

Operations and Maintenance Procedures

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OPERATION AND MAINTENANCE PROCEDURES

- I. **PURPOSE:** This plan establishes the procedures to be used at Brunswick Community College when performing operations and maintenance functions.

- II. **SCOPE:** The content of this plan applies to all operations and maintenance functions we perform at the Brunswick Community College level. It applies to and is carried out by all BCC maintenance, ground construction, custodial, employees and subcontractor employees.

- III. **RESPONSIBILITIES:**
 - A. **Director:** This person will:
 - 1. Carry out the procedures of this plan and train on-site personnel in its use.
 - 2. Assign subordinate duties and responsibilities related to carrying out this plan.
 - 3. Set up priorities for and work efforts and insure that established completion times are met.
 - 4. Monitor preparations and completion of work requests.
 - 5. Provide procedures to receive and respond to emergency and urgent work requirements during other than normal working hours.
 - 6. Monitor and maintain the progress and schedule.
 - 7. Monitor the progress and quality of work for service calls and repairs.
 - 8. Monitor usage of man hours, materials and outside service to ensure that the minimum amount is to complete the procedures of this plan.
 - 9. Maintain facility history files according to the provisions of this plan.

 - B. **Maintenance Supervisors:** The person will
 - 1. Receive and act upon work requests based on the established priority.
 - 2. Monitor the progress of work and insure its completion within the time frame.
 - 3. Review completed work orders for accuracy and completion.
 - 4. Inspect work in progress and completed work to assure a satisfactory level of quality.
 - 5. Verify and validate repair actions and materials needs before expenditure occurs.
 - 6. Monitor subcontractors performing services in this functional area to insure quality. Ensure that hours spent on job are productive and accounted for with service ticket.
 - 7. Maintain the technical library for parts and equipment.
 - 8. Meet with employees daily to review work schedules.

 - C. **Administrative Assistant/ Work Order Clerk:** This person will:
 - 1. Receive and create work requests.
 - 2. Assure work orders based on established priorities.
 - 3. Maintain accurate and complete data base in the computer systems.
 - 4. Gather, update and provide work orders status when requested.
 - 5. Insure work documents and completed properly recorded in the systems and filed.
 - 6. Maintain the facility history and other established files.
 - 7. Complete time sheets for director to check and sign.
 - 8. Order custodial supplies.

9. Maintain inventory on custodial supplies and keep record on supplies that are being used in buildings.
10. Supplies are delivered to custodial to save time.
11. Maintain records on flat vehicles and who request the use of vehicles; make sure documents are filled out.

D. Maintenance Personnel: This person will:

1. Perform work requests as assigned by the director or supervisor. Account for all work order documents assigned to them at the end of the each day.
2. Perform service calls on a “first in”.” first out” bases, unless directed otherwise. Complete other work as instructed by the supervisor.
3. Work at a steady pace during the entire day without taking unauthorized breaks or during “make work” projects.
4. Reports immediately to the supervisor when stopped on a project or out of work.
5. Perform all services to the quality standard and at a speed, set by the director.
6. Notify the supervisor anytime a job will require more hours and /or materials than originally estimated.
7. Use no more materials or hours than absolutely required to perform the service correctly.
8. Record accurately and legibly all service performed. Also any special conditions encountered on the work order document.
9. Maintain job site, shop ad mechanical areas in neat and orderly fashion.
10. Ensure that all safety procedures are used to protect you, the occupant and the environment.
11. All employees will wear uniforms that will be established by director and vice president.
12. Make sure that all preventive maintenance work is carried out according to manufacture specifications or mechanical guide sheets. Completed within the time frame allotted, unless there is an unforeseen problem.

E. Custodial: This person will

1. Dust file cabinets, tops of partitions, vertical and horizontal surfaces on window ledge, book storage units, desk that are clear of paperwork, arms , seat area, tops ,stool and bases of chairs, and legs.
2. Vacuum all carpeted areas once a week, more if needed or high traffic area.
3. Clean restrooms.
4. Mop classrooms and hallways.
5. Pull trash.
6. Clean stairwells.
7. Cleaning outside entrances.
8. Clean at entrance door- (Glass).
9. Clean inside of windows.
10. Wipe down walls when marks are noticed.
11. Clean baseboards.
12. Clean white boards and chalk boards.
13. Clean outside gazebo.

14. Clean spots off furniture (cloth).
15. Keep janitorial closet stocked.
16. Keep janitorial closet clean
17. Clean elevators and tracks
18. Clean carpet spots
19. Carpets and floors are cleaned by contractor
20. Clean outside gazebos.
21. Clean smoke stands.
22. Clean up paper, butts, etc. from around entrances.
23. Sweep sidewalks and entrance stairs and remove all spider webs from around building.
24. Clean all entrance mats as needed.

F. Grounds & Buildings:

1. Pest Control. Two employees hold pest control licenses.
2. Mowing.
3. Edge sidewalks and curbs.
4. Mulching around trees and flowers beds.
5. Replace summer and fall flower beds.
6. Weed control.
7. Utilizes tractors, mowers, Bob Cat and trencher.
8. Dead tree removal.
9. Weedeat campus.
10. Pick up litter.
11. Fertilize grass areas.
12. Fertilize trees and plant beds.
13. Aerate, verticut and over seed hybrid grasses.
14. Repair lawns areas, pant beds, roads, parking lots, fencing, etc,
15. Prune trees.
16. Service grounds maintenance equipment.
17. Help with event set-up.
18. Move furniture for relocation of staff and facility.
19. Maintain tow water gardens and fountain.
20. Maintains Marquee sign for scheduled events.
21. Repairs sprinkler systems where provided.
22. Cleans maintenance department on Friday.
23. To paint as needed.
24. To assist in the building department.
25. To perform any other duty assigned by either the Director or the maintenance supervisor.

G. Mechanic and Recycling personnel:

1. Recycle 14 building twice a week.
2. Inspection of all fleet and maintenance and grounds vehicle. (15)
3. Inspect, repair, and service all grounds maintenance and equipment.
4. Repair broken furniture.

5. Works in all departments if needed
6. Inventories shop supplies for all equipment
7. Refuels all motor equipment.
8. Cleans maintenance departments on Friday.
9. To perform any other duty assigned by either the Director or maintenance supervisor.

H. **Shipping and Receiving:**

1. Receives all parcels and records in financial documents for inventory
2. Delivers all parcels.
3. Records serial numbers on inventory sheets and turns into the finance department.
4. Stocking supplies.
5. Unlocks all Building in A.M.
6. Deliver all custodians supplies, pickup from the maintenances department as needed.
7. Verify that custodians are at work on time.
8. Make sure hear, air conditioning and lights are working.
9. To perform any other duty assigned by either the Director or maintenance supervisor.

IV: **DEFINITIONS:**

- A. **Building Operations Plan:** This is a set of instructions that direct operating personnel in the day-to-day operations of the building's systems and equipment. The primary focus is to operate all systems in compliance with the operations requirements energy conservations practices and responsible maintenance procedures.
- B. **Pyramid:** This term is used for describing the software program for the facility management functions.
- C. **Service Calls:** A service call is a report by building occupants personnel or other interested parties of a problem and the subsequent response to and corrections of the problem. Service calls are broken down into three classifications; emergency, urgent, and routine.
- D. **Tours:** This function is performed to equipment, systems or area based on a need for maintenance personnel to periodically inspect their condition and operations. The action can include but not being limited to, inspecting, adjusting, recording, or operating the equipment or system specified.
- E. **Watches:** This function is performed to systems or equipment that normally is part of the boilers, compressors and chillers. The main equipment and all associated equipment are included in the watch assignment.
- F. **Energy/Utilities Conservation Program:** This program sets the policies and procedures to control and optimize the consumption of energy/utilities.
- G. **Facility History File:** This file is the permanent history for the facility. Telling you what equipment has been replaced, the date replaced, how often repairs are made etc.

IV. Policies: The goal of this plan is to prevent equipment and system breakdown, thereby affecting student and staff satisfaction: reduce life cycle maintenance costs. Lessen the consumption of energy and setup effective procedure for guiding BCC employees in performing these responsibilities.

VI. Procedures:

A. Administrative Assistant/Work Order Clerk: This area will function as the communications center for each Project and the focal point for work control. It is use too:

- receive and record work requests,
- generate work control documents,
- issue work orders,
- maintain data base,
- create reports,
- update and provide work order status,
- maintain project files,
- record work completion
- maintain facility history,
- complete time sheets for director to check and sign,
- order custodial supplies,
- maintain records on fleet vehicles, who request use of, and all paper work completed.

1. **Personnel:** The Work Control Clerk will be staffed by the Administrative Assist. the Administrative Assistant is responsible to be at her desk at all times unless they can be relieved. The Administrative Assistant will perform all assignments in work control functions, as assigned by director with exception of scheduling, supervision and inspections. When work reception is not manned the telephone answering machine will be used to receive.
2. **Communications:** Cell phones with Touch 2 Talk for Director and Supervisor, two cell phones for maintenance with only touch to talk. Ground leaders have cell phone with only touch to talk and administrative assistant has cell phone with only touch to talk. Custodian and receiving person have radios.
3. **Equipment:** The office will be furnished with:
 - a. A computer work station and secretarial chair or a secretarial desk.
 - b. Two four-drawer filing cabinet. One for vendors and the second for the Facility History files.
 - c. Two phone lines one for incoming service calls and the second line for outgoing calls, facsimile and modern functions.
 - d. The answering machine will pick up on fourth (4th) ring. It will remain on line at all times. The following message will be used:

You have reached the maintenance department at Brunswick Community College. We are unable to take your call at this time. Please leave your name and phone number. We will return your call as soon as possible. In an emergency call Lindsey Walton 910-617-2977 or Donna Baxter 910-617-2977.

- e. Computer (2) one for Director and one for Work Order Clerk. The Director will be the main server on the Pyramid System.
- f. The standard dot matrix printer for this system is the Okidata Microline 320. This printer is used primarily for work orders and non-letter quality correspondence to staff and site employees.

4. Automation: Brunswick Community College is using **Computerized Maintenance Management System (CMMS)** called Pyramid.

- plan and prepare schedules for routinely recurring work,
- record request for non-scheduled, event driven work,
- prepare work orders and other control documents,
- track the progress of all work, and account for completed work,
- schedule and issue work orders for quality control inspections,
- prepare reports,
- provide documentation of resource expenditures

Pyramid is an intrinsic component of our management strategy and provide an automated and formalized process to account for work from inception to completion. It provides the visibility needed to asses work progress on a daily basis through scheduled work status checks and in weekly work planning sessions.

B. Work Control

1. Work Reception – Official Working Hours: Working hours will be set by the Board of Trustees. The work order desk will be manned at all times during official hours.

- a. Normally these are the hours and days that will be staffed by the AA.
In case they are out two people will be trained to man this operation.
- b. In either case, work requests may be received:
 - In writing,
 - By telephone,
 - Direct personal contact or
 - By cell phone or radio.
- c. The receiving person will record request for services and prepare the appropriate work documents.
- d. Work request from remote sites (Southport, Leland and BETC) will be received in the same manner as a and b above.

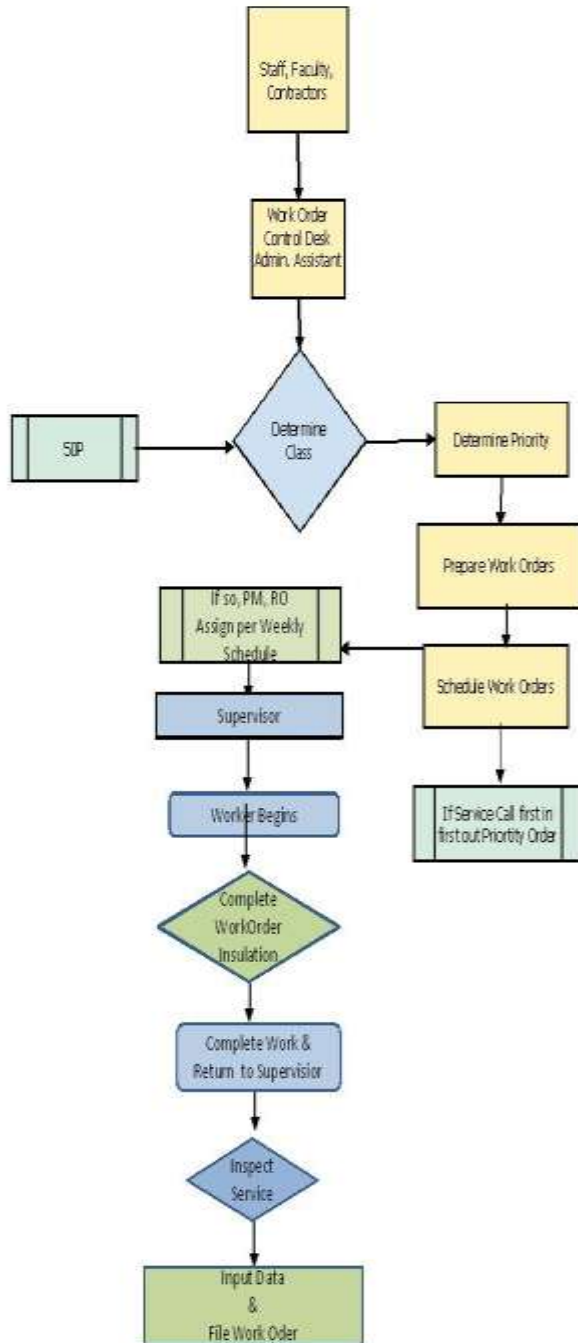
2. Work Reception – Non-Working Hours:

- a. Normally these are the hours (and day) outside of the normal occupant hours. Emergency Service calls received during this period will be responded to within (1) hour.
- b. A telephone or cell phone call to security will start procedures to call maintenance to handle operation and maintenance issues.
- c. Documentation for emergency service calls will be prepared in pyramid and complete as normal. In any case, work request will be handled the same as above.

3. Work Request Handling Procedures:

When work request are received. Administrative Assistant will follow the procedures outline below Figure 1: on the next page depicts this process graphically. Handling procedures for remote locations are the same as stated above.

Simple Flowchart



Since receiving a service call is one of the more visible connections we have with staff, faculty, students and contactors, it is important that it is handled correctly. First and foremost is that the caller must be treated as a customer. Do not consider a complaint or service call as a bother or waste of time. Treat each and every caller with respect and professionalism. Take sufficient time to understand the caller's problem. Close the transaction by assuring the caller it will be taken care as soon as possible.

Some other steps to insure good customer relation in this area are.

- Never debate or argue with the call. Have the Director call back difficult callers.
- Answer the phone with an appropriate greeting.
- Never say that's not our job to do.
- Follow up when you have said you would
- Always exhibit a "Can Do" attitude.

The physical steps to create a work document are:

a. Determine the classification: Work is classified into five categories. They are:

- (1) Service Calls (SC)- These are work requests received from staff, faculty and contractors.
- (2) Prevention Maintenance- These are work orders created on a scheduled basic.
- (3) Standing Orders- These are work orders that are created from the recurring tasks loaded into Pyramid.
- (4) Repair Order- These are work requests that go beyond the other classifications.

b. Determine the Priority: The work order clerk will decide the priority (emergency, urgent or routine) for the work request based on the guidelines below.

(1) **Emergency-** The nature of the complaint appears to present immediate danger to personnel or damage to property.

This category includes, but not limited to:

- Electrical power outages
- Electrical problem which may cause fire or shock
- Gas or oil leaks
- Air Conditioning or Heating problems
- Life safety problems, etc.

(2) **Urgent:** These are circumstance which interrupt or otherwise adversely impact Brunswick Community College operations or building occupants operations

Example of this level are, but not limited to:

- Temperature complaints
- Tripped Breakers
- Lights out over desk or work station
- Leaky faucets or flush meters
- Inoperative door closers, etc.

(3) **Routine:** These are requests that do not fall into either of the above categories. They will be responded to within 24 hours and the work completed within 48 hours. The only valid justifications are:

- Parts are not readily available in the local marketplace.
- The required part is not something we normally would stock.
- Our worker (s) were not allowed access to the area
- A weekend or holiday was involved
- A specialized subcontractor was required
- Special tools are required;

c. Creating a Work Order: Work orders must included the following information:

- Locations
- Description of the problem
- Name and number of requests
- Classification
- Priority
- Receipt time
- And response time

To create a work order follow the procedure outlines below:

- (1) At the Pyramid main menu, press **“W”** and enter highlight **Work orders and enter.**
- (2) When the sub-menu appears, highlight, **Edit Work Orders and Enter.** The work order screen will appear. Press **Enter** for the options
- (3) Select **Add and Enter.** A blank work order will appear. Enter information in space provided. The **Description** line is used to describe the problem or complaint: For example: Exit light out; toilet clogged up; door looses on its hinges; etc. If the **Description** line does not contain enough space to describe the complaint use the memo field. Give enough information so the workers know what he is looking for.
- (4) To use **Memo**, press **Enter** at the end of the end of the **Description** field. When the work order reappears, **Enter** again to bring up **Options** and select **Memo**. When the field appears, enter information as you would in Word Perfect. Then exit use **(CTRL+W)**. The work order is now ready to be printed. Must use Okdata Micro line 320 printers.
- (5) Return to **Options**, select print and **Enter** the work order will print at this time.
- (6) If working in another Pyramid module, press **“F8”** to “Hot Key” to the Service Call screen and perform the following functions:
 - a. When the pop-up window appears, enter all information required.
 - b. At the end of the **Description** field , **Enter** and the work order will print

To speed up the service call process, when you leave Pyramid to work in another program, have the service call pop-up windows (**F8**) on the screen. This way a **Service Call** can be immediately entered. This will save several steps.

- (7) After the work order is prepared the work order clerk will give the work order number to the person who called in the work request.

d. Issuing Work Orders:

Emergency and Urgent work orders will be issued immediately to the most available worker via talk 2 talk cell phone or in person, whichever is the fastest. The hard copy of all work orders are placed on the supervisor work box. They will be issued to the appropriate worker(s) according to procedures out lined in the following paragraph

e. Scheduling Work:

The supervisor will schedule all work. This includes services calls, even though they are received on as required basic. As a basic rule, they are issued to the worker(s) on a “**first in first out**” basis, according to the **priority**. However, their impact, man hours-use must be accounted for in the scheduling function. Meeting held every morning to handle any back – log work orders. An addition since emergency and urgent work orders are issued immediate and directly to the worker they are not considering in the following discussion in the method of scheduling.

- (1) The director and supervisor will set aside time each Friday to plan and schedule work for the following week.
- (2) All PM’s and Standing Operation Procedure’s work orders will be printed on Friday for following week schedule.
- (3) Be sure all outstanding WO’s that are completed have been closed out in the computer. Print out a new open work order report often this has been done. Use this report to account for all outstanding work order. This is a critical step, since you must account for WO’s and the hours required completing them.
- (4) During the meeting the following factors must be estimated and factors must be estimated and considered when scheduling for the next week.

What is the average number of hours expended on services call per week?

- How many hours are scheduled for PM and standing orders (tours/watches) in the coming week.
 - Are there any repairs outstanding that involve critical equipment?
 - How many hours will it take to performs outstanding PM’s and repairs (Booklog)?
 - Are parts and materials on-hand? If not, how long will it take to get them?
 - What tools are required for the job? Are they on-hand?
 - Can work be done during normal working hours?
 - What work can be done during normal working hours?
 - What work can be deferred (if necessary)?
- (5) Determine how many service calls, PM and tour hours will be needed in the coming week. Remember, back log work takes priority over new work, unless the new work is an emergency or urgent.
 - (6) Work orders not completed at the end of the day must be returned to supervisor for re-scheduling.
 - (7) The supervisor will review open work orders each day and reassign the work as necessary.

- (8) Now estimate the hours it will take to complete the new work. Decide if you can complete the new work with the available hours and, if not, what the short fall will be. Then, based on the priority and classification of new work, the Director and supervisor must decide if all required work can be accomplished on time or can be rescheduled to the following week. If not, then the Director and supervisor will work out a plan that will accomplish the required work on time. However, if there are sufficient hours, then the Director can proceed to schedule all the work for the coming week.
- (9) Using the information gathered so far, reschedule all outstanding work to a specific employee, for a specific day, in the order they are to be accomplished. Consider that the employee(s) who started the job must finish it and what skill level is required in each case. Continue this process until all outstanding work orders have been reassigned,
- (10) Next schedule all recurring work orders (PM, and tours) to the respective workers, in order they are to be accomplished. Be sure you have allocated enough time each day for the anticipated **Service Call** workload. Continue this process until each available worker has at least (9) hours (full-time employee) worth of work scheduled for each day they are present.
- (11) On Friday the Director will meet with the supervisor to review the schedule. Problems such as parts availability, insufficient hours, lack of tool and so on will be discussed at this time. The Director will resolve all conflicts and develop a plan of action to complete work on-time. He/She will decide what work must be deferred or sub-contracted, if hours are not available.
- (12) Employee will check with the supervisor continually during the day to adjust their schedule if needed.
- (13) Work orders not completed at the end of the day must be returned to the supervisor for re-scheduling. The Director and supervisor will decide if the work order must be accomplished before the end of the day. This may occur if an emergency is involved.
- (14) The supervisor will review open work orders each day and reassign the work as necessary. All incomplete work will be integrated into the next day's schedule in the appropriate priority.

f. Performing Work:

Workers will receive their assignments from supervisor. When completed, the work will return the document to the work order clerk. The work order clerk will retain the work order until they are reviewed and if selected, inspected by the supervisor. The worker is responsible to complete the following items before they are turned in.

1. The date and time work began (see **Figure 2** on next page).
2. A brief description of the work actually performed, adjustments made if any and other services performed.
3. The date and time work is completed.
4. Worker doing the job
5. Minutes/Hours required to complete each line item of work for each employee.

6. A description of the material/parts used, the Administrative Assistant will enter the cost.
7. If a sub-contractor used, enter name of the sub-contractor. Administrative Assistant will enter cost when the invoice is received.

g. Inspection.

The director will review each completed work order for accuracy and completeness. Director will select at least (20%) of the work orders for inspection. Once director has finished with the work orders they are turned back into the Administrative Assistant.

h. Work Order Close-Out.

After approval from the director the Administrative Assistant will close out work order as follows:

- (1) At the **Work Orders** sub menu, select **Edit Work Order**
- (2) When the **Work Order List** appears, **Enter** for options and then “E” for **Expense**.
- (3) **Enter** again for options. If no expense has been previously charged to the work order, **Add** will be highlighted. **Enter** again to bring up the **Expense Detail** screen. An entry must be made for each purchased item listed on work order.
- (4) At this point list **Enter** information requested as to materials used.
 - (a) Employee ID number. An entry must be made for each employee number showed on the completed work order.
 - (b) Type in the number of hours worked.
 - (c) In the **Stock** block type the stock number and quantity. An entry must be made for each item used.
 - (d) If parts/materials did not come from stock, enter a brief description in the “**Other**” block and type in price.
 - (e) If sub-contractors costs were incurred, make an entry in the contractor block, enter the amount the vendor has billed or will bill for this job.
 - (f) If no more expense is to be entered, press **Enter**. The prompt **Complete This Work Order? Yes/No (Y/N)** will appear with “N” highlighted. To close the work order type “Y” and **Enter**. When the new screen comes up, type in the **Response Time, Completion Date and Completion Time** and **Enter**. This will bring up the prompt **Closeout this Work Order (Y/N)** with “N” highlighted. Type “Y” and the screen will return to the **Work Order List**. Proceed with the next work order to be closed out.
- (ff) On occasion, if it is necessary to change an expense line item or add expense to a work order not previously closed out. To accomplish this do the following:
 - a) At the work order list, select the work order to be changed and . **Highlight** the expense to be changed and **Enter**. **Change** is already highlighted, so **Enter** again. Make changes and follow the procedures outlined in f) and ff) above.
 - b) To add expense, follow the procedure in a) above, except when the option appear, highlight **Add** and **Enter**. Continue with the procedures in f) and ff) above.

i. Filing Work Order.

After work orders have been closed out and inspections completed, the work order will be filed in the history file.

j. Controlling and Tracking Work Orders.

Once supervisor schedules work to be done, he must insure that:

- It is responded to and completed on time
- The worker has correctly diagnosed the repair actions needed
- The quality of work is satisfactory
- All documentation is completed promptly and accurately

Director and supervisor will use the following methods to control and track work orders

- (1) Work assignment daily , monitor the work orders on the report of Open Work Order
- (2) Monthly PM log- The monthly PM log will be maintained at the Word Order Clerk will enter the date PM- was completed and the name of the employee who performed the work.

The director will review this log daily to monitor preventive maintenance progress for the month and determine the back log.

(3) Open Service Call Report:

The Work Order Clerk will generate this report at end of each day and give to the director. The director will:

- (a) Review the report and compare it with completed work orders
- (b) Mark off the completed work orders that have not been closed out
- (c) Up-date the status on all work orders; There are four status available:
 1. Work in Progress
 2. On hold
 3. Waiting parts
 4. Complete
- (d) Determine if any of the remaining service calls are or will go pass the completion time limit. If so, find out what the delay is.
- (e) Integrate the incomplete work orders into the next day's schedule.
Hold-Over work is given priority for completion. Remember, Service calls are handled on a first-in first-out basis.
- (f) Return the report to the work order clerk to update and then give the report to the Director.

This tracking method is not limited to Service Call and is also used for repair work orders.

- (4) Open Repair Order Report – this report will be created by the work order clerk each Friday and given to the Director. The Director and supervisor will perform same steps as shown for the Open Service Call report. Afterward it is return to the work order clerk for up-dating.
- (5) Open Work Order Report – This report will be prepared by the work order clerk Every two weeks, on Friday. It will be made available to the Director. When this report is created it is not necessary to produce the Open Service Call and Open Repair Order reports, since these work orders will show on this report. The Director will take the same action as shown above
- (6) Meetings- The Director will meet with the employees daily at the beginning of each day at 7:30 am to review work orders not completed from the previous day. This time will be spent in solving any situations that have occurred or emergency that has happened.

4. Work Request Handling Procedures- Remote Site:

Work request at remote sites will be received in the same manner as those at the main site by the work order clerk. However, the handling procedures will be somewhat different.

Work Request will be handled as follows:

- a. Service Call Log: A manual log will be prepared and maintained (see figure 3). The person receiving the work request is responsible for entering all the information shown, into the log. This log will become part of the building history.
- b. Classification and Priority: This will be determined according to the process outline above.
- c. Work Order Forms: They will be set in the schedule at the next day meeting, unless an emergency or urgent. Copies of blank work order will be distributed to the remote sites. The blank work order generated will be deleted from the active list.
- d. Creating Work Orders: Personnel at the remote sites will fill in blank work orders for each work request received.
 - (1) Date and Time - Enter the date and time the request was received.
 - (2) Requestor – Enter the name and telephone number of the requestor.
 - (3) Location - State where the problem is (i.e. RM 626, basement, lobby etc.).
 - (4) Building – Enter the building acronym for the remote site

(i.e. Leland).

(5) Response Time – Enter the time the call was responded to.

(6) Type - State what type work request it is (SC, RO, etc.).

(7) Priority – Enter the priority of the request (E, U, R).

(8) Description of Work – Write a short description of the work.

For example: Sink drain clogged.

e. Performing Work: Work will be performed, inspected and completed as instructed previously.

f. Work Order Close-Out: The same procedures shown earlier on closing out work orders apply for remote sites.

g. Inspections: The supervisor will review each completed work order for accuracy and completeness. He will also select 20% of the work orders for inspection of the work. At the end of the week, all completed work orders will be turned in to the work order clerk.

h. Work Order Clerk Responsibilities: Upon receipt of the remote site work orders, the work order clerk will take the following action:

- (1) Enter them into Pyramid for a permanent record. The employee will insure all information is accurately transferred from the written work order.
- (2) All steps for generating and closing out work orders outlined earlier will be followed. It is not necessary to print the work.
- (3) Enter the computer generated work order number on the manual work order in the space provided.
- (4) Once these steps are completed, the hand written work order becomes the record copy of the work request.

C. Emergency Recall Procedures:

Brunswick Community College will have emergency recall procedures in place in order to react to emergencies with in time frame specified.

- a. Security handles all emergency except for operations and maintenance.
- b. Security will use talk to talk cell phone to inform director who will call supervisor and return to Brunswick Community College if not during normal business hours.
- c. The maintenance people on call will response to the emergency also.
- d. An emergency work order will be prepared by the work order clerk during normal hours, and next day when after hours, unless weekend or holiday.
 1. Name and telephone number of the calling party.
 2. Nature and location of the problem.
 3. Time call was received.
 4. If it is within the capability to resolve the problem take action immediately. If problem is not solved then the director will call in resources necessary to resolve emergency.
 5. Keep security and Vice President aware of problem and how it is handled.

D. Elevator Emergencies:

1. Normal Working hours.

- a. Determine how many people are trapped.
- b. Determine the location of the elevator
- c. If talking to a trapped person, reassure them that help is on the way.
- d. Make sure Director is at the site.
- e. Notify the elevator company of the emergency. Let them know if a “person trapped” situation.
- f. Prepare an emergency service call work order. The work order clerk will fill in necessary information when the elevator mechanic turns in his work ticket after the job is completed.

- g. The Director will:
 - (1) Respond to emergency.
 - (2) **NOT** attempt to remove trapped persons unless a medical emergency.
 - (3) Talked to trapped persons through the door or on the phone, is possible. Every attempt should be made to keep them calm and reassure them help will arrive soon.
 - (4) Assist elevator mechanic in removal of trapped persons, if necessary.
 - (5) Obtain work tickets from the mechanic describing the problem and the corrective action. Sign off on the work ticket and give to the work order clerk.
 - (6) Enter necessary information on the service call work order and turn into the work order clerk for close-out.

2. Non-working Hours. The following procedures apply:

a. Facilities With On-Site Security.

- (1) Brunswick Community College has on-site Security who will provide the telephone number for the elevator company.
- (2) Security officers will call the elevator company immediately. They will also obtain an estimated time of arrival for the mechanic.
- (3) Security will use the talk to talk phones to call director or maintenance person who is on call that week. Security has roster for callout mechanic.
- (4) All calls on elevator where emergency or non-emergency will be responded by maintenance.
- (5) Director will notify security, Vice President of Operations of all situations, so that they will be well informed.
- (6) An emergency work order will be prepared by the work order clerk during normal hours, and next day when after hours, unless weekend or holiday.
 - a. Name and telephone number of the calling party.
 - b. Nature and location of the problem.
 - c. Time call was received.
 - d. If it is within the capability to resolve the problem take action immediately. If problem is not solved then the director will call in resources necessary to resolve emergency.

b. Facilities Without On-site Security.

- (1) The monitoring company will be provided the telephone number for the elevator company. They also have the cell number of the Chief of Security.
- (2) The monitoring company will immediately call the elevator company in case of entrapment. They will also obtain estimated time of arrival for mechanic.
- (3) Monitoring personnel will call the on-call mechanic and the Director after calling the elevator company. They will if possible call the trapped person and inform them of what is occurring.
- (4) The mechanic on call will respond to the facility and assist with removal of trapped person.
- (5) The Director will obtain and sign a work ticket from the elevator mechanic.
- (6) The mechanic and Director will assess the situation. If the problem cannot be corrected and repairs can wait until the start of the next work day, the mechanic will secure the elevator. If repairs must be done immediately, the Director will authorize calling the elevator repairman in. He will remain on-site until repairs are completed. He will obtain the work ticket and sign. The ticket will be turned in on the next work day.
- (7) If repairs are deferred to the start of the next work day, the on-call mechanic will make sure that the elevator company is called first thing in the morning, and repairs will be performed.
- (8) The work order clerk will prepare and close out an Emergency Service Call Work order for emergency calls. An Urgent Service Call work order will be prepared for work deferred until the start of the work day.

E. Preventative Maintenance

1. Set Up

a. Inventory: The equipment inventory is an essential part of the preventive maintenance program since it provides the basic for the PM schedule. Directory and supervisor will complete physical inventory of the campus and remote sites to identify the equipment and systems that should have PM. They will assign each item of equipment requiring PM a unique equipment ID number. The ASA PM guide that relates to that particular class of equipment. As an example all air handler units are labeled with PM guide number "A-11". The secondary part is the building locations. The basic principle is that the equipment ID number for any specific item also identifies and serving items of that class, and the frequency of performance. I continue the above example the first air handler unit inventoried will be "A-11- Bldg. A-01", if more than one, A-11 Bldg. A-02, etc. The inventory team also records data such as manufacture, type, size, model number and serial number, horsepower, location special conditions, and relative use materials. This information is input in the pyramid data base and used to create a computerized equipment record for every item or systems.

b. Pyramid Data Base data records must be created for all equipment and systems on the inventory. Also data record is created anytime a specific record must be maintained to record maintenance history and/or procedure work orders as a pre-determined future date. If equipment or systems are added to or deleted from the inventory, the director will update the

data base. The following is a brief description on how to set up and maintain this data base in order that BCC can continue with this systems if key persons or not there.

(1) A record is created whether the specific equipment, systems or event is performed/maintain by personnel or under a contractor. An example is elevators where the PM schedule is provided by the elevator company, loaded in the data base, PM work order is created, even though the actual work is performed by others. This allows the director the ability to track PM work orders for each unit when the maintenance is due. It also provides a mean to record corrective maintenance and service calls.

(2) Use the alpha code designation discussed in equipment inventory set up. For example, is a new air handler is added; check the data base for the number of the last A-11. The new equipment will be assigned the next number.

(3) Examples of specific equipment are boilers, chillers, air handlers, split unit, and pump and so on. A single data record is created for each price. This allows a separate work order to be created also to change off repair expense to this unit.

(4) Lighting fixtures, fire extinguisher, fire detection devices are examples of systems. This class does not require a data record for each piece of equipment within the systems. However records must be maintained for the systems as a whole. An addition the specific location of each piece of equipment within the system must be listed in the memo field of the data record. The memo field is within the equipment data menu, director will add this part of the data.

(5) Boiler/elevator inspections, reminders to schedule contractors support such as electrical listing and elevator inspection, it is particularly important that the events be recorded and against the particular piece of equipment.

c. Pyramid PM schedule: Determining the next "PM" date to be inserted in that field of the record is a crucial step in maintaining PM schedule. Concurrent with this determination is the requirement to balance PM workload is over the 52 cycles of the year. Since the director may need to re-balance the PM schedule, director must understand how the initial schedule was set up. The following steps are taken:

(1) First create a schedule that cross reference the cycle member with the calendar work week. This is done in Pyramid using the **PM Cycle Dates** option of the equipment module. You can view or print this schedule for the current year or future years. Cycle of the Pyramid year represents the first full week of January. Therefore cycle of 2008 is from 1/7 to 1/11, cycle 2 is from 1/14 to 1/18.

(2) Do weekly first, any date that falls within the range of that cycle is typed into the next PM Field of the equipment data entry record. **F5** is used to auto-fill the rest of the schedule for the year. Next, schedule all monthly PMs so that they occur in the first two weeks of the calendar month. Again auto-fill is used to fill in the rest of the year. The last two or three cycles of each month are served for quarterly semi-annual and annual PM's. Attempt to balance out the man hour allocation equally between the two weeks. It is not necessary to balance this exactly at this point.

(3) Quarterly PMs are schedule with the understanding that the first event must occur within the first three months of the equipment set-up. Again when the initial date is selected, try to balance these out equally over the cycles within the first quarter and within the last two or three cycle of each month for each quarter. The simplest method is, one at a time, in the order of the equipment listing, input the event in third and fourth cycle (remember monthly

PMs were placed in the first and second cycle of each month) of each month. An example, if the third week, of this month, of your fiscal year is PM cycle number 32, the first quarterly PM on the equipment list goes there. The next quarterly shown on the list goes to cycle 33 and so on. If the calendar month has five cycles the next quarterly is put into it. If not, we jump to the third cycle of the next calendar month. This process continues through the entire year and, if needed, starts over again until all quarterly PMs are scheduled.

(4) An in the case of semi-annual and annual PM's we first insert dates on equipment that have definitive seasonal considerations. These are boilers, chillers and so on. On the remainder of the equipment in this group the process becomes complicated die to the following consideration:

(a) PM on equipment that share common locations and/or have component/sub component relations (M-3, motor that are a part of a P-4 pump, for example) must have the same scheduled date. This will consolidate travel time.

(b) PM actions that are less than annual, that is two year, three year are scheduled as there operation guide requires. For this class of equipment, the **Interval** field (number of weeks) is used instead of **Frequency** in the data record, new equipment only. In certain situation you may have to maintain the schedule already is place. If this is the case, that date is inserted in the "**Next PM**" field.

(5) After accounting for the factors noted above, the semi-annual and annual PMs are used to balance out the man hour's allocation over the entire 52 cycles. To do this, review your **Total Chart** and find the cycles that have the lowest number of hours as compared to the overall average. Start scheduling the PMs into these cycles by inserting the appropriate date in the **Next Scheduled Date** field of that respective item. Continue this process until all PMs have been scheduled.

(6) After you have done as much balancing as possible using the graphics a printed listing is used for the final review. This is created from the **EUIPMENT** sub-menu by selecting **List PM Man Hours** report. The graph and chart quickly show the balance of the schedule and reveal major areas for review. However, the **List PM Man Hours** report is the actual tool used to make final adjustments to the scheduled date in order to balance the entire year. This report has several options on the output format, depending on how many buildings are listed in the Building field. In addition, the entire year or a selected quarter can be printed. Selected quarters can be used if an imbalance of man hours exists between the cycles and within the quarter and not between the quarters themselves. The balancing process is as follows:

(a) Print out the **List PM Man Hours** report. Leave the equipment listing page attached. Separate the Cycle list from the Equipment lists. Align the line numbers from each listing and tape together.

(b) Using the report, start with the cycles that show the highest and lowest man hours. Using a pencil start moving the **PM** occurrences from the high cycle to the low. Change the **Next Due** column on the report to one that coincides with the cycle you have moved it to.

(c) Input the corrections into the respective data records. View the graph or chart for the end result. If the man hours assigned to each cycle are within 10% of each other then the process is complete. If not, continue working with the print out until the graph shows this balance.

(7) After the equipment listing page attached, **PM** cycle report. This report shows the cycle each data record is scheduled to occur in using a check mark. It is not intended to be used as the tool for balancing the **PM** workload. You need the calendar cross reference to read the schedule.

(8) Some additional items to consider when working with the PM's schedule:

(a) Always use .01 in the standard man hour's field if the service is performed by a contractor. If you don't then your schedule will not balance. Some of the work that will be contracted out includes.

1. Elevator inspections, service and maintenance
2. Fire systems and fire extinguisher service and maintenance
Monthly inspection is done by maintenance, employees have been trained to check the equipment.
3. Household pest control application (outside done in house)
4. Septic tank pumps and hauls
5. Chillers, boilers and air handler maintenance and repair (condenser coils done in-house).
6. Water testing analysis (sample collecting in-house)
7. Quarterly and bi-annual floor maintenance (i.e. stripping, carpet Shampoo)

(b) Always try to consolidate the number of data records file. The more records the more cumbersome the file is to handle and balance.

(c) When determining whether to consolidate or separate equipment considers what type output is desired and whether the **PM** action can actually be done within a week or two.

(d) When the location of equipment or groups of equipment is in question place a note in the **Memo** field to have the mechanic gather the information during the first PM action. Then, when the PM work order is closed, the location can be input into the **Equipment** record.

(e) Be sure to keep the format of the equipment number and location consistent throughout the entire record. This includes spaces and using capitals. In the number field, be sure to use a (/) when identifying equipment groups with multiple quantities. The range of the number would indicate the quantity of the group.

(f) If a piece or group of equipment requires a guide number that is not part of the standard list, create one. If one is created, a guide card must be generated.

d. Special Considerations: A preceding paragraphs we have discussed setting up the preventive maintenance program and schedule from the equipment inventory. However, a number of other factors figure into the schedule before it is finished. They are:

(1) Inspections certification: This is a situation used to schedule periodic work that are not part of preventive maintenance and/or need a reminder record created in Pyramid in order to schedule a contractor in advance of the occupancy. Included in this would be:

(a) Elevator inspections and tests- This includes semi-annual or annual inspections and 5 year load test.

(b) Boiler Inspection- Boilers are required to be inspected and certified annually. Also be sure to schedule this event to occur in conjunction with the annual **PM**.

(c) Unfired Pressure Vessel CUPV Certifications- A piece of equipment is included in this category if it is a pressure vessel designed to operate at a pressure over 60 PSI and have a capacity in excess of 15 gallon. It can include hot water heater, boilers, air compressors, holding tanks, expansion tanks, and so on. Inspection and certification is an annual requirement. Normally, the same company doing the boiler will perform this service.

(d) Electrical switch year testing-This task is performed at varying times depending on the requirement of the PM guide cards. It included main switch year, bass ducts, transfer switches, motor starters, and motor control center and so on. The list is to be performed by a electricians accredited by the North Carolina State Electric Examiners Board and National Testing Association (NETA).

(e) Fire alarm/suppression systems inspection/certification- If an outside company used for all or any part of this service both a data record and a reminder record need to be created.

(f) Security system inspection or certification (if required). Refer to (e) above for this equipment.

Reminders are put into the system and used to create a work order 30 to 60 days before the scheduled PM's or inspection/certification went. For example, elevator inspection, switchgear testing and boiler inspections are normally scheduled with the sub-contractor 60 days before the actual inspections to insure the sub-contractor will be available. Once the work has been scheduled, close out the reminder work order in the same fashion as discussed in Paragraph **B** above.

Reminder records are created in the same way as a **PM** record, with a few exceptions. To create the reminder select the **PM** category the reminder is for. Assume the reminder is for high voltage transformer testing. Select **E-33 as the PM** guide number. In the model number block enter "**inspection reminder**", "**annual Inspection**" or some appropriate wording to describe what the reminder is. Enter the number of units to be inspected on the quantity line. Fill in the rest of the record as if it was a PM record. In the **Next PM** block enter a date approximately 60 days before the **PM** date. In the **STD MH** block enter .01. Press **F-5** to auto-fill the schedule week. The **MEMO** is used to show the name and telephone number of the sub-contractor who will perform the work. It will also be used to show any other electrical equipment that is to be inspected at the same time. In this manner, one reminder will serve as a reminder for all the electrical equipment that is due to be inspected on the next scheduled **PM**.

The example above can be used to create reminder record for any inspection or certification required. When the reminder work order is created, the Director will contact the sub-contractor. The Director and sub-contractor will agree on a date for the inspection.

(2) Sub-Component Loading:

This process takes into consideration the scheduling of sub-components of a system at the same time as the main unit. For example, all sub-components of an air handler (i.e. V-5 valve, V-6 valve, Motor Operated, F-32 filters, throw away, M-3 motor; F-27 fan centrifuge, etc.) located in the same room would be scheduled for PM at the same time as the air handler. This will save travel time in that a mechanic won't have to keep going back to the same room to do different PM's at a different time. Grouping of equipment by using the **LOCATION** field is the best way to accomplish this.

(a) Identify all components associated with the air handler by inventory number. Decide on the PM cycle for the group.

(b) Create a unique group name. For example the second floor east may be named **2FLE** or **LL2E**. The first example is simply an abbreviation for 2nd Floor East. The second example identifies the building (Leland) along with floor and area. It really doesn't matter so long as the format (spacing, capitals, and so on) are the same.

(c) Select the equipment records for each sub-component and the main unit from the equipment list in Pyramid. Go to **Location** block of each one and enter the group done.

(d) For each record enter the **Next PM** date you decide on the step (a). Continue this procedure until the equipment record for each item (sub-components) of the major unit (the air handler) has been changed. **REMINDER: This procedure may require the PM cycle is changed for some equipment. Use F5 to auto fill the new cycle.** Work orders for all equipment in the group will now list out together on the report (if selected by **LOCATION**) an PM work orders will be created at the same time.

(e) Once the above steps are completed, review the PM graph to determine if the grouping has caused high or low spikes. Should this occur, re-balance the PM schedule using the procedures discusses above.

(f) Continue this grouping with all equipment that should be grouped together such as chillers with associated pumps, boilers with associated pumps, etc.

(3) Seasonal Consideration - When preparing the PM schedule certain seasonal consideration must be takes into account. For example, chiller and boiler PM's both take a lot of man hours. The PM schedule has to accommodate this to insure a proper balance between testing and certification. Since most of this work is done under contracts it does not change the PM schedule

(4) Sub-contractors Schedules - With a work driven system, it is important that contractors be loaded into the system. This provides the Director with a method of tracking what the contractors is supposed to be doing. By requiring the contractor to sign off on the work orders, the Director can be reasonably assured the work has been completed. Elevator and HVAC contractors are examples. Both have certain items to be completed at certain times; elevator mechanic must perform monthly, quarterly annual and semi-annual checks; HVAC mechanic has the same schedule.

(5) **Service Calls During Seasonal Changeover** – Many maintenance planners fail to take into consideration the service call volume during seasonal changeover. When the season are changing a large number of temperature complaints are common. If this situation is not accounted for in the schedule it is easy for the **PM** to be neglected. When setting up the **PM** schedule, consider temperature complaint history to determine the time frame and man hours related to these complaints. Take this into account and schedule a lighter **PM** load during high complaint periods. Typically, these periods are April/May and September/October.

(6) **Testing and Certification** – Since most of this type of work is done under a contractor it does not effect the **PM** schedule.

2. Weekly/Monthly Procedures

a. **Creating work orders.** Work orders for the **PM** program are generated weekly, printed on Friday proceeding the week they are scheduling to be completed. For example, **PM** work orders for the week of August 7, 2007 (cycle 32) would be printed on Friday, August 6. The following steps are necessary to create **PM** work orders:

- (1) At the Pyramid main menu, **select the Equipment** module and **Enter**. **Next, select Create Work Orders** and **Enter**.
- (2) Choose the option desired; work orders for all building or selected building and **Enter**. This option allows where more than one building exists to selectively create work orders for individual buildings.
- (3) Next, select the number of **Cycles** and **Enter**. Up to three cycles can be chosen. To reduce the amount of work orders “just lying around” it is recommended that not more than one cycle at a time be created. **PM** work orders scheduled for the selected cycles will generate at this time. A listing of the work orders being generated will display on the monitor. When all work orders have been generated, a prompt will appear on the screen stating how many orders have been generated. Another prompt, **Press any key to continue** will appear. **Enter** and the sub-menu will re-appear.
- (4) When the **Equipment** sub-menu re-appears press **Escape** and return to main menu. Select **Work Orders** and **Enter**. When the **Work Orders** sub-menu appears, highlight **Print Work Orders** and **Enter**. All work orders that have been generated will print at this time.
- (5) **PM** work orders are closed out in accordance with procedures discussed in paragraph B, work control.

(b) **Monitoring Progress.** If these tools are used properly, the Director will always know the status of his program. The director has three tools that can be used to monitor the progress of **PM** programs. These tools are:

(1) **Weekly PM Schedule-** This report is the primary tool used by the supervisor and director to monitor and control the **PM** schedule. This report is created from Pyramid the following procedures:

(a) Select **Equipment** and **Enter**.

(b) **Highlight List Weekly PM's** and **Enter**. This schedule

will generate and print at this time. This step will be taken before the work orders are printed each week.

(c) This log is maintained by supervisor and director. The supervisor will use this log to track the **PM** work orders and to plan out his materials needed for the following week. As completed work orders are turned in, the date work was completed and who did the work is entered on the director log.

(d) At the end of the work day the director reviews the log. After reviewing the log, the director will compare the work completed to the work schedule for the week. Director will meet with the supervisor to determine why work schedule is re-prioritized to include the incomplete PM work. If any **PM** must be deferred to later in the month or into the next month, the Director will take the action discussed in **Paragraph d** below.

(2) Monthly PM Schedule- This schedule is created the same way as the weekly schedule except **Print Monthly PM's** is selected. This log is also maintained at the work order clerk's desk in the same fashion as the weekly schedule. When the month is closed out this log is updated, reviewed by the Director, and used as the monthly PM progress report.

(3) Open work order report- This report is obtained from the work orders module. With this report the director can monitor what PM work orders have not been closed out. It is created each Friday afternoon for the scheduling meeting. This report will be generated using procedures discussed in paragraph B. 3.J below. The status of PM work orders should match the information shown on the weekly PM scheduled.

c. Deferment/Rescheduling. Scheduling work may be deferred for several reasons. These include, but are not limited to:

(1) At the direction of the Vice President, when performance could interfere with or disrupt classes or certain activities. The Director strives to lessen interference or disruption by scheduling and performing this type of work during other than normal occupant hours. However, when this will not serve to avoid the problem, and when so directed, the work will be rescheduled.

(2) If materials, needed to complete the work is not immediately available, the work may be deferred temporary. It will be completed as soon as the necessary materials become available. Unless a long lead time is involved the work will not be rescheduled; roll over the work order will stay open until materials are available. Then the work will be completed as a priority.

(3) Sufficient personnel are not available to perform the work. This will occur with unexpected absences, unexpected breakdowns, higher than normal service calls etc. In this case, the uncompleted work will be re-prioritized into the next day's schedule.

(4) Unreasonable hot or cold weather can affect seasonal work on boilers and chillers. This will cause a shuffling of the work schedule to accommodate these items.

(5) Repairs discovered necessary while performing a PM. In these case the work order will remain open until work is completed.

Any Pm work that be deferred beyond the end of the current week will be rescheduled for the following week. The deferred Pm will be integrated into the next week's schedule and will receive priority. All other work will be re-prioritized to accommodate this. When a deferred PM

is completed, the **NEXT PM date** in the computer record will **not** be adjusted to reflect the actual date of performance; to do so would eventually lead to an imbalance in the PM workload.

F. Other Recurring Operations:

1. Tours- The purpose of the tours is to inspect and adjust operating equipment and/or record gauge readings from equipment that is in operation. This includes air handles, chillers, boilers under 15 PSI, pumps, electrical switchgear and water treatment equipment..
2. Watches- A watch is an activity where in certain tasks are performed in connection with operating high pressure boilers (15 PSI and higher), air conditioning compressors and related equipment in a centralized location. Also this includes equipment that is not running efficiently.

G. Repairs: In an emergency the director is allowed to make repairs when it will affect the staff, faculty and students.

1. When considering a repair the director must decide whether the work is to be by employers or by a contractor. The director will use contractors to perform work in this category if, in the director opinion does not have the resources required to do this repair:
 2. The director must solicit (3) bids, in writing, from qualified contractors (unless it is an emergency).
 3. Obtain a current Certificate of Insurance (CEOI) from the contractor if one is not on file.
 4. Obtain firm start and completion dates from contractor.
 5. When considering a repair, the Director must decide whether the work is to be done by personnel or by a contractor. The Director is authorized to use contractors to perform work in this category if, in his opinion, he does not have the resources required to complete the job on-time and correctly.
 6. All bidders must be furnished with the same scope of work. Be sure the scope of work is specific and itemized. It is extremely important that the scope of work be detailed enough to ensure we will receive the end result expected. **DO NOT ENTER INTO UNSPECIFIED CONTRACTS WITH CONTRACTORS.**
 7. Work orders for this type of work are generated in the same manner as those discussed in paragraph B above. However work orders in this category will classified as an RO (repair order).

H. Special Situation:

1. **Hazardous Material Handling-** This includes asbestos, chemicals and other Similar items. To handle any of these materials is to use a contractor specifically licensed, trained and experienced to do these type of work. The director will require a definitive scope of work to be developed along with proof of training, licenses and insurance.

I. Reports:

1. **Service Calls**

a. **Monthly Log:** Will contain service calls of all status, open, waiting parts, and completed. The report will include service calls for the enter month. To generate this report, use the following procedures:

(1) At the Pyramid main menu, select **Work Orders and Enter**. Select **Monthly work order report and enter**.

(2) A list of the past six months will appear. Select the month report is to be prepared for and center.

(3) When the option box appears, toggle off all types except **SC** (this procedure was discussed earlier in this plan) listed in the first column. **Make no changes in either of the other two columns.**

(4) After toggling off the last of the other type of work orders, presenter again.

(5) A prompt will appear with two options:

(a) Report work orders – If the line items are not needed on the report, select this options and **Enter**. When the **Screen/Printer** option appears, select **Printer** and the report will be generated on the printer. The screen will automatically return to the sub-menu.

(b) Include line items – If the line items are to be included, select this option and **Enter**. Again, the **Screen/Printer** option will appear, select **Printer**. The report will print with the line items for each work order.

b. Open Service Call Report: To prepare the **Work Order Clerk**.

(1) Select the **Work Order** module in **Pyramid** and **Enter**. Next, select **Work Order Report and Enter**.

(2) When the report box appears omit or “toggle” off the type of work orders not required for the report. For example, to generate the **Open Service Call** report mentioned above, the work order clerk would toggle off all symbols except “**SC**”. This is done by typing these symbols in the **Enter Option to Omit** box. Lock the keyboard in **CAP LOCK** and type the symbols in the box individually. **Enter** again.

(3) The screen will go to a prompt that says **Report Work Orders and Include Line Items**. For this report, highlight **Report Work Order and Enter**. (Line items are the term used when expenses are charged against the work order. For the purpose of this report this information is not needed.) At this point a prompt will appear asking **Screen or Printer**, select print and **Enter**.

This same method can be used to generate a report for just Repair Orders, **PM’s** or any of the other type of work orders. Also, the **Status Field** can be selected as a basis for sort

2. Preventive Maintenance:

Pyramid can also provide the Pm work order status report. Use the same procedures as discussed above, but toggle the appropriate switches. This report is used for weekly and monthly progress reports on PM’s. Regardless of the frequency, Pyramid has the capability to produce both of these reports However, the information for both reports must be entered by hand from the **PM** work orders as they are closed out.

3. Work Order Report:

The procedure for producing this series of report is the same as above. Select the type and status and follow the same steps.

K. Records

1. Facility History: The **Facility History files** will contain the maintenance history of the campus. These files will be kept in a separate, unlocked file cabinet so personnel can review them at any time. The files will be prepared as all files are prepared; pendaflex hanging files with a manila folder inside for work orders and other documents, plastic file tabs identifying each different section, file labels on the individual folders, etc. Additional instructions are noted below.

a. **Building Equipment:** This is the history file for all items listed on the equipment inventory. It is broken down by the alpha-numeric designation group, not by individual piece of equipment. For example, A-11 Air Handler Unit (Under 5000), A-11 Air Handler Unit (5000-15000), A-7 Air Condition (Computer) <10T, A-7 Air Condition (Computer) 10T, etc. File folders are prepared for each group. This means that work orders pertaining to each group will be filed in one folder. For example, if 15 air handlers are less than 5000 CFM, they are all part of the group labeled A-11 Air Handler Unit (Under 5000) and so on for each different group. These files will contain both **PM** and **RO** type work orders pertaining to each classification of equipment. These work orders will be filed in reverse chronological order clipped together by month.

b. **A & S/Systems:** All **RO's** (repair orders) related to non-building equipment items go into this category. This file will be broken down by sub-categories as follows:

- (1) Windows repair or replacement.
- (2) Carpet repair or replacement.
- (3) Plumbing repairs. This will include repairs/replacement of faucets, toilet, urinals, wash basins, etc.
- (4) Door repairs and/or replacement.
- (5) Lawn sprinkler repair and replacement.
- (6) Concrete repairs or replacement.

As with the files, above a different file folder is set up for each sub-category. Work orders are filed in reuse chronological order and clipped together by month, if the content of the files warrants it.

c. **Service Calls:** Because of the sheer volume of work orders in this category, it will also be broken down into sub-categories. These sub-categories include:

- (1) Pest Control complaints and call back.
- (2) Restroom complaints
- (3) Temperature complaints
- (4) Cleaning complaints

Set up a separate file folder for each sub-category and file the work orders in the same as a and b above.

2. Certification/Testing: Below is a listing of equipment that typically requires certification and/or testing. Certifications and test results for this equipment will be filed under this heading. A separate file folder will be set up for each different type of equipment.

(a) **Elevator:** All elevator inspection reports from contractor and other sources will be regardless of source will be maintained in this file.

(b) **Boiler:** Boilers are required to be inspected annually. This file will contain inspection reports and certifications for boilers regardless of the source.

(c) **Unfired pressure vessel (UPV):** This file will contain inspection reports and/or certifications for **UPV'S**.

(d) Electrical Switchgear: One copy of the testing and certification report will be maintained in this file.

(e) Fire Detection/Suppression: Inspection report and/or certification for fire detection/suppression equipment are maintained in this file.

(f) Back flow prevention devices: This file contains a copy of the certification for for these devices.

3. Operating Logs: This file will contain the operating logs for boilers, chillers, air compressor , emergency generators, etc. The logs will be separated by log and filed in reverse chronological order with each month clipped together. Each different log will be placed in its own file folder.

4. Tours/Watches: This file will contain the file copies of all tour assignment sheets and watch assignment sheets. Also included in this file is the Master Tour Log. The Master Tour Log will be filed in reverse chronological order clipped together by month.

5. Energy Management Records:

a. Meter Readings: The file will contain any and all meter reading to include gas, electric and water.

b. Utility Rate Schedules: The latest rate schedules from local utilities will be maintained in this file.

c. Energy Audit Reports: A copy of the energy audit for the campus, if any, will be maintained in this file. The file will contain all copies of all correspondence pertaining to the energy audit.

6. Sign In/Sign Out for Contractor: This is for contractor on PM's, RO's and SC's, to know when on site and where. This also included for hours on billing. They will be maintained in a file in reverse chronological order and clipped together by month. However, each separate group of logs will be labeled with the group they are used for, i.e. HVAC, locksmith, plumbers, etc.

7. Key Control Records: Staff and faculty (new) will sign for keys they receive, the Director of the person asking for a key will sign for room key, and Vice President will sign off on this form also. Building Master will be signed off by the President. Grand Master will be held only by President, Vice President's , security, Director of Maintenance and maintenance supervisor. A record will be sent to employee service to put in their employee file. This will be used at their exit out. The last paycheck will be held until key or keys are turned into employee service.

8. Warranty Records: All available warranty records will be kept maintained in this file. This will include warranties for both equipment and architectural/structural repairs or replacements.

9. Occupant Emergency Plan: This is for special needs staff, students and faculty, Incase emergency (sickness, fire, Hurricane etc.) and they need to be taken from the building, especially for any building with a second floor. We work with security in this area, they are the lead.

10. Special Areas:

a. Quality Control Files: Are work orders that have been inspected by using the Quality Control Checklist. For example, Quality Control Checklist for Urgent Service Calls is

QC-03 this is inspected weekly. You have eight areas to inspect each areas has point all point correct are 100 anything below 95 fails. A work order is given to the employee or employees to re-do. This continues to the work is correct. This is used when doing evaluations also.

b. Asbestos: All reports, test results, initial and clearance sample test results will be maintained in this file. Also included in this file will be a copy of all correspondence pertaining to asbestos operations.

On Mondays, each custodian is given a worksheet called General Cleaning Procedures, this form shows a schedule for that week, Monday thru Friday that they have to accomplish. With different weekly cleaning assignments. The sheets are turned in on Monday and dated, a new sheet is given. The Director will do Quality Control on the work turned in. If the work has not been completed or did not pass, a work order is given to the custodian with there employee number so that you can track to see if more training is needed.

L. Custodial Procedures:

1. Empty wastebaskets in all classrooms, offices, restrooms and outside entrances. Monday thru Friday.
2. Sweep and mop all halls and all areas where tile is on floor. Monday thru Friday.
3. Clean commodes, urinals, mirror, add paper products and air freshener as needed. Install paper products in dispenser; do not lie on top of anything. Monday thru Friday. Policing Restrooms, the number one mission of restroom cleaning is to make sure that each restroom has enough paper for the rest of the day.
4. Disinfect and mop bathroom floors. Monday, Wednesday and Friday.
5. Mop classrooms and halls that have tile. Tuesday and Friday.
6. Clean water fountain with stainless steel cleaner on Monday and as needed.
7. Clean glass in offices once a week on Friday.
8. Clean entrance doors on Monday thru Friday, first thing in morning and before you leave for the day.
9. Clean chalkboard and white boards as needed.
10. Clean entrance mats three times a week.
11. Pickup butts, paper, etc from entrance Monday thru Friday.
12. Clean smoke stands three times a week.
13. Vacuum carpet as needed, but at least once a week and elevators.
14. Check weekly for spider webs and remove.
15. Dust windowsills once a week and Venetian blinds once a month.
16. Polish stainless steel at least weekly (include all bathrooms, all inside doors, water cooler).
17. Nearly every person that enters a building uses elevators at least twice daily. Extra attention is needed to keep elevators looking clean.
 - A. Elevator key is needed to lock off elevator.
 - B. You will need dust cloth and dust wand, metal polish, degreaser, vacuum and 4 clean rags.
 1. Dust and spot clean exterior doors.
 2. Dust: Work high to low and clean all side panels and inside of the elevator doors.

3. Clean stainless steel walls and doors. Make sure that the metal surfaces are uniform (they all look the same) and shiny.
 4. Vacuum elevator carpet or sweep and damp mop if a hard floor.
 5. Clean elevator tracks.
18. Carpets spotting, first, try to indentify the spot. Using clean white rag blot up as much of the stain as you can. Start at the outside of the stain and work your way in. This prevents the stain from spreading. Using the red spray bottle (environmental sage orange extract) to the stained area. Let is sit for ten to fifteen minutes to loosen the stain. The longer the chemical sits the more effective it will be. Add hot water to the area with spray bottle. The water must be hot! The hot water causes the pores of the carpet fibers to open up and release the stain. Continue with the procedure above until stain has been removed.
- A. Note: Biological stains- it is more important than ever that procedures are following when cleaning up potentially hazardous biological spills (like vomit or blood). When the worker is called to the scene of a bio-hazardous spill, the custodian will notify the Director and Supervisor, and make them aware of the situation. The director or supervisor will come observe the clean-up to make sure that all required safety actions are taken.
 1. The worker will immediately put on surgical gloves.
 2. A Blood born Pathogen kit will be used; each custodian has a kit in there supply area. Training has been given to each custodian in how to use this kit. Each custodian and any new hire will be required to have the Hepatitis B shots.
 3. If carpet the area will be cleaned after the spill is removed and disinfectant will be applied.
19. Make sure that at the end of day that route sheet were filled out and any special cleaning is noted on the sheet. All route sheets will be turned in on Monday and a new sheet is given to the custodian for the following week.
20. Periodic Work, Periodic Specialists are schedule differently than the regular cleaners. The Director decides how each task is to be accomplished. So or Service Orders are to be filled out as work orders so that a history file can be set (for example, window washing outside, cleaning carpet).
21. Problem Reporting, the custodian is to report all problem found during the day on form 132, reporting problems is a part of the daily work assignment. Examples of problem include burned out lights, lead under sinks, or area where tile or carpet is coming up. A work order is issued from the form 132 and assigned to maintenance to repair.
22. In addition to her normal daily inspection and walk-around the Director does a weekly custodian inspection and reports this on form 131. She will discuss what she has found to the custodian and do retraining if necessary.
23. Stocking of janitor closet are called in on Friday and personnel shipping and receive ring will deliver supplies to custodian. A record is kept of what they are ordering; this helps in re-ordering and keeping a watch on misuse of products.
24. All custodians will wear the uniforms that are issued to them.

MAKE SURE THAT ALL LIGHTS AND DOORS ARE LOCKED WHEN YOU LEAVE THAT AREA IF APPLICABLE.

During quarter breaks all tile floors will be stripped and waxed, carpets are to be shampooed and cleaned. This work is done periodic. Under (SO) work orders.

ALL WORK BELOW IS COVERED UNDER PYRAMID STANDING ORDERS (SO).

M. Grounds/Buildings:

All grounds maintenance staff under the direction of the Physical Plant Director and lead ground person perform a variety of grounds maintenance duties.

1. Two employees have their license in pest control, Public Pesticide Operations Federal and State, Grounds L.
 - a) Spray shrubs and trees for insects and disease, two times yearly in May and September.
 - b) Spray plant beds with soil fungicide this is done in March.
 - c) Spray plant beds with pre-emergent herbicide twice a year in March and August.
 - d) Spray grass areas for weed control this is done yearly in June.
 - e) Spray grass areas for wild onions control this is done twice a year in April and November.
 - f) Spray selected areas for insects, disease and unwanted vegetation this is done as needed.
2. Mowing is done from April to October. It takes three days to mow the main campus.
 - a) Mow and Trim Hybrid Bermuda grass areas.
 - b) Mow and trim common Bermuda grass areas.
 - c) Mow and trim over seeded rye grass areas.
 - d) Mow and trim centipede grass areas.
3. Edge sidewalks and curbs, this is done monthly from April to October.
4. Mulching is done twice a year.
 - a) Trees are done in April and October.
 - b) Plants are done in May and December.
5. Replace summer and fall flowers, this is around the entrances to the college and all building. Large flower containers are also refurbished for all buildings.
6. Dead Tree Removal if the trunk is less than 2 to 4 inches we remove if larger a specialist removes the trees.
7. Weed eat campus this includes all lamp post, trees, beds, signs, fences, etc.
8. Pick up litter and empty outside trash containers is done weekly and as needed. We also pay special needs students to help with this function.
9. Fertilize grass areas, trees and plant beds.
 - a) Fertilize grass areas three times a year in May, August and October.
 - b) Fertilize trees yearly in October.
 - c) Fertilize flower beds when in bloom every four weeks and yearly in October.

10. Aerate verticut and over seed hybrid grasses.
 - a) Aerate twice a year in April and November.
 - b) Verticut once a year in November.
 - c) Over seed yearly in November.
11. Repair lawns areas, plant beds, roads, parking lots, fencing, etc, This is done on a as needed (roads are pot holes).
12. Pruning Trees and trimming shrubs.
 - a) Trees are pruned once a year in February.
 - b) Shrubs are trimmed three times a year in March, July and October.
 - c) Winter Creeper is trimmed twice a year in May and October.
 - d) Trim all other plants once twice a year in January and July.
13. Maintain one water garden and one fountain, the Batten Garden has a water fountain that is shut down in October and serviced and restarted in April. The Victory Garden runs all year long and must be checked each week for water levels, algae, keep plant materials under control, clean out debris such as pine cones and needles.
14. Service Grounds equipment, before the start of each day, check equipment that is being used to make sure there is gas, no oil leaks belts loose or tire need air.
15. Help with events set-up, this is usually done in the student center which seats 150 people or the larger classrooms and conference rooms. The events coordinator schedules the events and then calls the AA to do a work order on the day needed with how they want the room set-up and what other equipment they will need.
16. Moving desk, furniture, and other office appliances from one location to another, usually takes the maintenance crew and grounds personnel. The move is scheduled so that faculty, staff and students are least disturbed.
17. Marquee sign is on Highway 17, scheduled events at the campus and Odell Williamson Auditorium are displayed. A work order is given and the letters and numbers are pulled and installed on the marquee.
18. Sprinkler system is in three different sections of the campus; repairs include changing out heads, replacing water lines, repairing pumps, etc.
19. All staff except custodians cleans the shop on Friday this is accomplished one hour before everyone leaves. This includes sweeping and moping over 4,000 square feet of flooring, three bathrooms, kitchen and 3 large office areas.
20. Grounds personnel will be used in paint jobs, when the window of opportunity is small.
21. Director or supervisor on new hires will do safety training, on all grounds equipment that will be utilized by that employee.
22. To perform any other duty assigned by either the director or the maintenance supervisor.

N. Mechanic/Recycling:

1. Recycling 14 buildings twice a week will take two days to accomplish. There are six containers for paper, plastic, etc, and 1 large container for cardboard boxes. The boxes must be broken down to fit in the dumpster. The recycling center picks up twice a week.

2. Inspect all fleet, maintenance and operations vehicle (14 total vehicles).
 - a. Fleet vehicles are different in that the AA must call Raleigh to get an authorization number to do the oil changes, etc. Maintenance then bills fleet for the oil, filter and labor; all documents must be included to receive payment. All other work must be called in and we are informed on what must be done.
 1. Daily
Interior cleanliness check
Exterior spot check
 2. Weekly
Under-hood visual inspection
Fluids, air/tires inspection
Exterior body check
Exterior mechanical inspection
Instrument and interior fixture check
Upholstery and interior fixture check
 3. Monthly
Test Drive
 4. Quarterly
Oil and filter change (authorization needed)
Chassis lubrication (authorization needed)
 5. Bi-Annually
Rotate tires (or every 6,000 miles authorization needed)
Check air conditioner
 6. Yearly
Annual Safety Inspection (authorization needed)
Winterize cooling system, check battery (authorization needed)
 7. Bi-Yearly Or Every 30,000 miles
Full tune-up (plugs, wires, PVC, and ERG valves, timing, air filter, fuel filter, fuel system check (authorization needed)
40-50,000 miles Service/replace brakes (authorization needed)
50-60,000 miles Full transmission service, replace shocks and struts (authorization needed).

Use routine check list for example, head lights, parking lights, tail lights, horn, windshield wipers, tires, brakes, directional signal, fuel vehicle, check all fluid levels and safety inspection. Include on work order assigned.

- b. Maintenance/operation vehicles same as above also use the work order in Pyramid and the checklist for routine service (example head lights, parking lights, tail lights, horn, windshield wipers, directional signals, wash vehicle, fuel vehicle, safety vehicle).
3. Grounds equipment that is not being utilized will be serviced and stored until needed. Mowers will be checked each day for problems and possible problems. Belts, pulleys and blades will be kept in stock. Fuel will be stored in five gallon containers fire proof cabinets.

4. Furniture that needs minor repairs (examples loose legs, bolts need tightening in chairs etc.) will be done on work orders prepare by the AA.
5. If and emergency happens all personnel will be called on to adjust there schedule to handle the situation or if we are short personnel to accomplish tasks that must be done.
6. Vehicle and equipment inventory will be kept on hand to stop delays, example, filters; oil; belts; blades; couplings; air filter etc.
7. All personnel will clean up there area each day, on Friday the maintenance shop will be swept, moped, and all trash removed, bathrooms will be cleaned.

N. Shipping/Receiving:

1. Receives all parcels that are order by staff, faculty and contractors. Opens every parcels for accuracy of shipment, using packing tickets to check in items.
2. Records serial numbers and model number in inventory book. This book is kept in the finance department and must be pickup every morning and return at the end of the business day.
3. Delivers all parcels including bookstore supplies and materials.
4. This person also opens all the buildings in the morning, raises the flags at the entrance to the college.
5. Delivers all custodial supplies.
6. Repairs custodial equipment example vacuum cleaners, floor equipment.
7. Once a month changes out all floor mats in 8 buildings (two per building) and brings back dirty mats for pickup.
8. Shreds all documents on campus that is consider to be out of date or federal and state requirements also paper that has personal information on students and staff i.e. social security numbers.
9. Keeps up with all return items and their documents.
10. All personnel will clean up there area each day, on Friday the maintenance shop will be swept, moped, trashed removed and bathrooms cleaned.

O. Inventory:

Inventory for operations, maintenance is kept to a bare minimum, inventory is based on what materials are needed to maintain the campus on a day to day operation. Lamps are kept in stock we have 30 different lamps on the main campus and off-site areas. Plumbing parts such seals, diaphragm and vacuum breakers. Grounds we keep belts, blades and edging string. Equipment items are filters, oil, and fuel filters. Pest Control chemicals are kept in a chemical storage cabinet. We only keep enough to do what pre or post emergent is needed. Ceiling tiles are kept on hand in case we have a leak in the ceiling. This is done to eliminate any mold that can grow in a wet dark area.

The invoices are kept in a file and materials that were used will be billed on that work order that needed the materials. The item is marked off the list as used. We also do this for stock items. We make a work order, for all jobs that are done on site and off. If you add up the items on work orders and the total of materials purchased you should be close within a

range of purchased. Of course you have bulk items that are billed out as used. Paint is billed to the work order that called for paint. If some is left and we have enough to do another job it is put on the work order but no dollar amount. Pyramid has a inventory module, this was not purchased because of cost, and the inventory is not conducive to the cost.

P. Safety:

The personal safety and health program of each employee of Brunswick Community College is of primary importance. We will maintain a safety and health program conforming to the best practices of the Facility Management industry. Our objectives is a safety and health program that will reduce the number of injuries and illnesses to an absolute minimum, not merely keeping with surpassing, the best experience of operations similar to ours.

To be successful, such a program must embody the proper attitudes toward injury and illness prevention part of supervisor and employees. It also requires cooperation in all safety and health matters, not only between supervisor and employee, but also between each employee and his or her co-workers. Only through such a cooperative effort can a safety program in the best interest of all be established and preserved.

The Director is responsible for the safe operation of all elements of the facility. It is the Directors responsibility to:

- ✓ Monitor and enforce safety rules, regulations, and personal protective equipment policies;
- ✓ Inspect work areas and identify and correct unsafe conditions and practices;
- ✓ Investigate accidents and report result to Vice President and Security Chief;
- ✓ Conduct annual safety meetings will all employees;
- ✓ Stay abreast of all OSHA regulations on safety;
- ✓ Set the example for safety by following all safety requirements;
- ✓ Make sure personnel are trained on new equipment introduced into the work place and instruct employees in their safe operating techniques;
- ✓ Inspect tools and equipment to ensure that all equipment guards and safety features, on both old and new equipment, are not removed, and used properly;
- ✓ Do not permit or require any employee to work while his or her ability or alertness is impaired by fatigue, illness or other causes that might expose the individual or other to injury\

Definitions:

- **ACM: Asbestos Containing Materials**
- **ANSI: American National Standards Institute**
- **CFR: Code of Federal Regulation**
- **EPA: United States Environmental Protection Agency**
- **HAZMAT: Hazardous Materials**
- **MSDS: Material Safety Data Sheets**

- **NESHAPS: National Emission Standards for Hazardous Air Pollutants Asbestos Regulation (40 CFI 61, Subpart M)**
- **NFPA: National Fire Protection Association**
- **NIOSH: National Institute for Occupational Safety and Health**
- **NEC: National Electric Code**
- **OSHA: The Occupational Safety and Health Association**

Physical Hazard: A physical hazard is a combustible liquid, a compressed gas, an explosive, a flammable substance, an organic peroxide, an oxidizer, a pyrolysis, or an instable (reactive) or water-reactive substance.

PPE: Personal Protective Equipment (hard hats, respirators, safety goggles/glasses, etc.).

A. Work Site Analysis: It is extremely important that all Directors, supervisor employee, and contractor personnel are aware of any hazards that exist within the workplace that could hurt workers. In order to identify these hazards, it is necessary to perform a work site analysis. This Work Site Analysis will be done regularly throughout the year and will be documented on a work order. It is only through this ongoing process of self-inspection that probable hazards can be identified and control measure evaluated to determine whether they can control or reduce hazards. An OSHA-recognized contractor (Blue Ridge Community College rep. of OSHA) to help conduct this analysis.

Once the hazards have been identified, control procedures will be set up to prevent accidents or injuries. The control procedures outlined in this program will be followed. Should the work site analysis find hazards that are not covered by these procedures, the Director will immediately begin interim procedures or stop work until the hazard can be abated or reduced to an acceptable risk.

All hazard identified are prioritized from the most dangerous to the least dangerous. A Corrective Action Plan (CAP) will be in place. The Director with the Chief of Security will make an assessment to control or remove the hazards identified. In this case the Director should use as a guide the basic steps that OSHA follows in creating effective controls: eliminate the hazard from the machine, method, the material, or the campus structure; abate the hazard by limiting exposure or controlling it at its source; training personnel to be aware of the hazard and to follow safe work procedures to avoid it; and, issuing PPE for protecting employees against the hazard.

The CAP is a detailed plan that outlines what specific actions have to be done to eliminate or reduce the hazards identified. The plan identifies:

- The person who is responsible for performing these actions,
- What resources are needed to complete these actions, and
- Assigns a target completion date for finishing each action

The hazard that has been assigned the highest priority will be addressed first, however, multiple hazards may be addressed at the same time and the corrective actions do not need to be done in sequences (i.e., not initiating step two until step one is complete).

Operating a safety and health program is an ongoing process and does not end with finishing the assigned tasks. The QC (Quality Control) Program calls for monthly assessments of safety program. This periodic reviews help to make sure that the campus is operating safely and that all controls are working as intended.

B. Establishing the Safety Program.

1. Setting up Plan. It is the Director and Vice President of Operations who must decide the process of the safety training, and what training is needed at the campus and off campus building. The campus safety program includes Quality Control Reports, Safety Meeting minutes. Attachments have been added that apply to the campus and off sites as well. The attachments will be protected by plastic sleeves and put into a binder. The binder is kept in the maintenance shop. When needed the pages can be removed to take to work site, the supervisor can also use these for on the On-the-Job training or remedial training.

2. Purchase of Safety Equipment. The Director will make that all safety equipment that is needed is in the maintenance department before work on any project begins.

3. Location of safety equipment: Some general rules concerning safety equipment.

- a. First-aid kits will be located in the maintenance shop work center. It will be clearly identified, wall mounted (but removable for transport), and easy to access.
- b. Personal eyewash station will be placed in a well-lit location, near each work area where hazardous chemicals could splash in their eyes. Examples of these areas are custodial supply rooms or areas where water treatment chemicals are mixed. The station will be placed so that it should take no longer than 10 seconds to reach the station. The path to the eyewash station will be kept clear at all times. All eyewashes will be set-up in Pyramid as a monthly PM. Eyewash station will meet the ANSI requirements, to provide 15 minutes of continuous water flow.
- c. Foul weather gear will be stored in the maintenance shop.

4. Hazard Communication Program. By law this program must be in an area where all employees have access to it at all times. To meet this requirement Brunswick Community College has established “**Right To Know**” station inside the maintenance shop. This is divided into janitorial supplies, buildings and grounds.

5. OSHA and Insurance Company Inspections. Upon receiving notification that either OSHA or an insurance company will be inspecting the campus, the Director will notify the Vice President of Operation. If the notification letter did not make the purpose of the inspection obvious, the Director will call the inspecting party to get more information. The Director will make a quick tour of the areas to be inspected. This inspection can avoid a “smoking gun, and can prevent unnecessary “hits” by the inspector. For instance, unlabeled chemical containers, will draw a mandatory fine from OSHA if found during inspection.

6. Contractor Safety. The campus will require contractors to comply with local safety rules, regulations, and the policies. It is the responsibility of the Director and

supervisor to monitor the work of the contractor to ensure compliance with all safety procedures.

C. Training for Supervisor and Employees.

1. Supervisor and Employee Training. It is the responsibility of the Director to train all supervisors to carry out their program responsibilities. Training will center on: inspection: of premises, equipment and vehicle; employee training; and the enforcement of safety rules. Directors and supervisor are trained to recognize and eliminate all the hazards that face the people they supervise. They are trained to implement the safety program at the working level and to reinforce that training with quick reminders and refresher, and with disciplinary action if necessary.

2. Employee Selection and Placement. An important step toward conducting safe operations is to employ qualified people who care about safety. In this regard, great care will be taken in the selection and hiring process. It is important for the Director ask the prospective employee during the selection interview to discuss their experience in safe work procedures. Press the client for details and carefully check out their references with specific emphasis on safe operations.

3. Initial Orientation/Training.

a. All employees, prior to beginning work, must receive initial orientation and training relative to occupational health, safety, and accident prevention to include fire prevention. This will be done on two levels, a general campus safety orientation, and a specific Job-Work placed related orientation.

b. The level is a general orientation and instruction in Campus safety practices and procedures that are broadly applicable to all employees and workplace. This general orientation will be presented by the Director and will be documented and acknowledged on an Individual Training record and kept in the safety file.

c. During this orientation, the Director/trainer emphasizes to the new employee that he let the Director or the employee's supervisor knows when the employee sees things that look harmful to them. The employee must understand that they should not undertake a job that appears unsafe. The Director will stress that no employee is expected to undertake a job until he or she has received job instructions on how to do it properly and has been authorized to do the job.

d. The second level is a specific orientation that addresses the hazards related to the individual employee's specific job and workplace, as well as the safety practices and procedures that he/she is obligated to observe and follow. This second level training will be accomplished by the the employee's supervisor, and will also be documented on the individual's Individual Training Record. An example of job specific training for a custodian, would be the proper use of cleaning chemicals, and would include a brief discussion of the dangers of using the product incorrectly.

e. Initially, the supervisor explains to the employee exactly how to do the job and demonstrates the correct way to do it. The supervisor watches the new employee perform

the job to make sure that the employee understands the correct procedures. Brunswick Community College has a probation period for new hires and it is important that all levels of management check the employee's performance during this period to make sure safety instructions are being followed in addition to work rules and evaluations.

f. **New Equipment/Procedures/Supplies.** When new pieces of equipment, tools, or supplies are introduced into the workplace; they may require different handling and safety practices. The Director and supervisor will review the item's operating procedures or MSDS and make sure that any necessary changes to current operating methods or equipment are made in the campus operating procedures. The need for specialized training will be identified and it is the Director and supervisor responsibility to train the employees in the safe use of the equipment or supply. This training, as with other safety training, will be documented on an Individual Training Record. This record will be kept with the work order clerk in the safety file.

4. Safety Meeting and Training. The Director will schedule and conduct an annual safety meeting for all employees by work sections and have all employees sign an attendance roster.

a. The purpose of these meetings is two-fold. First, the Director will conduct refresher training on work center safety and the procedures that employees will follow if they spot a potential hazard. Second, the Director will open the floor for general discussion of safety practices. The Director will take notes on concerns and recommendations of the employees. These suggestions with merit will be forward on the Vice President of Operations for considerations. More than one session may be required to complete the training for each work section; however, the Director is responsible to make sure that the meetings move along in timely fashion.

b. **Safety Meeting Procedure.** At each annual meeting, the general safety procedures will be reviewed with the employees. After this is done, additional meeting topics will be tailed to the specific target group and be devoted to discussions of safety matters of interest to the employees involved (i.e., there is no need to discuss custodial safety with members of the mechanical group). The discussions will focus on the safe use of the chemicals that the employees use, procedures for handling their work equipment safely, any new operating procedures, or may introduce new campus safety policies.

c. The Director will conduct the safety meeting by functional work group for two reasons. The topics covered will be applicable to the group and, in small group meetings, employees are more apt to join in the discussions. These small group meetings will be held right at the work site rather than in a meeting room. During these meetings, the need for any additional general or job-specific refresher training will be discussed, decided upon, and plans for implementation will be made.

d. This training will be documented for each group on the Individual Training Form; these forms will be kept in the work order clerk section in a separate folder.

5. Specialized Safety and Health Training. The Director will make sure that personnel in each work center or work group receives training in specific areas such as handling and disposing of hazardous materials, or the use of specialized equipment/systems as required by specifications

a. CPR and First Aid. Our chief of security has the equipment and training in these areas. The director will have training in these areas also.

b. Asbestos Certification. This will be an outside contractor certified in this area.

c. Respirator Fit Testing and Training. This is mainly used for confined space at this time we do not have confined space that we must enter. But if we do have confined space this will be contracted out. A safety class will be taught on this subject by using a Respiratory Protection training handbook and / or a training video.

d. Specialized Equipment. As stated above the Director will be responsible for determining the type and number of items of equipment/materials necessary and coordinating their purchase. Once the items are purchased, the Director or supervisor will make sure the employees are trained in the proper use, maintenance, and storage of the equipment and materials. For equipment requiring periodic preventive maintenances, the Director will post the maintenance schedule into Pyramid.

6. Safety Publicity. The Human Resource Department will recommend appropriate posters and other written and visual materials relating to occupational health, safety, and accident prevention from various Governmental and civilian sources (Red Cross, NIOSH, OSHA, commercial/industrial Associations, insurance firms, etc.). The Director will display these materials prominently in work centers and break rooms, and offices.

7. Hazard Communication Program: By law, Brunswick Community College Hazard Communication Program must be maintained in an area where all employees have access to it at all times. To meet this requirement, Brunswick Community College has established “Right to Know” station which is located in the maintenance shop.

There are attachments that follow this page; they are guides that will be followed in training of each employee present and new employees.

TOPIC: HOW TO REPORT UNSAFE AND HAZARDOUS CONDITIONS

1. All Brunswick Community College employees must always be on the lookout for unsafe or hazardous condition. If you find a potential hazard, do not try to correct the situation yourself. Go tell your supervisor immediately. Do not wait till your break or until the end of your shift. Make sure that you or your supervisor fills out the form Report of Unsafe or Hazardous Conditions. This report is kept in the Director office and a copy given to the Chief of Security to track hazards in the buildings.
2. The form for reporting is kept with the work order clerk in the work center. Employee and contractors personnel under the jurisdiction of the Director are encouraged to use this form to report any unsafe or hazardous practices or conditions, and to submit suggestions for corrective action and improvement.
3. When an employee alerts the supervisor or the form for Unsafe and Hazardous conditions is turn in, the supervisor investigates the hazard. If the danger exists or potentially exists, the supervisor immediately goes to the Director. The Director with the Chief of Security will determine what corrective action is needed. The President and Vice President will be notified as soon as the events occur or lack of occurs.
4. Whether the situation turns out to be dangerous or not, the form for this situation will be kept on file in the Director office. When the form has been turned in, and the hazard identified has been fixed, a copy of the form is kept in the Safety Binder. These hazards that have been found at the campus or off-site locations will be brought to the employee's attention at a scheduled safety meeting.

TOPIC: GENERAL WORKCENTER SAFETY PROCEDURES

1. Safety rules apply to all work activities. Most safety rules are simply common sense. The following rules are for the well being of Brunswick Community College operation and maintenance department.

- a. Report all workplace hazards immediately.
- b. Know where emergency phone numbers are posted.
- c. Always be on the lookout for conditions that can cause injury or property damage.
- d. Obey ALL warning signs.
- e. Make sure you know exactly what to do and where to go in case of fire or other emergency.
- f. If you observe a fire, notify people in the area, activate the alarm systems, and leave the building.
- g. NEVER use an elevator in case of fire or other emergency. ALWAYS use the stairs.
- h. Horseplay, scuffling, fighting, or practical jokes are not allowed.
- i. Running in the workplace is not allowed.
- j. If you are not sure how to do a job, DO NOT attempt to do the work. Talk it over with your supervisor.

2. Safety in the office is as important as safety anywhere else in the building. Follow these rules when in the office.

- a. Open only one file drawer at a time. The center of gravity can change dramatically and cause the cabinet to tip over.
- b. NEVER store hazardous materials such as cleaning solvents and aerosols in cabinets or other unapproved locations. They should be stored only in designated storage areas that meet all safety and contract requirements.
- c. NEVER USE CHAIRS FOR CLIMBING.
- d. Keep all aisles clear of obstructions such as electrical cords and wastebaskets. Do not use high-traffic areas for storage.
- e. Floor surfaces must be kept dry. Wipe up any spilled liquids immediately, and pick up papers, pencils, and paper clips, as soon as you see them.

3. Slips and falls in the workplace cause many injuries and lost-time accident each year. All Brunswick Community College Operation and Maintenance shop employees must follow the general guidelines set out below to keep our campus and off-site locations safe for ourselves and for our students, faculty and staff.

- a. If you spot a potential hazard, show it to other people working in this area.

- If you can easily fix the problem yourself, go ahead and do so. If you cannot fix the problem, report the hazard to your supervisor immediately.
- b. Always keep work areas well lit.
 - c. Report loose carpeting, stair treads, or hand rails to your supervisor.
 - d. Always use the proper safety equipment. Belts, hard hats, safety shoes and handrails are for your safety.
4. The following rules and work practices are intended to help everyone avoid slips and trips.
- a. Clean up ALL spills immediately. Make sure you post wet floor signs while clean up is going on. Leave the signs in place until the floor is completely dry.
 - b. Avoid carrying trash, equipment or other heavy objects across wet floors.
 - c. When stripping, scrubbing or performing other tasks that require you to stand on a wet floor, ALWAYS wear “GATOR” shoes.
5. Director’s and supervisor responsibility:
- a. Make sure emergency telephone numbers are posted where they can be readily found in case of emergency.
 - b. Make sure signs are posted as required for hazards present in the buildings.
 - c. Make sure all employees know where the closest source of medical attention is located.
 - d. Make sure first aid kits are easily accessible to each work area, with necessary supplies available. Make sure kits are periodically inspected and replenished as needed.
 - e. Make sure eyewash stations are full and in working order.
 - f. Make sure that all required Personal Protective Equipment is kept in location convenient to use by employees. For example, make sure safety goggles are kept close to power drills and power saws, so that workers do not have to search for them.

TOPIC: STAIRS / SCAFFOLD SAFETY

- a. Stairs are not dangerous places if you follow the rules:
- (1) Never leave any objects on a staircase. Remove any objects that others have left behind immediately.
 - (2) Use hand rails whenever possible.
 - (3) Don't run up or down stairs or jump from landing to landing.
 - (4) Don't carry loads you can't see over if you have to go up or down stairs.
- b. Everyone can help avoid falls by following these simple rules:
- (1) Never stand on chairs, boxes, desks, books, or other objects to reach high areas. Always use a ladder or footstool on a flat, stable floor.
 - (2) Use ladders that are in good condition. Check rungs and your shoes for grease and grime, and clean if necessary. Always use a fiberglass ladder when working with electrical fixtures. Make sure the ladder is labeled as meeting OSHA standards.
 - (3) Stepladders should be fully opened with spreaders locked in place. Never use a stepladder as a straight ladder.
 - (4) Use both hands when climbing. Keep your weight centered in the middle of the ladder.
 - (5) Use the 4 to 1 rule for ladders. The distance from the wall to the base of the ladder should be $\frac{1}{4}$ the distance from the base of the ladder to where it touches the wall (5 feet is $\frac{1}{4}$ of 20 feet). Keep the ladder at this 75 degree angle for safety.
 - (6) Hoist tools or materials up after you reach the top of the ladder. You need both hands for climbing.
- c. The construction and use of scaffolds is regulated by OSHA. Proper set-up, regular inspection, and basic maintenance must be performed in accordance with the scaffold's manufacture's recommendations.
- (1) 29 CFR 1910.28, which contains the OSHA standards for scaffold building and use, is available in the Director office for anyone to review.
 - (2) OSHA standards require that when free standing mobile scaffolding is used, the height cannot exceed four times the minimum base dimension. In other words, if the scaffold is 8 feet wide, the scaffold can not be more than 32 feet high ($8' \times 4' = 32'$).
 - (3) If you build a scaffold that is from 4 to 10 feet tall and less than 45 inches wide, it must have guard rails. All scaffolds over 10 feet high must have guard rails.
 - (4) You cannot extend scaffold planking more than 12'' over the edge of the scaffold. Planking must always be secured to the frame.
 - (5) Always clear work surfaces of snow, ice, or slippery materials. Sand wet planking for sure footing.
 - (6) Never overload scaffolds with people, equipment, or supplies.
 - (7) Make sure you ALWAYS lock casters on mobile scaffolding to prevent movement when working.

(8) Use ladder jack scaffold only for light-duty work.

d. When a scaffold is purchased you must keep the manufacturer's instructions on hand, and always use them to verify that the scaffold is built and used according to the instruction.

e. High work such as exterior window washing and gutter cleaning will be identified by the Director, if equipment and safety equipment are problems, such as work that requires a harness this will be contracted out. When ever possible, high work task will be coordinated so that they can be accomplished at the same time. For example, the Director should arrange to have the exterior windows washing contractor also perform gutter cleaning while they are at the campus.

TOPIC: ELECTRICAL TOOL SAFETY

1. If you are not qualified, do not attempt to repair any electrical equipment, such as cords, fuses, or circuit breakers. Just leave it alone and report the problem to your supervisor.
2. If you use portable electrical tools, they must be grounded or double-insulated. If the double-insulated marking is not on the tool, it must have a three-prong ground plug. If the ground prong of a three-wire plug has been removed, don't use the tool.
3. Personally examine every electrical tool before you use it. If it is defective in any way, remove it from service and tag it "**DO NOT USE**" to make sure no one else can use it until it is repaired.
4. Never splice or tape an electrical cord that will be used near water. If the cord is defective in any way, it must be shortened by the maintenance department or replaced.
5. Electrical cords that will be used near water can be taped with electrical tape if only the outer insulation surface of the cord is cut. If the wires themselves have been cut, the cord must be shortened or replaced.
6. When you disconnect electrical tools, **NEVER** pull on the cord.
7. Do not wear jewelry around electrical equipment.
8. Make sure you have ample work space, especially in back of you.
9. Never use electrical tools in damp or wet location.

TOPIC: USE OF MACHINE GUARDS

1. The rule is: If it moves up or down, back and forth, or turns, and it is less than 7 feet from the working surface, it must be guarded. In other words, if the moving surface of a piece of equipment you use could possibly contact you, it must have a guard. Examples of machine that should be operated with guards or covers in place are grinding wheels, power saws, power transmission belts/rods, and fan blades.
2. Never attempt to remove or adjust a guard while the machine is in operation.
3. Never attempt repairs on a machine if there is the slightest possibility that it could be started without your knowledge or intent.
4. Test whether the control switches of a wood-working or metal-working machine are within arm's reach before you turn it on. If they aren't, don't use it. Controls should be placed where they are accessible from the operator's normal position.
5. Personal Protection devices, especially eye protection, are required for machine operation.
6. Keep all machinery, especially cutting edges, clean and in good working order.
7. Ring test (sound) a replacement abrasive wheel in accordance with the manufactures recommendations before operating the tool. A defective fly-wheel could suddenly fly into high-speed fragments and cause serious injuries. A properly installed wheel will ring or chime when tapped with a metal hammer. A defective or incorrectly installed wheel will "thud" or clunk. Make sure that guards or grinders are within 1/8" of the wheel.
8. Machines designed for a fixed operating location (not portable) must be anchored securely to the working surface.
9. Never wear dangling jewelry or loose-fitting clothing while operating machinery that requires guards. Long hair should be tied back or secured in a way to avoids risks.

TOPIC: VEHICLE SAFETY

Brunswick Community College has campus-owned vehicles that are used by their employees to perform their jobs at campus or off site. If you drive a campus vehicle, follow all Federal, state and local traffic regulations.

1. Wear seat belts at **ALL TIMES**, and obey speed limits. If you get a traffic ticket, YOU are Responsible for paying the fine.
2. Only Brunswick Community College employees are allowed to operate a campus-owe vehicle. NEVER let anyone else drive a campus vehicle.
3. Always make a quick visual inspection of your vehicle, this is to be done weekly.
4. Only Brunswick Community College employees that are properly licensed and experienced Will be used to drive the vehicles. A copy of their drivers license will be kept in their personnel record. This will be done before employees are allowed to drive a vehicle. The Director must consider the experience of the potential operator before sending them out. For instance, an employee that does not have much experience driving in bad weather conditions should not be sent out to drive during a snowfall.
5. During the first week in January, April, and July of each year, a work order (placed in the Pyramid system) will be produced. This work order will refer to a vehicle inspection checklist that will be completed by the vehicle's primary driver. The checklist will assist in checking the vehicle is in proper operating condition (lights are working, tires have tread left, etc.). A copy of the checklist will be kept with the maintenance records for each vehicle.
6. During the year the Director will be reminded (by work order) to have each vehicle inspected by a certified mechanic. The steps that will be taken will be on the work order. Any winterization steps needed will be performed at this time.

TOPIC: PREVENTING BACK INJURIES

Many on-the-job injuries are back injuries that result from improper lifting and carrying Techniques, or even just from twisting to get into small work area. All Brunswick Community College have back braces that must be used when a job involves lifting, or requires twisting to get into a confined area.

a. Everyone involved with a lifting project (moving furniture, loading supplies, etc.) must wear a brace. If an object looks like it weighs more than 75 lbs, don't try to lift it without help. Don't be fooled by small or light loads. You can hurt your back lifting or carrying even a small amount of weight if you don't use proper methods. Follow the guidelines listed below to help avoid injury.

- (1) Check the immediate areas and your intended route to make sure there are no obstructions or hazards that could cause you to slip, trip, or fall.
- (2) Think about the load before you pick it up. If it seems too heavy or too large, get some help.
- (3) While standing close to the load, place one foot beside the item and the other slightly to your rear while keeping an even balance.
- (4) Use the "sit down" or squat position and keep your back straight.
- (5) Tuck your chin in comfortably so your neck and head are in a straight line with your back.
- (6) A proper grip is one of the most important parts of lifting. Keep your fingers and hands extended around the object you are going to lift, using your full palm. Fingers alone have very little power. You need the strength of your entire hand. Keep your arms tucked in to your body. The closer your arms to your body, the more strength you have.
- (7) Make sure your body weight is centered over your feet. This gives you more power and better balance.
- (8) Start your lift in a smooth, even motion using your leg muscles. Make sure you don't shift the load so that the weight is transferred to your back. Keep the load close to your body.
- (9) Do not twist your body. This when many back injuries occur. By simply turning your forward foot out and pointing it in the direction you are moving, you will avoid the greatest danger of injury.
- (10) Don't fight to recover a "lost" or "dropped" load. If you lose control of the object, get out of the way and let it drop.
- (11) Sudden or jerking motions will always cause stress to the spine and back muscles. Move at a comfortable speed with deliberate motions, and you can avoid a painful back strain.

b. Knowing how to carry a load is as important as lifting it safely. Follow these guidelines to avoid injury when carrying loads,

- (1) When you carry objects, always make sure you can carry them comfortably and can see over them.
- (2) Allow enough time to get where you're headed, and slow down.
- (3) Pay attention to where you are walking, and be on the lookout for hazards,
- (4) Shorter steps are safer, especially on damp surfaces.

c. If you must crawl into a small working area or reach at an awkward angle to use a tool, you must wear a back brace to help prevent injury. Jerking and straining motions causes stress to the spine and back muscles. Do whatever you can to keep twisting to a minimum.

TOPIC: WORK PERMIT PROGRAM

1. Some maintenance tasks require that a work permit be filled out before any work can be done. Normally these tasks have been identified by the Director. The need for a work permit is listed on the Work Order for that maintenance task. If you think that a task requires a work permit, or if you are not sure of what a work order means, **ASK YOUR SUPERVISOR** before you start.
2. If a Work Permit is required, you must post it in the immediate work area in a clearly visible location before starting the job.
3. You must get an approved Welding/Burning Work Permit 24 hour before welding, burning, cutting, brazing, or grinding is permitted.
4. Make sure you have a Fire Watcher with appropriate fire extinguishing equipment in the immediate vicinity of any welding, burning, or grinding.
5. Follow all safety precautions required by the Work Permit or Brunswick Community College Burn/Welding safety procedures.
6. You must get approved Work Permit 24 hours before shutting off any utility system. Certain campus activities may require that more notice be given than 24 hours. An example of such an activity is a major computer system for which there are insufficient power back-up system for which there are insufficient power back-up systems in place (battery back-ups, uninterrupted power systems [UPS], etc.). If you are not sure, ask your supervisor.
7. You must get an approved Work Permit before starting work on any part of the fire alarm /suppression systems, or for any work that may affect these system (i.e. core drilling near smoke detectors).
8. You must get a Confined Space Entry Permit before working in areas that are identified as confined spaces. If you are not sure, ask your supervisor before starting the job.

Extra care must be taken with some maintenance tasks because they are potentially hazardous to Brunswick Community College employees, students, customers, and visitors. Examples of these tasks include: work on fire alarm/suppression systems, asbestos abatement, welding, burning, or confined space entry. When possible, the work permit requirements will be loaded into the Pyramid system so that it will appear on the work order when it is time to perform maintenance on that piece of equipment. Since not every type of work that requires a permit can be scheduled and loaded into Pyramid this will be handle on as need basis.

Contractors will also be required to secure a Work Permit from the Directors office when the type of work would call for a Work Permit if a Brunswick Community College employee were performing it.

TOPIC: WELDING, CUTTING, AND BRAZING

1. You are not allowed to start work until the Work Permit is approved and signed by the Director.

2. Training: Brunswick Community College employees are not allowed to perform any welding tasks unless they have received the appropriate documented training and certification. Copies of any certifications and training records must be in an employee's personnel file before they are allowed to weld.

TOPIC: CARE, USE AND HANDLING OF COMPRESSED GAS CYLINDERS

1. Moving Cylinders – Follow these procedures when moving cylinders:
 - a. Where removable caps are provided for valve protection, such caps must be kept on cylinders at all times except when cylinders are in use.
 - b. Keep cylinder caps near the work area so that they do not get lost.
 - c. Never lift cylinders by the cap.
 - d. Never drop cylinders or allow them to strike against each other or against other surfaces.
 - e. Do not drag or slide cylinders. Use a suitable hand truck, roll platform, or similar device with the cylinder firmly tied down for transporting in a vertical (upright) position.

2. Storing Cylinders:
 - a. Cylinders must be stored in accordance with all local, state and municipal regulations and in accordance with appropriate standards of the Compressed Gas Association, Inc., and the NFPA.
 - b. When not in use, cylinders must be chained securely in an upright position. Cylinder caps must also be capped when not in use.
 - c. Areas where cylinders are stored should be prominently posted stating the names of the gases that are stored.
 - d. If different types of gases are stored at the same location, cylinders must be grouped by types of gas, and the groups arranged to take into account the gases contained; e.g.; flammable gases should not be stored near oxidizing gases. Different types of gases must be separated by fire resistive walls or by distance (20 feet apart at the minimum).
 - e. Charged and empty cylinders must be labeled and stored separately with the storage layout planned so that old stock can be removed first with a minimum handling of other cylinders.
 - f. Storage rooms should be fire resistant if practical, and should be kept dry, cool and well ventilated.
 - g. Cylinders must never be stored near open flames or highly flammable substances such as oil, or gasoline.
 - h. Cylinders should not be exposed, to continuous dampness; near salt or other corrosive chemicals or fumes. Cylinder stored in the open must be protected from the ground to prevent rusting.
 - i. Cylinders should be protected from objects that will produce a cut or abrasion in the surface of the metal.
 - j. Do not store cylinders near elevators or gangways, or in locations where heavy moving objects may strike or fall on them.
 - k. If ice or snow accumulates on a cylinder, thaw at room temperature.

1. Cylinders must be protected against tampering by unauthorized individuals.
3. Withdrawing Cylinder Content:
 - a. Only experienced or trained persons are allowed to handle compressed gas cylinders and use cylinder contents.
 - b. Removable type valve protective cap must remain in place until ready to withdraw content, or to connect to a manifold.
 - c. Cylinder must be properly secured before using, so that they cannot be knocked over.
4. Inspection of Cylinder:
 - a. Regulations of the Department of Transportation (DOT) requires that a cylinder be condemned when it leaks, or when internal or external corrosion, denting, bulging, or evidence of rough usage exists to the extent that the cylinder is likely to be weakened appreciably.
 - b. The Supervisor must determine that compressed gas cylinders are in a safe condition to the extent that this can be determined by visual inspections.
 - c. If it appears that a problem exists with a cylinder, the Supervisor will contact a cylinder manufactures and receives instructions on how to determine the presence of contaminants, corrosion-products or internal lining materials that might react with the new gas or endanger the serviceability of the cylinder.
5. General:
 - a. Compressed gas cylinders must meet the regulations of the DOT if cylinders are to be transported.
 - b. Cylinders must not be charged except by the owner or with the owner's written consent, and only then in accordance with DOT regulations.
 - c. Transferring compressed gases from large to small cylinders by Brunswick Community College employees are not permitted.
 - d. Brunswick Community College personnel are not permitted to remove or to change prescribed numbers or marks stamped into cylinders.
 - e. If a cylinder leaks and the leak cannot be remedied by tightening a valve or packing nut, close the valve and attach a tag noting the cylinder is not serviceable. If the gas is toxic, utilize appropriate respiratory protection. If the gas is flammable, keep away from ignitions sources. The leaking cylinder must be moved out-of-doors to a well-ventilated location. In the event the gas is flammable or toxic, an appropriate sign warning against these hazards should be placed at the cylinder. Notify the gas supplier and follow instructions on how to return the cylinder.
 - f. **Caution:** Depending upon the contents of a cylinder, it may be necessary to evacuate the area and contact the fire department for assistance. When confronted with a leaking cylinder, the employee must have prior knowledge

of the required action as specified in the Material Safety Data Sheets (MSDS). Therefore, it is vital that both the supervisor and the employees are well versed in the **MSDS BEFORE** commencing work with a cylinder.

- g. Unless specified the DOT regulation, each cylinder must bear the proper DOT label required for the compressed gas contained therein.
- h. Do not smear or remove any markings, labels, decals, tags and stencil marks used for identification of content attached by the supplier.
- i. When returning empty cylinders, be sure to close the valve and ensure that the cylinder valve protective caps, outlet caps or plugs, if used, are replaced.
- j. Cylinder containing compressed gases should not be subjected to a temperature above 125 degrees Fahrenheit. Flames must not be permitted to be exposed to any part of a compressed gas cylinder.
- k. Never attempt to repair or to alter cylinders, valves, or safety relief devices.
- l. Cylinders should never be used for any purpose other than to contain the content as received.
Cylinder valves must be closed at all times, except when in active use.
- n. Notify the owner of the cylinder if any condition has occurred which might any foreign substance to enter the cylinder valve, providing details and the cylinder serial number.
- o. Cylinder must not be placed where they might become part of an electrical circuit.
- p. Cylinders are not to be repainted by Brunswick Community College employees.
- q. Any doubts about the proper handling of a compressed gas cylinder or its content, must be referred to the manufacturer or supplier of the gas.
- r. MSDS's for cylinders must be posted prominently in the cylinder storage area.

All Brunswick Community College employees that are exposed to compressed cylinders must be trained on this Attachment. Training will be documented on their Individual Training Forms.

TOPIC: PROCEDURES FOR THE USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE)

1. This topic should be reviewed each time an employee is issued Personal Protective Equipment. PPE training must be documented (this is an OSHA requirement).
 - a. Use and Care of Equipment:

You will be given the protective equipment that you need to help protect you from the workplace hazards that you will face. When you receive a piece of equipment, make sure that you understand how to use it correctly. Show your supervisor how you will use it. If any item of PPE that you have been issued is broken or will not work to protect you, tell your supervisor immediately. He will either correct the problems, or give you a new piece of equipment. Before and after each time you use PPE, you must check each item to sure that it is in correct working order. Proper care, cleaning and storage of PPE is the employee that the equipment is issue too. Before you head back to work sign training form.
 - b. Eye and Face Protection: Eye and face protection is needed anytime that an injury can be prevented by use of such protection. Brunswick Community College will provide protective eyewear and face shields anytime it is needed..
2. Typical Brunswick Community College duties that need safety glasses or face shields include: Floor stripping; personnel that are cleaning out boiler tubes or performing other maintenance tasks that produce airborne debris; landscape workers that are creating flying debris; personnel performing welding, sanding, high pressure washing, painting, etc. If there is even a remote chance that debris, dangerous cleaning chemicals, or flying objects that could come to close to the face of a worker, that worker must wear eye protection. Safety glasses are to be left in place next to work areas that require eye protection. For example, safety goggles will be hung on the wall next to the grinders and saws, so that their use is convenient to the employee. The goggles will be kept in a small cardboard box so that they will stay clean.
3. Eye and face protectors must meet the following criteria:
 - a. They must provide adequate protection against the particular hazards for which they are designed.
 - b. They must fit snugly and must not unduly interfere with the movements of the wearer.
 - c. They must be durable and capable of being disinfected.
4. If your vision requires the use of corrective lenses, you must wear goggles that can be worn over your glasses without disturbing the fit of your glasses.

5. All eye and face protection used by Brunswick Community College employees complies with ANSI Z87.1-1989. When you are cleaning face and eyewear, wipe them dry with cloth towels. Paper towels will scratch the surface of plexi-glass.
6. Occupational Head and Foot Protection:
 - a. Head injuries are caused by falling or flying objects, or by bumping the head against a fixed object. Head Protection, in the form of hard hats, must do two things – resist penetration, and absorb the shock of a blow. Hard hats will also provide limited protection from electrical shock. All hard hats Brunswick Community College will buy meet the requirements of the ANSI standard for Protective Headwear for Industrial Workers (Z89.1). Brunswick Community College will provide Class A helmets to its employees.
 - b. You must wear hard hats when working around or under scaffolds and construction projects, when entering confined spaces, and during any other work situation where there is a possibility of head injury.
 - c. All Brunswick Community College maintenance workers, landscape workers, and utility workers must wear safety shoes. Brunswick Community College will pay for the difference between these safety shoes and the shoes that the employees would ordinarily wear to work. Safety-toe footwear for the protection of employees will meet the requirements of ANSI (Z41). When floors are being stripped that employee will wear gator shoes.
7. Occupational Hand and Ear Protection:
 - a. New OSHA standards (OSHA 3077-1994) requires the employer to provide gloves for the safety of worker's hands. Brunswick Community College policy has always been to provide gloves for its workers. The gloves that are provided depends on the work that is being done by the worker. Brunswick Community College personnel who are issued gloves include: maintenance workers, custodians, and landscaping workers.
 - b. Hearing protection devices will be placed just inside the doorway of the maintenance shop so that workers can easily get to them when they are needed. The Director and supervisor if they feel that the employee work condition requires ear protection because he is exposed to too much noise will be issued.

It is the Director who is accountable to ensure that all personnel are properly trained in the use of PPE before they are issued materials. Will maintain the required inventory of PPE. Using Pyramid, sets up a semi-annual inspection of all PPE.

TOPIC: BLOOD BORNE PATHOGENS PROCEDURES

1. If you work in a job where you could be asked to clean up a bloodstain, you must be trained in blood borne pathogens procedures. Blood borne pathogens are disease that live in human blood that can be passed on to other people who are exposed to that blood. The two worst blood borne pathogens are the Hepatitis B and HIV virus. Brunswick Community College will pay for you to receive a Hepatitis B vaccine.
2. Brunswick Community College will keep a clean-up kit at each custodial site. It is important to follow universal precaution when dealing with blood borne pathogens. When you use universal precautions, you always assume the worst (that the spill contains Pathogens). Vomit, saliva, and urine normally do not contain blood borne pathogens unless Blood is clearly visible in the fluid.
3. Whether on hard floor or carpeted surfaces, small blood spills are treated the same way. The person that will be cleaning up the blood will wear latex gloves provided in the kit. Before beginning clean up, the worker will spray the bloodstain with the solution in the kit. Use paper towels with the solution to clean the spot. Dispose of used paper towels in red biohazard bags provided in the kit. Once the spot is clean, spray the area again with the solution . Let the solution sit 3 minutes, and then wash the spot using clean water and paper towels. Dispose of these paper towels in the biohazard bag also. Using duct tape to seal the bag closed. Place the bag into another biohazard bag. At this point, the worker will wash there hands (with the gloves still on) with the solution, followed by soap and water. The worker can then remove the gloves . They will place them in the biohazard bag, and then seal the outer bag. The bag will be disposed of in accordance with the regulations that apply to the campus.
4. Large blood spills are handled differently, depending on the location of the spill. In either case, the person that will be cleaning the spill will wear latex gloves. If the sill is carpet, get a cotton mop, a bucker/wringer combo, and the extractor. Fill the mop bucket with 2 gallons of warm or hot water, and add 2 ounces of the solution Expose. Post wet floor signs to keep people back. Place the mop head in the diluted disinfectant solution. Next, without wringing, allow the mop to drain over the spill. Do not put the mop head on the stain! Completely cover the spill area with the disinfectant cleaner. Pick up the decontaminated spill using the extractor. Apply a small amount more of disinfectant to the area, and clean with the extractor again. It is important to remove as much moisture from the carper as possible. After the satin is gone, and the carpet appears dry, clean up the equipment. Clean the extractor first. Use the disinfectant in the mop bucket to wash and rinse the extractor tanks. If the extractor needs to be wiped, use paper towels. Place used paper towels in the red biohazard bag, however, the decontaminated water can be flushed down the drain in the janitor's closet. Next, empty and rinse the mop bucket. The bucket and mop head are clean, and do not need special precautions. The worker will seal the biohazard bag, and place it inside another bag. Finally, the worker will wash his hands (with the gloves still on) with soap and water. The worker will then remove the gloves, and place them into the

biohazard bag. The outer bag is then sealed, and disposed of according to the regulations at the campus. Later the same day the employee must return and re-extract the spot where the spilled occurred. The cleaning solution will attract and hold dirt if it is left in the carpet.

5. Major blood spills on hard floors are handled with a mop and bucket. The first step in cleaning is always to put on latex gloves, and post wet floor signs. Prepare a mop bucket with the cleaning solution from the kit. When starting to clean the spill, let the mop drain the solution on to the spill so that the spill is completely covered with solution. Do not let the mop head touch the spill at this point. Return the mop to the bucket, and wring it out. Use the mop to pick up the disinfected blood. Return the mop to the bucket often to rewet it. When the area is clean, take the bucket to the janitor's closet, and empty the disinfected solution down the drain. Rinse the mop head in hot water until the water running off it is clear. Rinse out the mop bucket with hot water. Put the mop head in the biohazard bag. The worker will wash hands (gloves still on) with soap and water, then remove the gloves and place them in the biohazard bag. The bag can now be sealed with duct tape, and disposed of according to the campus regulation.

6. Sanitary napkins do not require blood borne pathogen-handling procedures. However, gloves will be worn by Brunswick Community College employees when cleaning napkin receptacles.

All employees that may be required to clean a bloodstain must receive annual training on the cleaning procedures listed above. These employees will receive the Hepatitis B vaccine, along with procedure listed above. The training will be documented on the employees Individual Training Record and kept in their file.

The removal of decontaminated waste can be disposed of in regular fashion. If not sure call the disposal contract the college is using and ask about there procedures.

TOPIC: HAZARD COMMUNICATION TRAINING

1. As you know, you handle several different chemicals every day at work. As helpful as these chemicals are in doing your job, they can also be dangerous if they are not used properly. The purpose of this training is to make sure that you understand how to use your chemicals safely, and to show you where you can look if you have any questions about the chemicals.
2. Each chemical has a Material Safety Data Sheet, which is also called MSDS sheet. This is made up by the company that produces the chemical, and it tells about the hazards of their chemical.
3. Each chemical should also have a warning label. Spray bottles should be labeled with the same information about using the chemical safely. You should be able to get most of the information you need about a chemical from reading that label. If you want more information about the chemical, you can read MSDS sheet.
4. The MSDS are kept in a binder in your work center. You can look at them anytime you like. If you do not understand what the label or MSDS is telling you, ask your supervisor. If you want to read Brunswick Community College Written Hazard Communication Plan, it is in the administration assistant office.
5. The next part of this training focuses on the dangers in your work area, and how to protect you from this danger.

Mechanical: for all these chemicals, this discussion only covers the basics. For more in-depth information, read the MSDS.

WD-40

- a. **Symptoms:** The contents of the can are under pressure and are flammable. Do not smoke while using this container, and do not expose it to an open flame or high temperatures. If you breathe it, it can cause headaches, dizziness, nausea and general respiratory irritation. If you apply it to your skin, it can cause irritation. If you get it in your eyes, it may cause irritation, tearing, and redness. If you eat it, it will cause irritation, nausea, vomiting, and diarrhea.
- b. **First Aid:** If you eat it or inhale it directly, get medical attention immediately! If it gets in your eyes, flush them with water for 15 minutes. If you get it on your skin, wash with soap and water. If you breath too much, goes outside.
- c. **Precautions:** If using on a prolong basis, wear gloves and goggles.

Refrigerant (R-11)

- a. Symptoms: Unless you are exposed to a major release, there are no major health problems.
- b. First aid: If inhaled, get fresh air. If breathing is affected, get medical attention. If you drink refrigerant, expect to have your stomach pumped.
- c. Precautions: To be on the safe side, gloves and goggles should be worn.

Spray Paint

- a. Symptoms: Will irritate eyes. If left on skin can irritate. If inhaled can cause dizziness.
- b. First aid: If inhaled, get fresh air. If you get it in your eyes, flush with water for 15 minutes, and get medical attention.
- c. Precautions: Wear gloves and goggles. If doing significant work wear a respirator.

Lithium Grease

- a. Symptoms: Slight eye or skin irritation.
- b. First aid: Flush eyes with water for 15 minutes. Wash skin areas with soap and water. If several ounces of grease are eaten, get medical attention immediately.
- c. Precautions: None

No-Slime Strips

- a. Symptoms: Minimal effects on skin. Can cause nausea, vomiting, mild stomach disorders if eaten. Will cause a mild stinging sensation in the eyes.
- b. First aid: Flush eyes with water for 15 minutes.
- c. Precautions: Rubber gloves.

Water Treatment Chemicals: additional information regarding specific products is available at the Hazard Communications Station.

- a. Symptoms: Generally acidic. Will irritate or even burn eyes, skin, and mucous membranes. Prolonged contact will cause severe burns and permanent eye damage.
- b. First aid: Flush eyes with water for at least 15 minutes. Wash skin with soap and water. If ingested, drink large quantities of water. Do not induce vomiting. In any event, get medical attention!
- c. Precautions: Rubber gloves. Goggles or face shield. Face

shield is better. Long pants, long sleeve shirt, and work shoes.

A13

Custodial: For all these chemicals, this discussion covers the basics. For more in-dept information read MSDS.

Office cleaning:

- a. If you are pulling the trash, watch out for sharp objects and biohazards.
See attachment