

# *Yavapai* COLLEGE

---

Benchmark Service Area Review

Facilities Management

FY 2006-07

Prepared By:  
Joanne Berger, Jeff Rose,  
Bruce Hustedt and Judy Wampler

October 12, 2007

## A. EXECUTIVE SUMMARY

### Highlights of Benchmark Data

- The square footage of buildings and maintained space at YC is 51% higher than the benchmark 660,000 sf.: 440,106 sf. Since the survey, YC has added an additional 108,000 sf CTEC building and a 6,000 sf Family Enrichment Center.
- The fulltime headcount for YC is 52. The benchmark is 35.5. If you divide the total building sf operated and maintained by the # of staff the ratios are relatively equal:

Benchmark: 35.5 FTE/440,106sf = **1FTE/12,397sf**

YC: 52 FTE/663,000sf = **1FTE/12,750sf**

- In contrast to benchmark colleges, YC operates and maintains a number of high maintenance spaces including:
  - Two pools and associated locker rooms
  - The performance hall with seating 50% higher than the benchmark.
  - Aquaculture, turf management (golf course), pond and wetlands.
  - A greater number of occupational programs than the benchmarks.
  - An Early Childhood Education Center.
- Facilities processes 470 work orders/month compared to the benchmark of 228. This may be a reflection of square footage and responsiveness to employee requests.
- YC is comparable to the average sf/staff ratio. We are able to maintain or exceed the benchmark w/o outsourcing due to efficient management.
- YC cleans to a Level 2 while the other Colleges clean to a Level 3 which provides a lower level of services.

### Threats:

- Job budgeting for projects that circumvents Facilities. These incomplete numbers become operational budget numbers. The actual project costs then come in “over budget”.
- Everyone thinks they are experts in the fields of construction, custodial, and grounds. I have a brother....my friend builds...I added on to my garage.....
- Projects timelines are compressed creating unrealistic expectations and increased costs e.g. rush charge.

- Major construction projects which force Facilities staff to re-prioritize planned and budgeted projects e.g. CTEC. This prevents staff from completing regularly scheduled on-going preventive maintenance. This deferred maintenance can in turn reduce the life expectancy of equipment resulting in higher long-term costs.

Recommendations:

1. Improve External Communication
2. Actively Manage Energy Consumption
3. Comprehensive Project Planning and Implementation
4. Continue to improve Operational Effectiveness of Facilities Management Department
5. Refine Benchmark Criteria

## **A. INTRODUCTION**

The Facilities Management Department provides the physical support which allows for effective College operations. Facilities personnel are regularly called upon to troubleshoot and resolve problems. This is a significant requirement of job effectiveness. Facilities staff is on call 24/7. Facilities Management includes building maintenance and repair, building comfort control, grounds and landscape maintenance, custodial services, capital inventory purchase and control, master plan construction coordination, building renovation, space programming, motor pool, and utilities. Departmental authority is district-wide encompassing five sites & various lease properties for a total of over 764,097 sf of buildings & 333 acres of land.

## **B. MISSION**

The mission of the Yavapai College Facilities Management Team is to provide well-maintained, clean and safe learning environments. The team is committed to cost effective, efficient operations with excellence in customer service.

## **C. SERVICE AREA PERSONNEL:**

### **Director of Facilities Management and Master Plan**

#### **Provides Leadership, Problem-Solving, Project Management Skills and Technical Skills**

Master Plan project coordination & management, owner advocacy, fiscal management, negotiation between contractors, architects, and the college, contract review and enforcement, project schedule, space utilization, coordinate with office of academic affairs, student services, business office, ITS and facilities. Manages \$69.5 million bond build-out. As President Leadership Team (PLT) member reviews key issues facing the College, evaluates proposals, resolves institutional problems, reviews policy and procedure, provides information related to Master Plan and Facilities operation, coordinates with PLT members. Provide overall direction and coordination of the Facilities Management Dept (50+ team members). Facilities Management includes building maintenance and repair, building comfort control, grounds and landscape maintenance, custodial services, capital inventory purchase and control, master plan construction coordination, motor pool, and utilities. Review of annual budget, over \$4.8 million. On call 24/7.

### **District Operations Manager / Assistant Director Facilities**

#### **Provides Leadership, Problems Solving, Project Management Skills, Technical Skills**

Work with Director of Facilities Management, College administration, architects, engineers, faculty and staff to determine and implement programming, layout and furnishings of new, existing and swing space. Responsibilities include space programming, estimating, in-house design and construction administration. Establish standards; manage daily operations and maintenance functions of the department

district-wide. Acting Director in the Director's absence. Designs and organizes management of in-house construction/renovation projects utilizing contractors and Facilities crews. Evaluates and develops Facilities budget and implements reporting practices for evaluating operational efficiency. On call 24/7.

### **District Manager Technical Systems/Office and HVAC Manager/ Capital Assets**

#### **Provides Leadership, Problems Solving, Project Management Skills, Technical Skills**

Work with College administration, architects, engineers, Director of Facilities, Facilities Operations Manager, faculty, and staff to determine and implement district-wide programming, layout, and furnishings of new, existing, and swing space. Manage Heating, Ventilation, and Air Conditioning Staff; Troubleshooting software; Controls programming; General Services Technician; Computer Aided Design Technician; Capitol Property; Furnishings; MainBoss Facilities Management Software; Metasys Building Management Software; and AutoCAD software. Supervision of District office personnel. On call 24/7.

### **HVAC Supervisor**

#### **Provides Leadership, Problem-Solving, Technical Skills**

Supervise HVAC personnel in preventive maintenance, monitoring and repair of HVAC equipment, insures comfort levels are maintained District Wide. On call 24/7.

### **HVAC Technician I**

#### **Provides Time Management Skills, Communication Skills, Organizational Skills, Technical Skills**

Maintain, monitor, and repair all types of Heating, Ventilation, and Air Conditioning equipment district-wide. Perform preventive maintenance tasks on Heating, Ventilating and Air Conditioning equipment and document. Assist all other trades, i.e. Plumbing, electrical, etc. as needed. Assumes job duties of other trades as needed during their absence. Repair kitchen equipment and major appliances district wide. On Call 24/7.

### **Preventive Maintenance Mechanic**

#### **Provides Time Management Skills, Communication Skills, Organizational Skills, Technical Skills**

Maintain and repair HVAC (heating ventilation and air conditioning) equipment. Develop routine maintenance tasks according to manufacture's recommendations. Assist with plumbing, electrical and carpentry duties as assigned. On call 24/7.

### **District Trades Supervisor**

#### **Provides Leadership, Problems Solving, Technical Skills**

Coordinates with architects, engineers and contractors on construction/renovation projects. Manage, schedule and supervise Trades personnel (electricians, plumbers, carpenter, mechanic and painter) and temporary workers. Develops and coordinates office moves and personnel relocations. Procures bid estimates for projects. Schedules and manages sub-contractors. Manages repairs and renovations of in-house and Design/Bid/Build construction projects. Supervises the repair and installation of doors, windows, hardware, cabinets, furniture and specialty equipment such as keys, locks and door hardware. Oversee the accuracy of subordinates work logs and time cards for

input into computerized maintenance software. Research equipment purchases and orders and maintains supply inventories. On call 24/7.

### **Special Projects Coordinator**

#### **Provides Leadership, Problems Solving, Technical Skills**

Provide examination/coordination/inspection of construction projects throughout YCC District. Reports to District Trades Supervisor. Interface with Project Managers/Superintendents verifying adherence to construction documents and YC Technical Standards. Maintains construction document control plans and manuals. On call 24/7.

### **Trades – Plumber III**

#### **Provides Time Management Skills, Communication Skills, Organizational Skills, Technical Skills**

Install, repair, test, and maintain all plumbing systems, air vac, gas systems in labs, potable water system, sewer system, and gas distribution system (following Uniform Plumbing Code). Inspect work of outside contractors. Review plumbing plans and submittals for new construction review. On call 24/7.

### **Trades – Electrician/Facilities Specialist**

#### **Provides Time Management Skills, Communication Skills, Organizational Skills, Technical Skills**

Install, repair, maintain and troubleshoot operation status of campus electrical, alarm, security, and generator systems. Review new electrical projects and the work of subcontractors. Oversee work of subordinate electrician. On call 24/7.

### **Trades – Electrician III**

#### **Provides Time Management Skills, Communication Skills, Organizational Skills, Technical Skills**

With supervision from lead electrician, monitors and maintains electrical systems. Visually inspects various work areas to identify and detect problems. Prepares and evaluates work orders and performs necessary calculations to estimate materials and supplies needed to accomplish work. On call 24/7.

### **Trades – Maintenance Technician I**

#### **Provides Time Management Skills, Communication Skills, Organizational Skills, Technical Skills**

Perform carpentry tasks, including wood and metal stud walls, installation of doors and jams, and trim carpentry. Calculate and maintain records of time, materials and processes for continual data entry to department maintenance management software program. Assist other department personnel with various duties as needed. Operate heavy equipment, i.e., fork lift, backhoe, boom truck, skip loader, bobcat, etc.

### **Trades – Maintenance Technician III**

#### **Provides Time Management Skills, Communication Skills, Organizational Skills, Technical Skills**

Install shelving, bulletin & white boards, classroom equipment, etc. Repair furniture and office equipment. Install and maintain door hardware and restroom hardware. Calculate

and maintain records of time, materials and processes for continual data entry to department maintenance management software program. Assist other department personnel with various duties as needed, including mandatory, after hours emergency repair (on call 24/7). Operate heavy equipment, i.e., fork lift, backhoe, boom truck, skip loader, bobcat, etc.

**Trades - General Service Technician**

**Provides Time Management Skills, Communication Skills, Organizational Skills, Technical Skills**

Relocate office furniture / set up office – design office set ups – Auto CAD – Assemble and disassemble Steelcase furniture – documentation / video – maintain ware house / furniture – operate fork lift – handle auction surplus / documentation.

On call 24/7.

**Trades - Painter**

**Provides Time Management Skills, Communication Skills, Organizational Skills, Technical Skills**

Coordinate painting/plastering work with other trades and outside contractors. Calculate and maintain records of time, materials and processes for continual data entry to department maintenance management software program. Assist other department personnel with various duties as needed.

**Trades - Automotive Equipment Manager/Senior Facilities Specialist**

**Provides Time Management Skills, Communication Skills, Organizational Skills, Technical Skills**

Automotive Equipment Manager: keep all rolling stock and some stationary stock in proper operating order. Locksmith: Design, repair, install all lock functions on all campuses with assistance from my assistant.

On call 24/7.

**Trades - Locksmith/Automotive Equipment Mechanic Assistant**

**Provides Time Management Skills, Communication Skills, Organizational Skills, Technical Skills**

Install, maintain, and repair District-wide locksets and security devices and make keys and cores for same. Assist the Automotive Mechanic as directed and other duties as assigned.

On emergency call 24/7.

**District Landscape and Grounds Maintenance Supervisor**

**Provides Leadership, Problems Solving, Technical Skills**

Landscape design district wide. e.g. Prescott Courtyard. Manage the outdoor ongoing maintenance and landscape projects on the Yavapai College campuses.

On call 24/7.

**Grounds Maintenance Technician**

**Provides Time Management Skills, Communication Skills, Organizational Skills, Technical Skills**

To maintain grounds, landscape (irrigation, pick up trash, weed control). Maintain job related equipment. Perform other duties as assigned. Assist with general maintenance work as needed. On Call 24/7.

### **District Custodial Supervisor**

#### **Provides Leadership, Problems Solving, Organizational Skills**

Supervises, plans, schedules all custodial staff district-wide. This includes evaluations of employee performance. Calculates forthcoming salaries and operational budget needs and makes necessary proposals for the forthcoming fiscal periods. On call 24/7.

### **District Custodial Lead**

#### **Provides Leadership, Problems Solving, Organizational Skills**

Assigns and inspects the work of custodial employees engaged in the cleaning and setup of buildings district wide. Takes the necessary action to correct deficiencies. Monitors performance of others and trains employees. Acting Supervisor in the Supervisor's absence. On call 24/7.

### **Custodial Lead - Verde/Sedona**

#### **Provides Leadership, Problems Solving, Organizational Skills**

Assigns and inspects the work of (3) custodial employees engaged in the cleaning and setup of buildings in Verde and Sedona. Takes the necessary action to correct deficiencies. Monitors performance of others and trains employees. On call 24/7.

### **Custodians**

Sweeps, mops, scrubs, and vacuums hallways, stairs classroom, dorm, and office space. Empties trash and garbage containers. Notifies supervisor concerning need for repairs to lighting, heating and ventilating equipment.

### **Office Manager**

#### **Provides Leadership, Problems Solving, Organizational Skills**

Directly supervises Prescott and Verde office staff. Motivates, appraises, trains and counsels staff. Responsible for the daily efficient operation of district-wide administrative staff for the Facilities Management Department (60 employees). Creates work orders, new projects and project reports in maintenance program. Approves payment and accuracy of district wide utility billing. Orchestrates Hazardous Waste disposal; safety meetings; cell phone payment along with phone additions and changes; MainBoss program additions/changes; floor plan updates; newsflashes; key procedures; and maintenance of O & M documents. Creates sign inserts district wide.

### **Purchasing Liaison/Accountant**

#### **Provides Problems Solving, Organizational Skills, Communication Skills**

Implements purchasing procedures, obtains and creates information to purchase all equipment and materials the Facilities requires to upgrade and maintain all YC Facilities. Data input and process invoices created by Facilities in a manner which information can be readily obtained for budget control. Responsible for creating and processing employee travel requests, payroll records, inventory and maintenance of office supplies and office receptionist duties as needed.



**Administrative Assistant I**

**Provides Time Management Skills, Communication Skills,  
Organizational Skills, Problems Solving**

Provides administrative support for Facilities Management at the Prescott, Verde and Sedona campuses. Answer all incoming phone calls. Data enter trades/custodial time cards and create and enter work orders into the department maintenance management software program. Reserves rooms for facility usage for inside and outside parties. Back up for Office Manager and Purchasing Liaison.

## **D. SERVICE AREA OUTCOMES**

The first draft of the Facilities benchmark survey was developed by the department leadership team. Each section was then reviewed by district supervisors in each area including maintenance, grounds, custodial and office operations.

Please refer to appendix A to see the Facilities portion of the benchmark survey.

## **E. Strengths, Weaknesses, Opportunities, Threats Analysis (SWOT)**

### **Strengths:**

- Staff commitment to excellence in customer service. Members of the department are friendly, responsive and function from a base of problem-solving that meets the needs of students, staff and faculty.
- Facilities provides a healthy, safe environment.
- Facilities responds to reactive service calls through phone calls and the work order system. Response times are:
  - high priority : same day
  - normal priority : 24-48 hour
  - low priority : two weeks
- Training and expertise of our personnel. Facilities staff includes highly experienced professionals particularly in the areas of supervision and maintenance staff. The department has a great safety record. The department coordinates regular vendor training. Bi-weekly safety meetings for all staff.
- Good internal communication. Daily coordination meetings. Bi-weekly meetings. Cell and radio communication throughout the department.
- Good external communication with ITS and Campus Safety. Good working relationships with College departments.
- Long-term, loyal employees familiar with the college environment, buildings and equipment. Our staffing is characterized by many years of service and low turn over.
- Good coordination among staff and vendors. Prompt service and many accomplishments including the Master Plan, FEC, parking lot construction, project completions and the CTEC renovation.
- Effective work order management system. The MainBoss program is updated continually giving Facilities the ability to effectively run reports.
- Work is accomplished in a timely manner. Turn around time is immediate on emergencies 24/7.

- Good planning, project management and budget management. Due to expert planning on numerous projects construction has been completed on schedule and within budget.
- Strong support for implementation of institutional strategic directives. Facilities day-to-day work within our mission particularly supports the Strategic Initiatives of Long Range Facilities Planning and Long Range Financial Planning.
- Ability to operate in a changing, fast-paced environment.
- Ability to interface effectively with a wide variety of people.
- Good communication with upper administration and academic leadership through regular meetings with President's Leadership Team, BLT, Dean's etc.

### **Weaknesses:**

- External communication is not always comprehensive. We need to generate more NewsFlashes to train other departments about our services. We need website development.
- On-going challenge of working in a multi-campus environment. Travel time between campuses puts more burden and lost time on the department.
- The effective response to problems and coordination of various trades requires immediate and constant communication between Facilities staff. We are struggling with cell communication to the Verde.
- On-going diligence in completion of work order documentation.
- Timely, consistent district-wide implementation of Facilities policies, procedures, and ratios. We struggle to balance different responsibilities between campuses and the maintenance needs of old & new buildings.
- The department does not have adequate shop and warehouse facilities on the Verde campus.
- Budget management challenges due to antiquated software requiring entry duplication for project job costing.

### **Opportunities:**

- Adopt more energy management and reduction strategies. This is in process now.
- Identified Facilities staff will learn to manage and maintain our web page.
- We have learned from our experiences with the planning, design and build-out of Master Plan 2000. This expertise and experience will contribute to improved planning as we enter into the next phase of master site planning.
- Further research for continuing education and certification for development of human capital.

- Staff Development Day afternoon sessions might offer an opportunity to inform the College population about ways to maximize the use of Facilities resources.
- The five year capital improvement plan and five year maintenance plans enable improved maintenance and life cycle values that offer long term protection of College assets.

### **Threats:**

- Budgeting for projects that circumvent Facilities. These incomplete numbers become operational budget numbers. The actual project costs then come in “over budget”.
- Everyone thinks they are experts in the fields of construction, custodial, and grounds. I have a brother....my friend builds...I added on to my garage.....
- Projects timelines are compressed creating unrealistic expectations and increased costs e.g. rush charges.
- Major construction projects which force Facilities staff to re-prioritize planned and budgeted projects e.g. CTEC. This prevents staff from completing regularly scheduled on-going preventive maintenance. This deferred maintenance can in turn reduce the life expectancy of equipment resulting in higher long-term costs.
- The number of reactive service calls is increased proportionately to the delay in preventive maintenance.
- Constant demand-based interruptions, requiring Facilities to ‘shoot from the hip’, in order to provide top level service.
- When building functions are changed, the change requires adequate funding for infrastructure. Oftentimes there is a lack of attention to global impacts to infrastructure during design and implementation of projects. Because infrastructure is hidden in the walls, the tunnels, and the ground...and is very expensive...there is a tendency to ignore it until a crisis occurs. The creation of the 5 year CIP, Building Maintenance and Capital Equipment Replacement plans are a major step forward.
- The perception that outsourcing is a cost-effective, efficient operational strategy.
- Facilities financial and human resources get hit with unfunded mandates as a result of agreements with outside entities e.g. IGAs, MOUs, lease agreements etc.. This is slowly improving.

## **F. BUDGET AND STAFFING ANALYSIS**

NOTE: Since the time of the survey, YC has added the CTEC building :108,000sf, and the Family Enrichment Center : 6,000sf. The following discussion is limited to the FY 2005-06 numbers. As a result of CTEC our staffing has increased by 2.

YC has 51% more square footage to maintain than the benchmark.

- The fulltime headcount for YC is 52. The benchmark is 35.5. If you divide the total building sf operated and maintained by the # of staff the ratios are relatively equal:

Benchmark: 35.5 FTE/440,106sf = **1FTE/12,397sf**.

YC: 52 FTE/663,000sf = **1FTE/12,750sf**.

- The number of benchmarked staff does not reflect outsourcing which occurs in the area of custodial and maintenance in several schools. If incorporated, the addition of this staff would increase the benchmark staffing total. As a result, the average sf maintained by each staff member would be reduced reflecting a decrease in cost efficiencies e.g. 440,106 sf divided by 40 staff= 11,000 sf.
- YC is comparable to the average sf/staff ratio. We are able to maintain or exceed the benchmark w/o outsourcing due to efficient management.
- In addition, YC is able to maintain the staffing benchmark utilizing fulltime personnel which provides better consistency of service, higher quality of service, and achieves the College strategic initiative of developing our human capital.
- The cost of benefits/FTE parallels the number of full-time employees. Our emphasis on fulltime employees is directly reflected in the higher budgeted figure for benefits (61%).
- YC has 63% fewer part-time employees than the benchmark.
- The category of Other Expenses reflects the costs to maintain the buildings and grounds. YC is 37% above the benchmark. This reflects our increased building sf, difference in building usage/maintainability (e.g. performance hall)
- YC: 663,000 sf /\$4,813,708 =**\$7.26/sf**

Benchmark: 440,106 sf /\$3,177,664 =**\$7.22/sf**

## **G. BENCHMARK ANALYSIS**

### **General Overview:**

- The square footage of buildings and maintained space at YC is 51% higher than the benchmark. Since the survey, YC has added a 108,000 sf CTEC building and a 6,000 sf Family Enrichment Center.

### **Buildings:**

- The YC building total is incorrect. YC had 61 buildings at the time of the benchmarking study. This compares to the benchmark of 54. With the addition of CTEC and the Family Enrichment Center, we currently have 63.

- Within the next two years 90% of our buildings district-wide will be new or newly renovated.
- The newer technology for energy management requires a greater amount of maintenance and sophistication.
- The Master Plan 2000 was a direct result of three decades of deferred maintenance. College strategic planning and budgeting now provides for regularly scheduled maintenance and capital equipment replacement.
- The frequency of maintenance tasks increases based on the complexity of the functional use e.g. lecture space vs. lab space.
- To enable full life cycle value of College assets ongoing preventive maintenance is required. Every time a piece of equipment is changed or a building function is altered, the preventive maintenance program has to be redefined. Facilities personnel have an average of 550 scheduled preventive maintenance tasks per month district-wide. The amount of time required to develop and administer the preventive maintenance program is significant.

### **Buildings and Types of Spaces:**

Certain types of spaces are more expensive to maintain e.g. swimming pools, locker rooms, family enrichment center, laboratories etc.

- The College is comparable in science labs, athletics (excluding the pool), and visual and performing arts classrooms and studios.
- In contrast to benchmark colleges, YC operates and maintains a number of high maintenance spaces including:
  - Two pools and associated locker rooms
  - The performance hall with seating 50% higher than the benchmark.
  - Aquaculture, turf management (golf course), pond and wetlands.
  - A greater number of occupational programs than the benchmarks.
  - An Early Childhood Education Center.
- The data regarding the number of residence halls is skewed. The number of residents is comparable but the average number of residence halls in the benchmark is four times that of YC. The costs of operating, cleaning and maintaining dormitory-style residence halls are significant.

### **Energy and Utilities:**

- YC utilizes the combination of a central-plant-loop cooling and heating system on the Prescott Campus and an energy management system district-wide. This provides a greater ability to manage and control energy consumption.

- Benchmarks indicate use of individual heating and cooling units that are less energy efficient and require more maintenance.
  - The complexity of energy management systems requires a high level of technical skill and a great deal of commissioning (programming, testing, and refinement) time. This investment of resources will result in energy savings over time.
  - As the Master Plan build-out is completed on each campus the Facilities Management Department is aggressively addressing the commissioning which was not included in the Master Plan budget. Buildings are systematically being evaluated and the controls are being re-programmed for efficiency.
- All renovations include upgrades to control systems to provide better energy management.
  - Managing our *consumption* is our best opportunity to reduce utility bills. The rate charged by utility providers is a variable out of our control.
  - The Facilities Management Department strongly recommends that the College adopt an energy conservation philosophy supported by the Administration. This would include: reducing non-essential devices e.g. refrigerators, space heaters etc.; encouraging people to turn off computers and lights.
  - The cost of fuel for vehicles is also a variable out of our control. Yavapai College has 82 vehicles in contrast to the benchmark of 43. More data would be required to quantify the difference. In part, this may be a reflection of staffing numbers and the ratio of fulltime and part-time employees. Travel to and from five campus locations has increased the need for transportation. To support our landscaping/grounds personnel and due to our geographic location, operations require heavier equipment and vehicles including dump trucks, snow plow, boom truck, backhoe, and bobcats/mules.

### **Trades/Maintenance:**

- We have a comprehensive preventive maintenance plan that is continually updated to maximize the efficiency and life-cycle value of our assets.
- Facilities processes 470 work orders/month compared to the benchmark of 228. This may be a reflection of square footage, responsiveness to employee requests and/or the criteria for processing/grouping work orders.
- Each Yavapai College maintenance staff member maintains approximately 10,000 sf more than the benchmark.
  - YC: 1 FTE / **47,350 sf** (District average)
  - Benchmark: 1 FTE / **37,163 sf** (District average)
  - VERDE
    - 3.5 FTE / 117,974sf = 1FTE / **33,707 sf**

- PRESCOTT
  - 10 FTE / 554,996sf = 1 FTE / **55,497 sf**
- NOTE: Prescott staff assists on Verde maintenance projects = 1 FTE / year
  - 554,996 sf/9 FTE = **61,666 sf/staff** (1 FTE assisting Verde increases load on Prescott staff)
  - 117,974sf/4.5 FTE = **26,216 sf / staff** (1 FTE assisting Verde reduces load on Verde staff)

**Landscaping/Grounds:**

- The data collected is so diverse it is inconclusive.
- Landscaping/grounds has utilized xeriscaping in most areas to reduce water consumption.
- The following are some examples of the square footage maintained district-wide by the landscaping/grounds crews. This list is not inclusive.
  - 1,142 irrigated trees
  - 4,473 irrigated plants
  - 694,075 sf of streets and dirt roads
  - 1,109,449 sf of parking lots
  - 245,000 sf of sidewalks and concrete
- In FY 2005-06 the landscaping/grounds crew was staffed by **4.5 FTE** districtwide.

**Custodial Services:**

- YC cleans to a Level 2 while the other benchmark colleges clean to a Level 3. Level 3 is a lower level of services.
- The ratio of staff to square footage was relatively comparable to the benchmark.
  - YC                    1 FTE / **31,029 sf**
  - Benchmark 1 FTE / **28,838 sf**

**Prescott**

- 15 FTE / 554,996 sf = 1 FTE / **36,999 sf**
- Verde
  - 4 FTE / 117,974 sf = 1 FTE / **29,493 sf**



### **Room Scheduling:**

- YC is the only institution that has the Facilities department involved in scheduling non-instructional and special events.
- Room scheduling places a significant demand on office staff equaling a minimum of 2 FTE district-wide,

### **Furniture:**

- YC Facilities provides more comprehensive furniture services (design, ordering by department, re-configuring and installation) than any of the other institutions.
- Maintaining a consistent standard throughout the District reduces maintenance and replacement costs.
- Facilities tries to maintain a balance between safe, efficient cost effective environments and re-furnishing based on personal preferences.

### **Construction/Renovation Projects:**

- We are in alignment with the benchmark
- It appears that the YC Facilities Department is able to design and manage larger construction/renovation projects due to the expertise of our staff. This results in a significant cost savings to the College.
- Comments indicate that benchmark institutions utilize Facilities staff for minor renovations and contract out design services for larger projects.

## **I. RECOMMENDATIONS AND ACTION PLAN**

### **Recommendation 1: Improve external communication**

#### **Actions:**

- Send out Newsflashes with “Did you know?” information e.g. key requests, room scheduling.
- Update the webpage for easier access to work orders, key requests and general information about Facilities procedures.

### **Recommendation 2: Actively manage energy consumption**

#### **Actions:**

- Reduce energy consumption through improved efficiencies in HVAC programming.
- Increase energy conservation district-wide through administrative leadership and awareness initiatives. The Facilities Management Department strongly recommends that the College adopt an energy conservation philosophy supported by the Administration. This would include: reducing non-essential devices e.g. refrigerators, space heaters etc.; encouraging people to turn off computers and lights.

### **Recommendation 3: Comprehensive Project Planning and Implementation**

#### **Actions:**

- Require and reinforce procedures for Facilities involvement and sign-off relating to project programming, job costing, and scheduling.
- Capture all costs involved in the planning, design, implementation and on-going operation/maintenance of a proposed project.
- Recognition that there is a cost in human and budgetary resources for concept and programming e.g. what would it cost to renovate Building 5 for ITV?
- Develop realistic, cost-effective schedules for project implementation.

### **Recommendation 4: Continue to Improve Operational Effectiveness of Facilities Management Department**

#### **Actions:**

- Establish dedicated Facilities warehouse and shop space at all sites. Reduce number of storage containers.
- Maintain consistency of operational procedures district-wide.
- Reduce delays in scheduled preventive maintenance through attention to project schedules.
- Continue monitoring of time sheet completion resulting in accurate job-costing data.
- Improve cell phone communication.

**Recommendation 5: Refine Benchmark Criteria**

**Actions:**

- Refine for next Fiscal Year as necessary
- Develop ratios of Facilities FTE:FTSE and Facilities FTE:Faculty

APPENDIX A  
FY 2005-06  
Benchmark Survey  
Facilities Management



**2006 Community College Benchmark Survey  
Facilities**

<b>Facilities</b>				
<b>Facilities FY 2005-2006 Budget</b>				
<b>Function</b>	<b>YC Budget</b>	<b>Average Budget w/o Yavapai</b>	<b>Difference</b>	<b>% Difference</b>
Salaries	\$ 1,651,053	\$ 1,131,656	\$ 519,397	46%
Part-time Salaries	24,006	64,941	(40,935)	-63%
Benefits	637,622	397,148	240,474	61%
Other Expenses	2,501,027	1,583,919	917,108	58%
<b>Totals</b>	<b>\$ 4,813,708</b>	<b>\$ 3,177,664</b>	<b>\$ 1,636,044</b>	<b>51%</b>
<b>Staffing</b>				
	<b>Yavapai</b>	<b>Average w/o Yavapai</b>		
Full-time Headcount	52.0	35.5		
This survey was compiled relative to Yavapai College's organizational structure. It may not compare directly to your college. Included in the above headcount are the following positions or departments: Director; Assistant Director; Custodial; Technician (trades, grounds, etc.); Manager/Supervisor; Safety; Administrative Support				
<b>Name/Department</b>	<b>Yavapai</b>	<b># of Colleges that Responded</b>	<b>Average w/o Yavapai</b>	
Survey completed by (print name)	Jo Berger			
Phone number of individual completing survey	928.717.7666			
<b>Instructions - Please respond as indicated.</b>				
<b>Use "X" to indicate work performed.</b>				
<b>Use n/a if the function is not applicable.</b>				
<b>Use n/d if the function is performed, but no data is available.</b>				
<b>Use "O" if the function is outsourced (outside vendor).</b>				
Is any portion of your Facilities Services outsourced?	no	4	100% yes	
If yes, please list areas -		4	<ul style="list-style-type: none"> <li>• Food Service/ Security/ Bookstore</li> <li>• Approx. 5% of Custodial Services at branch locations</li> <li>• Maintenance function outsourced at one campus - began 7-05</li> <li>• Custodial</li> </ul>	
<b>General Overview - Please respond as indicated:</b>				
Total number of campuses and/or education centers owned by the district	5.0	4	5.8	
Total number of centers maintained on a lease-basis	1.0	4	1.8	
Total square footage of all buildings operated and maintained	663,000	4	440,106	

**2006 Community College Benchmark Survey  
Facilities**

<b>Name/Department</b>	<b>Yavapai</b>	<b># of Colleges that Responded</b>	<b>Average w/o Yavapai</b>
Total number of acres owned and maintained	325	4	609
Total number of improved acres	90	4	80
Total miles of maintainable roads	3.0	3	4.4
Average distance (in miles) between campuses	36	4	74
Do you maintain facilities for others (example: city tennis courts, etc.)?	yes	3	0% yes
If yes, please list:	no	0	0%yes
Approximate number of parking spaces district-wide	n/d	4	1,865
Other		0	
<b>Buildings - Provide percentage of total buildings by age range:</b>			
Less than 20 years of age	31%	4	27%
Between 20 - 29 years of age	n/d	4	12%
Between 30 - 39 years of age	69%	4	18%
Between 40 - 49 years of age	n/d	2	47%
Over 50 years of age	n/d	2	1.0%
Total = 100%		2	
Total number of buildings district-wide	48	4	54
<b>Buildings and types of spaces - Please check all that apply:</b>			
<b>Science Labs -</b>			
Biology	yes	4	100% yes
Morgue	yes	0	0% yes
Geology	yes	4	75% yes
Chemistry	yes	4	100% yes
Nursing skills lab	yes	4	100%yes
Number of fume hoods	15	4	10
Other		0	
<b>Athletics -</b>			
Aerobics Room	yes	4	100% yes
Fitness Center	yes	4	100% yes
Lap Pool	yes	2	50% yes
Water exercise pool	yes	3	50% yes
Gym	yes	3	75% yes
Baseball field	yes	3	75% yes
Soccer field	no	2	50% yes
Football field	no	2	0% yes
Rodeo arena	no	3	50% yes
Other	Tennis courts	3	<ul style="list-style-type: none"> <li>• Softball field</li> <li>• 1 - Tennis court</li> <li>• softball, tennis, track</li> </ul>

**2006 Community College Benchmark Survey  
Facilities**

Name/Department	Yavapai	# of Colleges that Responded	Average w/o Yavapai
<b>Buildings and types of spaces - Please check all that apply:</b>			
<b>Visual and Performing Arts -</b>			
Performance Hall	yes	2	50% yes
If yes, number of seats	1,000	2	459
Music rehearsal theater	yes	2	25% yes
Dance studio	no	1	25% yes
Ceramics studio	yes	4	100% yes
Kiln yard or area	yes	4	100% yes
Jewelry studio	yes	3	25% yes
Sculpture studio	yes	4	75% yes
Other	Photo lab	3	<ul style="list-style-type: none"> <li>• 2 - Lapidary</li> <li>• Silver Smith</li> </ul>
<b>Agribusiness -</b>			
Greenhouses	yes	3	75% yes
Aquaculture tanks	yes	0	0% yes
Demonstration fields	no	1	25% yes
If yes, number of acres		1	5
Livestock barns/equine program	yes	1	25% yes
Turf management/golf course	yes	0	0% yes
If yes, number of acres/holes	3	0	0
<b>Information Technology -</b>			
Number of server rooms	2.0	3	6.7
Other		0	
<b>Occupational Programs -</b>			
Gunsmithing	yes	2	0% yes
Welding	yes	4	100% yes
Construction	yes	4	100% yes
Fire Science	yes	3	75% yes
Filmmaking	yes	0	0% yes
Graphic Design	yes	3	75% yes
Drafting	yes	4	100% yes
Automotive	yes	3	75% yes
Auto Body	no	1	25% yes
Wood shop	yes	3	75% yes
HVAC	no	3	75% yes
Printing	no	1	25% yes
Electrical	no	3	75% yes
<b>Buildings and types of spaces - Please check all that apply:</b>			
Public Safety (law enforcement)	yes	2	50% yes
Other		0	
<b>Early Childhood Education and Lab School -</b>			
Total number of children served	61	1	25



**2006 Community College Benchmark Survey  
Facilities**

Name/Department	Yavapai	# of Colleges that Responded	Average w/o Yavapai
<b>Residence Halls -</b>			
Number of residence halls	3.0	4	12.5
Food Service	yes	4	100% yes
Bookstore	yes	4	100% yes
Other		0	
<b>Energy and Utilities - Please respond as indicated:</b>			
<b>Electrical Distribution -</b>			
Primary Voltage	12,470	4	<ul style="list-style-type: none"> <li>• 3 phase (12,470 volts)</li> <li>• 277 • 480 • 480</li> </ul>
<b>HVAC -</b>			
Number of boilers	17.0	4	5.3
Total BTU's for boilers	22,333,700	3	13,333,333
Number of hot water systems	14	3	18
Number of steam systems	0	4	0.3
Number of chillers	5.0	4	3.5
Other		2	<ul style="list-style-type: none"> <li>• 243 (HVAC/Evap/Air handlers/Fan coil) etc.</li> <li>• 175 - Package and split HVAC systems</li> </ul>
<b>Energy Management -</b>			
Control system - what type (example: JCI)	Metasys	4	<ul style="list-style-type: none"> <li>• Bacnet</li> <li>• DDC REMOTE</li> <li>• Manual • JCI</li> </ul>
<b>Energy and Utilities - Please check all that apply:</b>			
If you prefer to respond by individual campuses, please use the columns provided below (example: Campus A, etc.):			
<b>Type of Gas -</b>			
Natural gas	yes	3	75% yes
Campus master meter	yes	3	50% yes
Propane	yes	2	25% yes
<b>Water Service -</b>			
Campus master meters	yes	2	25% yes
City meter	yes	4	100% yes
District well	yes	4	75% yes
Backflow prevention devices	yes	4	100% yes
Other		0	
<b>Alternative Energy Systems -</b>			
Solar	yes	2	25% yes
Wind	no	1	0% yes
Ground loop thermal	yes	1	0% yes
Pellet boiler	no	1	0% yes
Other		0	0% yes

**2006 Community College Benchmark Survey  
Facilities**

<b>Name/Department</b>	<b>Yavapai</b>	<b># of Colleges that Responded</b>	<b>Average w/o Yavapai</b>
<b>Trades/Maintenance - Please check all that apply:</b>			
Carpentry	yes	4	100% yes
Plumbing	yes	4	100% yes
Electrical	yes	4	100% yes
HVAC	yes	4	100% yes
Painting	yes	4	100% yes
General service technician	yes	4	100% yes
Environmental health and safety/Hazmat	yes	2	50% yes
Pool tech	yes	2	50% yes
Vehicle maintenance/mechanic	yes	2	50% yes
Appliance repair	yes	2	50% yes
Lock shop	yes	4	100% yes
If yes, number of locks	1,798	3	867
Number of card access readers	7	3	0
Sign shop	yes	1	25% yes
Other		0	
Do you have a work order system (yes or no)?	yes	4	100% yes
If yes, average number of work orders per month	470	4	228
Average square footage maintained per staff (example: one maintenance worker per 38,000 sf)	47,350	4	37,163
<b>Landscaping/grounds - Please respond as indicated:</b>			
Average square footage maintained per staff (example: one maintenance worker per 38,000 sf)	n/d	4	<ul style="list-style-type: none"> <li>• 25 acres each</li> <li>• 217,000</li> <li>• All employees share landscape duties, in addition inmate labor used for grounds</li> <li>• 75,000</li> </ul>
<b>Custodial Services - Please respond as indicated:</b>			
What is your level of service? (example: level IV)	2	4	3
Do you do set-ups for district functions?	yes	4	100% yes
Average set-ups per month for instruction	30	4	448
Average set-ups per month for special events	7.5	3	63.3
Average set-ups per month for meetings	7	3	59
Do you have a work order system?	no	4	100% yes
If yes, average number of work orders per month		4	159
Do you provide custodial services for conferences?	yes	4	75% yes

**2006 Community College Benchmark Survey  
Facilities**

<b>Name/Department</b>	<b>Yavapai</b>	<b># of Colleges that Responded</b>	<b>Average w/o Yavapai</b>
Do you provide custodial services for residence halls?	yes	4	75% yes
Average square footage of custodial staff (example: one custodial worker per 33,000 sf)	31,029	4	28,838
<b>Rolling Stock/Vehicles - Please respond as indicated:</b>			
Total number of vehicles maintained	82	4	43
Total number of unlicensed vehicles maintained	13	4	21
Please check if you maintain the following:			
Autos	yes	3	75% yes
Pick-up trucks	yes	4	100% yes
<b>Rolling Stock/Vehicles - Please respond as indicated:</b>			
Dump trucks	yes	2	50% yes
Vans	yes	4	100% yes
Forklifts	yes	4	100% yes
Backhoes	yes	3	50% yes
Tractors	yes	4	100% yes
Bobcats or mules	yes	4	75% yes
Snowplows	yes	0	0% yes
Boom Truck	yes	1	25% yes
Man-lift	yes	3	75% yes
Other	Trailers	4	• yes • 9- Electric Golf carts
<b>Room scheduling - Please answer yes or no:</b>			
Do you schedule for instruction?	no	3	0% yes
Do you schedule for non-instructional activities?	yes	3	0% yes
Do you schedule for special events?	yes	3	0% yes
<b>Furniture - Please check all that apply:</b>			
Ordering	yes	2	25% yes
Design	yes	3	50% yes
Installation	yes	4	100% yes

**2006 Community College Benchmark Survey  
Facilities**

Name/Department	Yavapai	# of Colleges that Responded	Average w/o Yavapai
<b>Construction/renovation projects - Please check all that apply:</b>			
Project management -			
In-house	yes	4	100% yes
Contracted out	yes	2	50% yes
Architectural services -			
In-house	no	3	75% yes
Contracted out	yes	4	100% yes
What types of in-house construction projects do you perform?	Renovation, landscaping, grounds		<ul style="list-style-type: none"> <li>• small room additions/space reallocations/painting/drop ceilings/HVAC replacement/roofing/lighting retrofitting/some deferred maint.</li> </ul>
			<ul style="list-style-type: none"> <li>• Minor renovations/repairs</li> </ul>
			<ul style="list-style-type: none"> <li>• In-house space renovations including subdividing areas into smaller spaces, removing walls to enlarge spaces, installing doors and windows, electrical and plumbing repairs and installations.</li> </ul>
<b>Construction/renovation projects - Please respond as indicated:</b>			
Total square footage under construction at this time	13,500	3	650
Total square footage under renovation at this time	75,000	3	10,833

