

CONSOLIDATION FACILITIES TEAM

CHARGE

The Consolidation Facilities Committee major area of focus is:

- Review and provide recommendations towards the future structure of the Facilities Department that allows consolidated efforts to be delivered at a system-level.
- Assist with the development and provide recommendations towards establishing baseline levels of facility based services that can be implemented at each campus
- Provide recommendations to promote flexibility within a sustainable environment that support instruction, learning and student success.

COMMITTEE PARTICIPANTS

System Office Team Lead

Keith Epstein	V.P. Facilities, Infrastructure Planning & Real Estate	CSCU
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Members

Trent Barber	Director of Student Services	MCC
Armen Beermann	Facilities Associate	CSCU
Thomas Burkholder, Ph.D.	Professor, Department of Chemistry & Biochemistry	CCSU
Martin Charette	Building Maintenance Supervisor	QVCC
Sharon Pronovost	Admin. Office/Coordinator, Facilities Mgt. & Public Services	NWCC
Jeffrey Schlicht, Ph.D.	Professor, Department of Health Promotion and Exercise Sciences	WCSU
Thomas Struble	Director of Facilities Operations Services Southern	SCSU
James Troup	Provost & Senior Dean of Administration	NVCC

MEETING SCHEDULE

Tuesday, May 23, 2017	1:00pm – 3:30pm	System Office, Room 206
Tuesday, June 20, 2017	1:35pm – 2:40pm	System Office, Room 206
Wednesday, September 6, 2017	12:30-2:30	System Office, Room 206

STRATEGIES TO SUCCESS

The Consolidation Facilities Committee was presented with and discussed major options for evaluation that may reduce system-wide operating expenses. The evaluations included streamlining by way of benchmarking facility based operations against industry standards, establishing a “best practice” guide for supporting current and future staff levels and assure operations maintain support for academic and student life missions remain intact. The benchmarking and evaluations provide insight to Building Maintenance, Grounds and Custodial staffing levels as well as on and off site management in support of those disciplines. Other administrative functions pertaining to commodity purchasing, service contracting, sustainability and continuity of a future programs were discussed. Specifics of the options addressed and recommendations follow:

FACILITIES OPERATIONS –MP₂ CUSTODIAL

The Association of Physical Plant Administrators (APPA) is recognized nationally as a Higher Education facility focused industry-leading organization. Over the past 30-years, the APPA has compiled benchmarking standards from hundreds of universities and colleges. This APPA data has been extrapolated as part of these recommendations to provide guidance on staffing for custodial services. Assignable square feet and use of each space at each college was compiled and benchmarked against APPA's most recent guidelines. For the universities and colleges, as a comparison to APPA guidelines, each institution was also benchmarked against industry gross square foot "rule of thumb" standards. Through the analysis, the committee was made aware that the quantity of custodians staffed at a campus relate to staff availability to perform the work and not that work would be ignored. The committee was able to support approximate custodial staff levels that each campus should maintain as part of a normal operating budget (optimal) to meet reasonable cleanliness expectations. The committee was also able to support approximate minimum (modified) custodial staff levels that could be adhered to under a restricted budget as currently exists. Both supported cleaning levels maintain an APPA "level 2" in all public spaces. The modified staffing level recommends a stepped down APPA "level 3" in all classroom and non-community type spaces. Both optimal and modified cleaning scenarios establish equivalent custodial staff coverage across all campuses.

Committee Recommendations:

1. The standard level of care (optimal) and reduced level of care (modified) outline chart is displayed below. Although most campuses have already sized their custodial staff consistent with custodial modified staff levels the committee recommends the following:
 - a. Through attrition, reduce campus custodial staff quantities at Gateway to below optimal level staff levels and more currently to below modified staff levels consistent with APPA guidelines.
 - b. For Central, who has staffing levels below the "modified staff level", it is recommended to increase the custodial staff level so a basic acceptable level of cleaning can be performed in a timely manner while maintaining reasonable customer satisfaction expectations.
 - c. At Gateway, the Building Maintenance Supervisor who oversees both custodial and maintenance services currently reports to the Director of Human Resources. The reporting line for a facility of this size is not productive or effective to the overall operation. The Supervisor's reporting line should be to a more technically versed operations staff member.
 - d. Modified staff levels have only been supported by the committee as an interim cost preservation effort. Although this standard can be maintained for an extended period, it is not supported to be a long-term baseline standard. As funding availability allows, custodial staff levels should be brought to the "optimal" staffing level.

Custodial Staff Levels

	Modified Staff Level	Optimal Staff Level	*Current Custodial and Supervisor Available Positions	Comments
	Service Level 2.4	Service Level 2.1		
Asnuntuck	4.2	5.8	5.0	ok
Capital	3.8	6.1	3 + supplemental contract services	ok
Gateway	15.5	17.4	23.0	heavy by 8
Housatonic	10.6	13.9	contract services	
Manchester	18.2	22.5	19.0	ok
Middlesex	4.4	5.5	contract services	
Naugatuck	20.7	27.8	21.5	ok
Northwestern	4.7	6.9	6.0	ok
Norwalk	11.7	13.9	contract services	
Quinebaug	3.8	4.7	4.0	ok
Three Rivers	9.9	11.8	9.0	ok
Tunxis	7.2	9.2	7.0	ok
Charter Oak	----	----	contract services	
CCSU	46.0	----	35.0	light by 11
ECSU	24.4	----	**not compiled	
SCSU	51.4	----	55.0	ok
WCSU	38.6	----	35.0	ok

*vacant positions are not included in the available staff counts

**general fund & auxiliary service staff could not be separated for the purpose of the study

FACILITIES OPERATIONS – MP₂ MAINTENANCE/CRAFTWORKERS

Fifteen years ago, the APPA issued their first version of Operating Guidelines for Educational Facilities. Similar to the custodial guidelines, the most recent publication includes compiled data from hundreds of colleges and universities. The APPA compiled data is organized to allow high-level benchmark evaluations. The benchmarking performed for each CSCU institution is based from gross square feet and is assessed with a productivity work factor. Through the analysis, the committee was aware that the quantity of Maintainers/Craftworkers staffed at a campus typically relate to staff available to perform work and not that work would be ignored. The main intent of this review is to establish appropriate workforce levels under normal and restricted budget levels so that informed recommendations can be provided for Maintainer/Craftworker staff levels at each campus.

Only one campus appeared on the heavy side with maintenance staff. Quinebaug has four maintainers and requires two. Further review of Quinebaug indicates the college self performs snow clearing and landscaping operations. Preliminary cost modeling indicates self-performing the work, in addition to

other maintenance work performed by two additional staff members when not landscaping or clearing snow appears cost neutral opposed to hiring contractors.

Report Analysis Supported by the Committee:

1. The recommended staff levels for Maintenance/Craftworks that meet standard expectations (optimal) and a reduced level of service (modified) are displayed in the General Trades/Maintenance/Craftworkers Staff Level chart. Most campuses have already sized their maintenance/craftworker staff levels consistent with or below recommended modified staff levels. The committee supports:
 - a. For campuses who have staffing levels below the “modified staff level”, it is recommended they increase their staff level so a basic acceptable level of service can be performed in a timely manner.
 - b. Capital Community College needs to fill the vacant Building Superintendent II position to oversee day-to-day maintenance and custodial services.
 - c. The System Office facilities group shall provide ongoing evaluations to determine when hiring contractors to perform specialty work is less cost effective than providing additional staff to best balance capital and operating expenditures.
 - e. When attrition allows, competitively bid snow clearing and landscape services for Quinebaug to verify a cost savings.
 - f. Modified staff levels are supported by the committee as an interim cost preservation effort. Although this standard can be maintained for an extended period, it is not as a long-term baseline standard. As funding availability allows, Maintenance/Craftworker staff levels should be brought to the “optimal” staffing level.

General Trades/Maintenance/Craftworker Staff Levels

	Modified Staff Level	Optimal Staff Level	*Current Maintainer and Supervisor Available Positions	Comments
	Service Level 2 71,500 sf/maintainer	Service Level 1 50,000 sf/maintainer		
Asnuntuck	2.4	3.4	1.0	light by 2
Capital	4.3	6.1	2.0	light by 2
Gateway	6.1	8.7	2.0	light by 4
Housatonic	5.7	8.1	7.0	heavy by 1
Manchester	6.6	9.4	5.0	light by 1
Middlesex	1.7	2.5	2.0	OK
Naugatuck	9.6	13.6	6.0	light by 3
Northwestern	2.6	3.7	2.0	OK
Norwalk	4.9	7.0	4.0	OK
Quinebaug	1.4	2.0	4.0	heavy by 2
Three Rivers	4.1	5.9	3.0	light by 1
Tunxis	3.4	4.9	3.0	OK
Charter Oak	---	---	no staff	
CCSU	20.4	29.1	24.0	OK
ECSU	10.6	14.7	6.0	light by 4
SCSU	20.3	29.0	30.0	OK
WCSU	16.2	23.2	21.0	OK

*vacant positions are not included in the available staff counts

FACILITIES OPERATIONS – MP₂ GROUNDS MAINTAINERS

This study attempted to benchmark grounds maintenance campus staffing against APPA grounds guidelines. Site square foot data for different types of landscape treatment at individual institutions does not exist and could not be derived for this study. As a system-wide overview, a majority of grounds maintenance consist of landscape and snow clearing performed by contractors. Manchester Community College and Quinebaug Community College are the only two institutions who self-perform much of the landscape and some snow clearing operations.

Quinebaug currently employs two more general trade workers/maintainers than recommended under a “modified” staff level. This staff is included in the General Trades/Maintenance/Craftworker Staff Levels chart. Their four General Trade Workers/Maintainers complete landscape and snow clearing operations. Preliminary cost modeling indicates a negligible cost difference between hiring contractors for landscape and snow clearing operations compared with two additional General Trade Workers/Maintainers. The comparison takes into consideration projected building maintenance cost increases that would result from contractors called in more frequently to complete critical work if there were only two maintenance staff compared to the current four.

Manchester currently employs eight staff members in their grounds maintenance group. This staff is not included in the General Trades/Maintenance/Craftworker Staff Levels chart. The Grounds Maintenance group performs landscape operations, sidewalk and some parking lot snow clearing. A contractor performs snow clearing of the loop road. Cost modeling of Manchester's current grounds staff against landscape and snow clearing costs against other CSCU institutions display a potential cost savings for Manchester.

Report Analysis Supported by the Committee:

1. Through attrition, when Quinebaug intends to hire new maintenance staff, a public bid for landscape and snow clearing services should occur to verify if a cost savings could be captured by hiring contractors to perform the work.
2. As attrition occurs with Manchester's grounds maintenance, contractor bids should be solicited for landscape and snow clearing to verify the cost savings that can be captured with hiring contractors to perform the work.

OVERTIME COMPENSATION – MP2 CUSTODIAL, MAINTENANCE/CRAFTWORKERS & GROUNDS MAINTAINERS

In addition to the MP2 Facilities Operations "best practice" review that quantified trade staff, overtime practices for all the institutions was reviewed. Of the 616 Custodial, Maintenance/Craftworker and Grounds Maintainer workers analyzed in this study 513 received some level of overtime in FY 2017. System-wide, overtime pay totaled 11.4% of the entire facility staffs base pay. This study acknowledges that the workforce is requested to report to emergencies, preserve continuity of operations and be part of preparing for and closing up special events. These items are not part of the normal workday and are deserving of overtime pay. In some cases, specific departments or special use groups fund special event overtime. At the time of this report writing, differentiating between the types of work and funding sources for overtime pay could not be determined. Although overtime significantly differs at each campus it is believed that a maximum overtime allowance, not including emergencies, continuity of operations, essential operations and weather events, should be set at each campus to not exceed 2.5% of the aggregate MP2 Custodial, Maintenance/Craftworker and Grounds Maintainer base pay, whenever possible. Additional overtime pay funded outside of Facilities Operations through other departments and groups would be supplemental to the 2.5%. For campuses who exceed the 2.5%, the SO will sponsor an evaluation and professional training to obtain that threshold.

The 2.5% reduction is estimated to save \$1,500,000 annually. The 2.5% recommended ceiling does not include emergencies, continuity of operations, essential operations and weather events.

Through the review of individual staff, it was recognized that annual staff overtime compensation, not including fringe benefits, in excess of 30% of the base salary was not uncommon. Significant amounts of overtime are not highly productive measures to complete more work and frequently burn out workers. Supported by the Committee is a limitation of 5% annual overtime per worker per year should

be implemented, whenever possible. The 5% ceiling would not include emergencies, continuity of operations, essential operations and weather events. For excessive work beyond the 5% ceiling, opposed to funding time and a half compensation the institution should obtain supplemental part time staff who would not have the same benefits as full time staff.

Report Analysis Supported by the Committee:

1. Develop a System-Wide protocol for colleges and universities limiting campus total overtime to 2.5% annual, whenever possible. The 2.5% does not include emergencies, continuity of operations, essential operations and weather events.
2. Develop a System-Wide protocol for colleges and universities limiting individual staff overtime compensation to 5% annual, whenever possible. The 5% does not include emergencies, continuity of operations, essential operations and weather events.
3. Conduct an evaluation and training for campuses who cannot maintain the 2.5% threshold.

OPERATING PROGRAM ADMINISTRATION

A major element of the overall consolidation effort includes:

- Review and provide recommendations towards the future structure of the Facilities Department that allows consolidated efforts to be delivered at a system-level.

Currently System-Office (SO) Facilities primary function is to budget, develop and implement capital-funded projects. The SO staff is not involved with many small capital-funded campus projects and work performed funded from operating budgets. The non-SO services are managed by the Deans of Administration at six of the colleges and a combination of Directors of Facilities and Deans of Administration at the other six colleges.

Although the Director's share a similar job description all function differently at their campuses. Some focus primarily on operating issues while others focus primarily on capital improvements. At the six colleges, oversight of much of the operating work performed can be, or is already, completed by the Campus Superintendent. At some of the six colleges, limited capital funding is expended directly by the institution.

The analysis of deriving system-level services for facilities is planned from restructuring to complement the Community College Consolidation Committee recommendations. At the time of this writing, the President's Committee has suggested one Community College President, three regional Community College Vice Presidents and an "operations" type manager at each college. A staff reorganization has not been indicated for the universities. The facilities restructuring goal is to effectively respond to staff needs that support projected senior management staff modifications, streamline operations and deliver higher levels of service.

The SO Facilities staff benchmarked fourteen college and university facilities organizational structures as an oversight guide against the CSCU facilities structures in preparation of developing initial options for the Facilities Committee review and towards the evolving development of a modified facility structure. Through the committees review of staffing options it was recognized the staff levels might

be impacted by the depth of management at each institution. Facilities is a support service and lower levels of management at each campus may require shoring up campus voids. Of the options reviewed, the following was determined:

- The committee confirmed day-to-day operations should remain at each campus to preserve continuity of operations and customer service.
- Day-to-day operations oversight is currently coordinated from the operations custodial and maintainer supervisor at each campus.
- Other than “right sizing” operating staff levels at some campuses through attrition, staffing below the custodial and maintainer supervisor level does not need to be addressed.
- Day to day Facilities operations will report to a designated campus manager who also oversee management of other campus activities. The campus manager will oversee day-to-day facility operations.
- A SO Project Manager will assist the campus manager with non-day-to day operating requirements and advise on day-to-day operating activities including facility budgets.
- As an effort to streamline operations, maintain consistency across all campuses and increase the level of service, it is recommended, at five of the six campuses that the Director of Facilities position should be vacated due to attrition. Oversight of all campus capital programs will be by the SO Facility Manager and coordinated for implementation with the campus operations manager. The SO Facility Manager will also assist the campus operations manager with non-day-to-day operating requirements in addition to quality control oversight. Naugatuck Valley Community College is significantly larger than any other community college. Due to the size, age and logistics of this campus the Director of Facilities position is integral to campus operations. Recommendation is that this position remains at this campus. The SO Facilities manager will provide similar support to Naugatuck as they would to the other colleges. The six other community colleges who currently do not staff a Director of Facilities will be managed with the SO Project Manager as the other colleges will be managed.
- The SO currently staffs three Facility Managers who oversee four colleges each. With the college facility oversight modifications at five of the six colleges, the SO will staff four project managers who will oversee three campuses each.
- Technology and software offers a variety of opportunities that can streamline facilities operations. Streamlining processes would include project initiations, funding requests, funding transfers, tracking our facilities through a GIS system and assuring all college and university data is properly housed and categorized for continuity purposes. Software options would be a cost effective effort intended to decrease labor and increase service and productivity.

Report Analysis Supported by the Committee:

1. All day-to-day services and related facilities support staff not directly referenced in this facilities consolidation recommendation report will remain at each campus as currently exist and will report to a campus manager.
2. Through attrition, five of the six Director of Facility positions will be vacated. The Facility Director position at Naugatuck will remain.
3. SO office Facility Managers will be increased from three to four Facility Managers.
4. SO Facility Managers will assist and advise the campus manager on day to day operating efforts and advise and support the operations manager on non-day-to day operating and capital requirements.

5. SO Facilities will pursue obtaining facilities based software to decrease system-wide efforts and increase service and productivity.

PURCHASING

System Office (SO) Facilities conducted a high-level review of purchasing practices for the college and university operating programs. SO, university and college Purchasing Department labor was not analyzed related to purchasing. It appears most major building services are competitively bid with term contracts awarded. For commodity purchases, it appears most institutions issue blanket purchase orders against DAS contracts (or similar contract types) to vendors. Collected data indicate college efforts have occurred to obtain competitive service and commodity pricing. Regionally, bidding service contracts may achieve a small savings. It is assumed blanket purchase orders for commodities are currently written against contracts that offer discount pricing. Micro-managing commodity purchasing to find lower purchasing power may result in a savings.

This evaluation recognized the SO Purchasing Department is proposing software and other opportunities to increase the CSCU purchasing power and decrease cost exposures. Based from committee member past experiences from other modified applications of other systems, they expressed concern that revised purchasing processes could become more difficult than currently exist, if not properly vetted out. They recommended all proposed processes and procedures be fully vetted out before implementing.

Report Analysis Supported by the Committee:

1. The SO Facilities should regionally bid facility-based services as an effort to capture a savings over individual college and university service procurement.
2. The SO Purchasing Department needs to assure new procurement processes will not be more difficult than current processes.
3. The SO Purchasing & Facilities Departments need to analyze current college and university blanket purchase orders to verify that they include discounted pricing.
4. The SO Purchasing Department needs to verify that new commodity purchasing opportunities are more cost effective than current purchasing opportunities.

OTHER OPERATING COST SAVING MEASURES

As a system, the CSCU purchase of electricity, natural gas and oil exceeds \$25 million on an annual basis. Although the consumption and related expenditures can fluctuate due to market conditions and prevailing weather patterns, we have accelerated our efforts to pursue energy cost and consumption avoidance opportunities. Over the past couple of years the System –Office Facilities Department has remained focused on developing and exploiting operating fund cost savings through a number of programs. The first major operating fund savings from many of these programs will begin to be realized over the next couple of years. These programs look to reduce expenditures through capital funded energy improvement projects, be self-funded from their own energy savings, establish

public/private ventures, conduct electric and natural gas reverse energy auctions and execute power purchase agreements.

The Facilities Department current target is a 5% consumption reduction in two years in addition to developing mechanisms that mitigate our purchasing expenses. This program is technical in nature and is a sustainable effort to reduce operating expenses and exposures.

Examples of this program include:

- Over the past couple of years, we have strategized to establish a robust power purchase program. This program was developed as a public/private venture that allows developers to construct facilities on our campuses, manufacture power and sell the power back to the institution where the improvements reside. We also assist the developer to obtain grant funding, some of which is in the form of tax credits and is not directly available to us as a public entity. The effort is to drive down our cost of purchasing electricity. We are in process of awarding more than five megawatts of Photovoltaic Solar Cell (PV) generated electricity through power purchase agreements for six campuses. As examples, we estimate these agreements will annually save Manchester \$250,000, Southern \$100,000 and will power 50% of Quinebaug with a significant rate reduction. We are currently reviewing other alternate energy savings and cost avoidance opportunities.
- We consistently scope out capital improvement investments that lower operating expenses. At Naugatuck we are attempting to accelerate a major boiler replacement by one year for 2018 operation. Opposed to a "one to one" system replacement we plan to strategically replace three large boilers with multiple high efficiency smaller boilers. The cost increase of the high efficiency system over a one to one replacement is estimated at \$2,500,000. The annual savings of the new system will be in excess of \$100,000 for natural gas and \$500,000 for labor expenses. The operating expense will offset the additional capital investment in approximately four-years.
- We are in process of developing a program with Energy Service Conservation Organizations (ESCO's). DEEP previously established contracts for all state agencies with a number of vendors (ESCO's) who can provide energy improvement recommendations and construct the improvements. The ESCO contracts are difficult to navigate and have remained relatively dormant. Of significance to this contracting method, these contracts do not require DCS's participation that allows quick development and implementation of a project. Of additional value, this work can be funded from either our capital program or from the energy savings. As an example, a test project at Capital is currently in process. Through the initial design phases, it is estimated as an \$800,000 expenditure towards improving certain building elements may receive up to \$190,000 of utility company incentives and will offer an approximate \$118,000 annual savings. This project will have a 5-year payback.

PROJECTED SAVINGS

<u>Item</u>	<u>Cost Mechanism</u>	<u>**Projected Annual Savings</u>
<u>Labor</u>		
1. Gateway Custodial Staff Reduction 8 custodians at \$70,000 incl. benefits	attrition	\$560,000
2. *Terminate Gateway HR Director Custodian oversight	reporting realignment	\$10,000 est.
3. Gateway – Vacate 1 mid-level Manager	position attrition	\$115,000
4. Gateway – Vacate 1 Office Assistant position	attrition	\$75,000
5. Vacate five college Director of Facilities positions	attrition	\$550,000
6. Manchester Grounds Maintainers vs outsourcing 7 maintainers at \$375,000 less contract services	attrition	\$100,000 est.
7. *Capital – Fill vacant Superintendent II	position fill vacancy	(\$150,000)
8. System Office new Project Manager position	new position	(\$170,000)
9. *System Wide a. Limit Facilities Overtime to 2.5% annual b. Limit Individual Overtime to 5% annual	funding reduction	\$1,500,000
Projected Labor Subtotal		\$2,590,000
<u>Cost Avoidance</u>		
10. Commodity pricing improvements	software	unknown
11. *Regionalize service contracts	competitive bidding	unknown
12. Develop Facilities Protocol Manual	Staff Produced	unknown
13. Implement Facility Management Software	TBD	unknown
14. *Energy conservation/cost avoidance a. year one b. year two	program program	\$750,000 \$1,300,000
Projected Cost Avoidance Subtotal		\$2,050,000
Total Projected Savings and Cost Avoidance Value		\$4,640,000

* Item is not dependent on consolidation and can be fully implemented within 2-years

** Total projected annual savings is contingent on attrition