I- Total Columbia M&O Staff Cost and Unit Cost

Columbia	2012/13	2013/14	2014/15	2015/16	2016/17
Gross SF	242,643	242,643	242,643	245,187	245,187
M&O Staff	\$966,111	\$1,044,442	\$1,059,861	\$1,089,568	\$1,098,746
Admin/Clerical	\$48,809	\$55,626	\$55,875	\$63,563	\$72,845
Management	\$198,031	\$207,490	\$213,243	\$205,971	\$214,816
Total	\$1,164,142	\$1,251,932	\$1,273,104	\$1,295,539	\$1,313,562
Cost/GSF	\$ 4.80	\$ 5.16	\$ 5.25	\$ 5.28	\$ 5.36

SECTION 4.2.1- UTILITY COSTS – ENERGY USE AND COST

Energy Sources Overview

Each college obtains energy from multiple energy companies with some on-site photovoltaic generation. The Modesto JC campuses purchased electrical energy from Modesto Irrigation District, natural gas through SPURR (School Project for Utility Rate Reduction) a Joint Powers Authority that provides access to the wholesale gas market to California educational institutions. Columbia College purchased electrical energy from Tuolumne Public Power Agency (TPPA) and propane from various vendors. The building GSF only includes those buildings in active use, buildings under renovation are not included in the Building GSF for this model.

Electrical energy use increase tracked with increased building square footage until 2015/16 and 2016/17 as the addition of on-site photovoltaic generation reduced the amount of energy from utility sources. The natural gas usage was significantly influenced by weather conditions in addition to the new buildings.

Modesto Area Energy Source and Use

Chart 4.2.F Energy Usage Modesto Operations

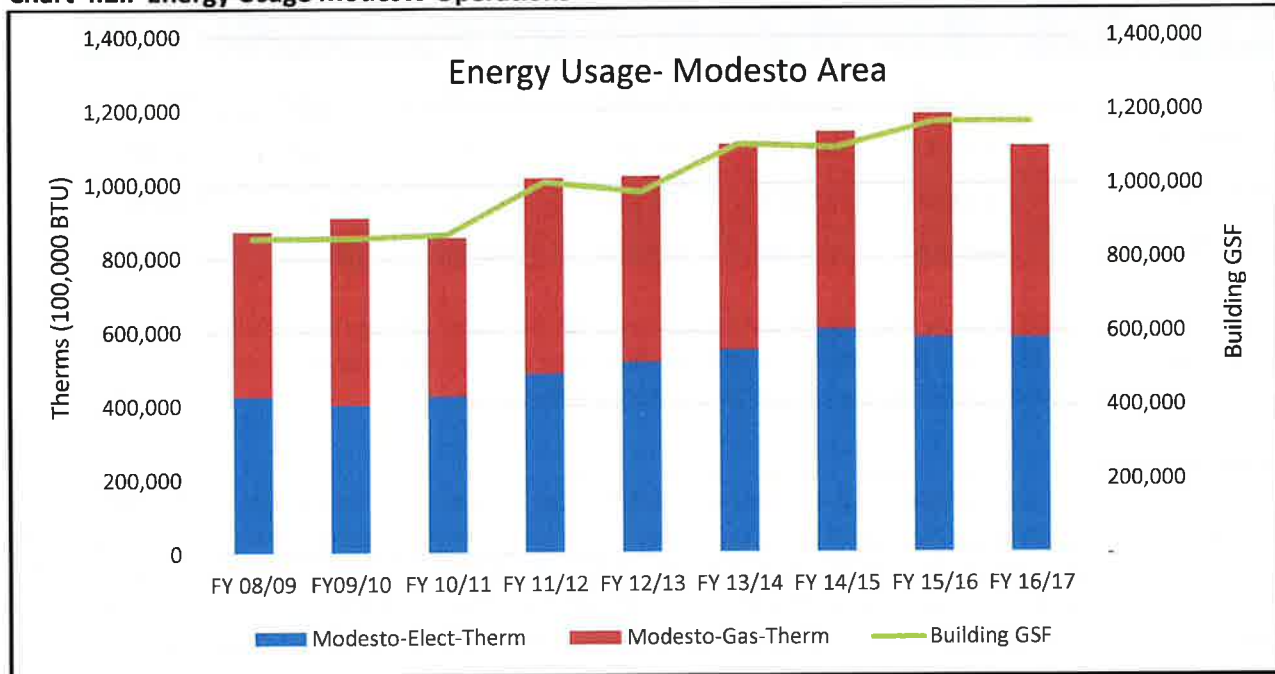


Table 4.2.J- Modesto Area Historical Energy Use

Modesto Area	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17
Gross SF	1006,524	979,175	1,108,264	1,098,664	1,168,265	1,168,265
MID MWh in MBTU	487,547	518,093	550,678	606,717	584,804	583,542
SPURR MBTU	299,689	274,798	555,781	533,392	603,883	518,576
DGS MBTU	228,456	228,456				
Total Utility MBTU	1,015,692	1,021,347	1,106,459	1,140,109	1,188,687	1,102,118

Columbia Energy Source and Use

Chart 4.2.G Energy Usage Columbia

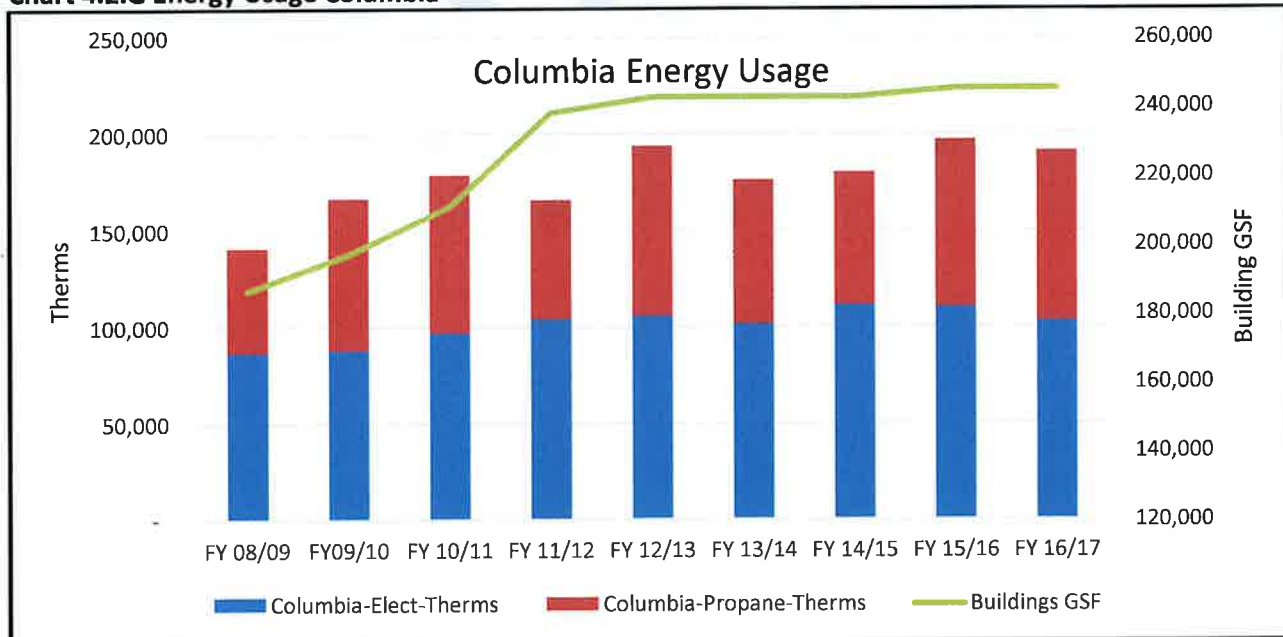


Table 4.2.K- Columbia Energy Use

Columbia	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17
Gross SF	238,163	242,643	242,643	242,643	245,187	245,187
Elec MWh in MBTU	103,930	105,612	101,450	111,367	110,256	103,092
Propane MBTU	61,920	88,097	74,547	68,693	86,535	87,876
Total Energy MBTU	165,850	193,709	175,997	180,060	196,791	190,968

Columbia College's electrical energy use decreased slightly over time despite an approximately 3% increase in gross square footage. As with Modesto area facilities, utilities fluctuate and are influenced by weather conditions. A possible decrease may be attributed to the on-site photovoltaic generation.

Energy Use Intensity

Energy Use Intensity (EUI) is a key performance benchmark. EUI is calculated as the total energy use in Million British Thermal Units (MBTU) divided by Building Gross Square Feet. The EUI difference between the two colleges can be ascribed to the warmer climate at Modesto requiring more air conditioning energy than the foothill climate at Columbia and longer hours of operation at the Modesto JC facilities. The 2017 APPA national EUI performance benchmark is 114; indicating the Colleges are more energy efficient than the APPA national averages.

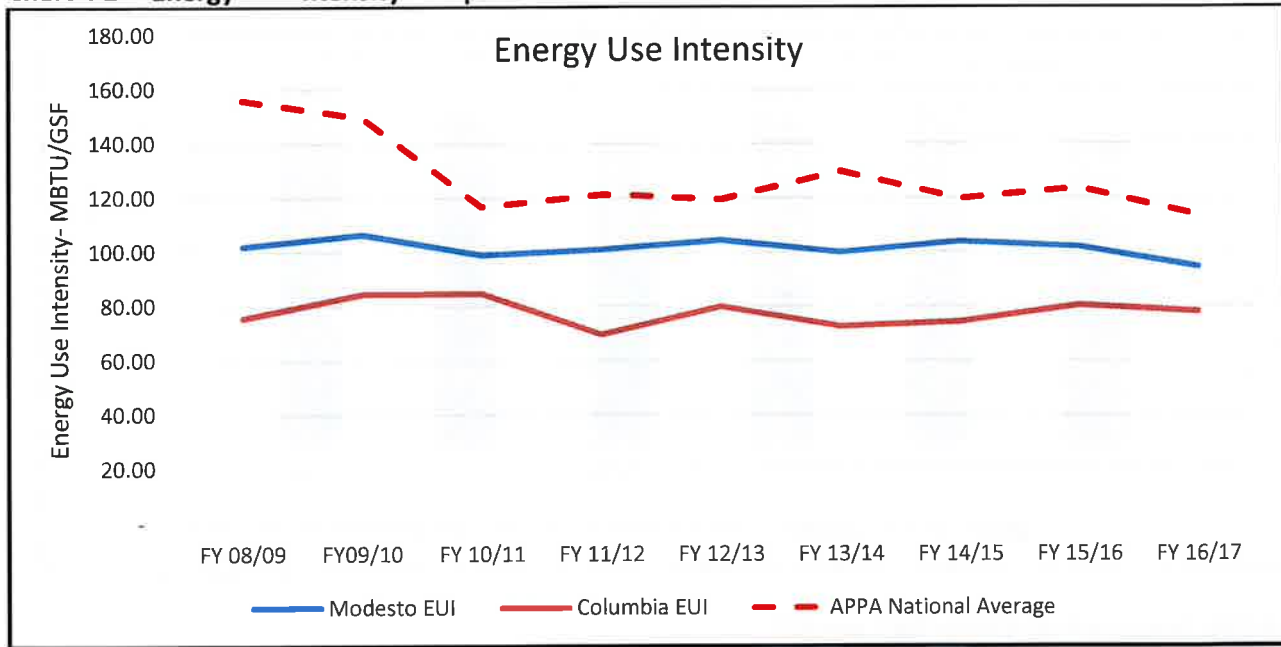
Table 4.2.L- Modesto Area Energy Use Intensity

	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17
MJC+ Dist Gross SF	1,006,524	979,175	1,108,264	1,098,664	1,168,265	1,168,265
Total MBTU	1,015,692	1,021,347	1,106,459	1,140,109	1,188,687	1,102,118
EUI	101	104	100	104	102	94

Table 4.2.M- Columbia Energy Use Intensity

	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17
Columbia GSF	238,163	242,643	242,643	242,643	245,187	245,187
Total MBTU	165,850	193,709	175,997	180,060	196,791	190,968
EUI	70	80	73	74	80	78

Chart 4.2.H Energy Use Intensity Comparison



While energy use intensity has declined over time, the cost of energy per square foot has increased over time. In Modesto, MID has kept electric rates very stable over the past 5 years, however, TPPA at Columbia has increased the electrical kWh rate by 50% over the same time. Gas prices fluctuate greatly with demand and weather. The cost for propane at Columbia is significantly higher than natural gas used at Modesto. Water and sewer costs between the campuses are similar and both show impact of the drought.

Chart 4.2.I- Modesto JC + District Utility Cost Distribution

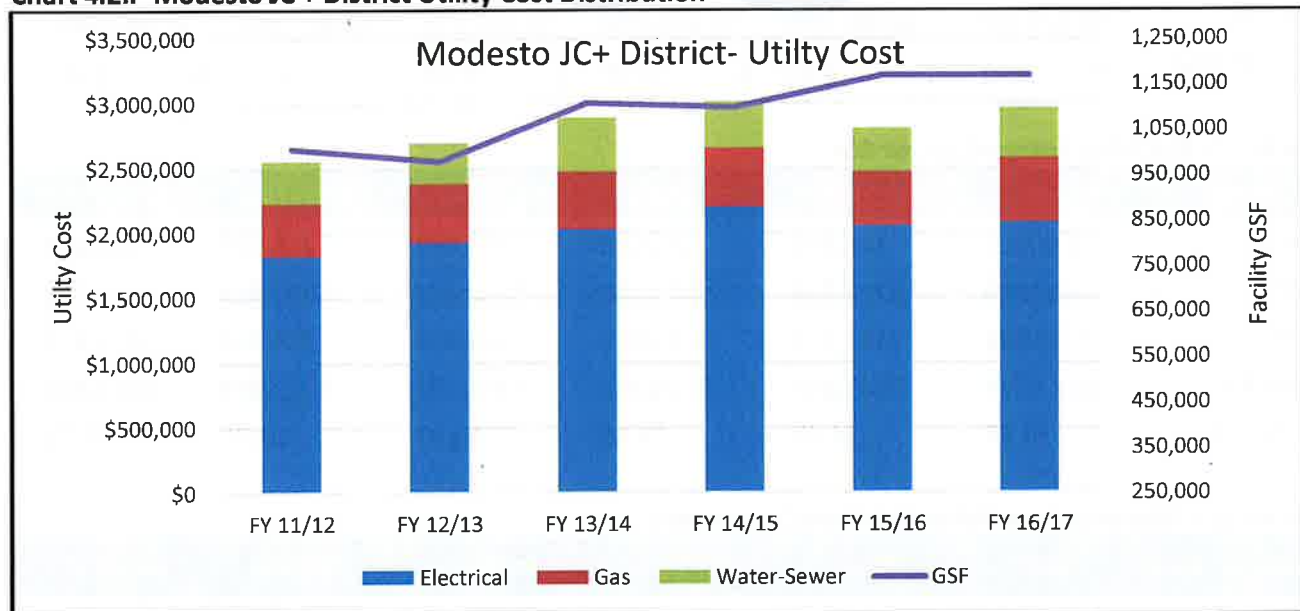


Chart 4.2.J- Columbia Utility Cost Distribution

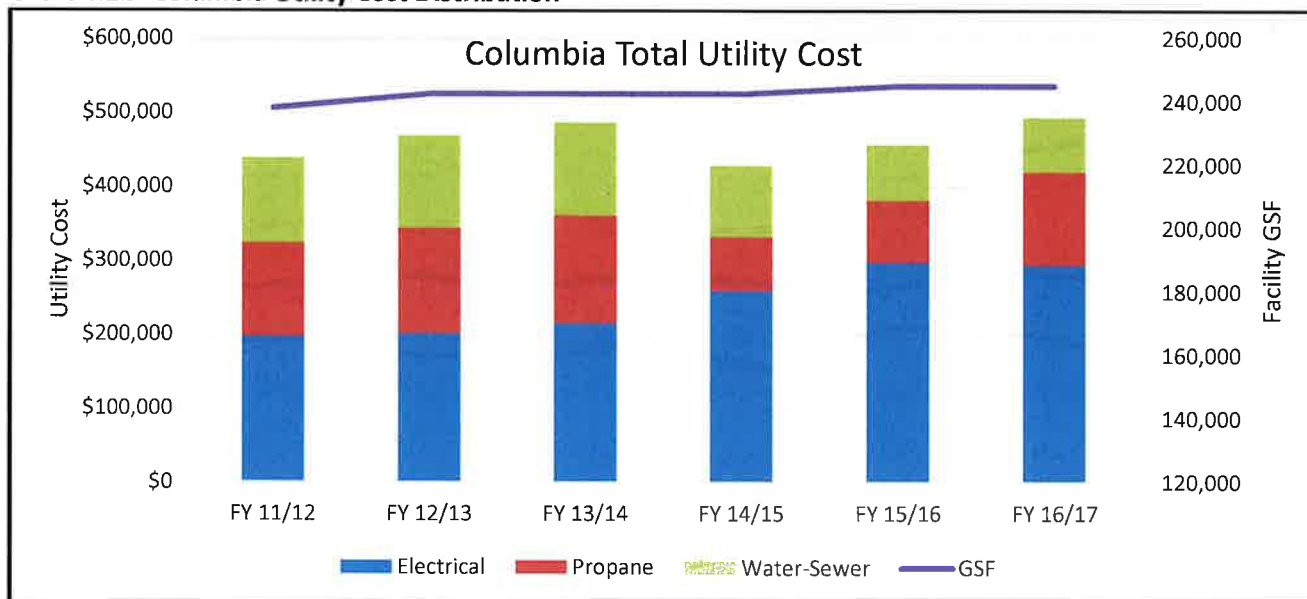


Table 4.2.N- Modesto Area Energy Cost per GSF

Modesto Area	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17
Gross SF	1,006,524	979,175	1,108,264	1,098,664	1,168,265	1,168,265
Elect \$\$	\$1,822,913	\$1,930,000	\$2,033,237	\$2,206,079	\$2,058,476	\$2,084,723
SPURR Gas \$\$	\$236,913	\$232,602	\$442,971	\$452,116	\$412,820	\$496,864
DGS Gas \$\$	\$169,329	\$221,401				
Energy \$\$	\$2,229,155	\$2,384,003	\$2,476,209	\$2,658,195	\$2,471,297	\$2,581,587
Energy \$\$/GSF	\$ 2.21	\$ 2.43	\$ 2.23	\$ 2.42	\$ 2.12	\$ 2.21

Table 4.2.O- Columbia Energy Cost per GSF

Columbia	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17
Gross SF	238,163	242,643	242,643	242,643	245,187	245,187
Elect \$\$	\$197,536	\$201,316	\$215,285	\$258,898	\$297,459	\$293,565
Gas \$\$	\$126,388	\$142,516	\$145,827	\$73,406	\$84,234	\$126,418
Energy \$\$	\$323,924	\$343,832	\$361,112	\$332,304	\$381,693	\$419,983
Energy/GSF	\$1.36	\$1.42	\$1.49	\$1.37	\$1.56	\$1.71

Table 4.2.O1- Modesto Area Utility Unit Cost Comparison

Modesto Area	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17
Elec \$/KWH	\$0.128	\$0.127	\$0.126	\$0.124	\$0.120	\$0.122
Gas \$/Therm	\$0.95	\$0.86	\$0.63	\$0.81	\$0.77	\$0.82
Water \$/CCF	\$2.49	\$2.57	\$2.47	\$2.20	\$3.06	\$3.83

Table 4.2.O2- Columbia Utility Unit Cost Comparison

Columbia	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17
Elec \$/KWH	\$0.065	\$0.065	\$0.072	\$0.079	\$0.092	\$0.097
Gas \$/Therm	\$2.04	\$1.62	\$1.96	\$1.07	\$0.97	\$1.44
Water \$/CCF	\$3.90	\$3.81	\$3.73	\$4.38	\$2.90	\$2.95

UTILITY COSTS- Water/Sewer

The cost of water and sewer represents approximately 15% of the utility cost for the colleges.

Table 4.2.P- Modesto Area Water and Sewer Costs per GSF

Modesto Area	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17
Gross Square Feet	1,006,524	979,175	1,108,264	1,098,664	1,168,265	1,168,265
Domestic Water	\$326,305	\$313,642	\$416,282	\$356,996	\$337,182	\$380,810
Cost/GSF	\$0.32	\$0.32	\$0.38	\$0.32	\$0.29	\$0.33

Table 4.2.Q- Columbia Water and Sewer Costs per GSF

Columbia	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17
Gross Square Feet	238,163	242,643	242,643	242,643	245,187	245,187
Total Cost	\$114,904	\$125,179	\$125,756	\$96,485	\$75,203	\$74,089
Total Cost/GSF	\$0.48	\$0.52	\$0.52	\$0.40	\$0.31	\$0.30

Total Utility Cost Per Gross Square Foot

The total utility cost per gross square foot is an APPA performance benchmark.

The tables below show that MJC's Total Utility Cost Per Square Foot has been reduced to 2011-12 levels, whereas Columbia's has increased almost 10%. This is due to the almost 50% increase in TPPA's electrical rates at Columbia College compared to the very stable MID electrical rates at MJC.

Table 4.2.R- Modesto Area Total Utility Cost per Gross Square Foot

Modesto Area	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17
Electrical/ GSF	\$1.81	\$1.97	\$1.83	\$2.01	\$1.76	\$1.78
Nat Gas/GSF	\$0.40	\$0.46	\$0.40	\$0.41	\$0.35	\$0.43
Water/GSF	\$0.32	\$0.32	\$0.38	\$0.32	\$0.29	\$0.33
Total Cost/GSF	\$2.54	\$2.76	\$2.61	\$2.74	\$2.40	\$2.54