

**PALM BEACH STATE COLLEGE
FACILITIES DEPARTMENT
DISTRICT WIDE PREVENTIVE MAINTENANCE PROGRAM**

The following is an outline of preventive and general maintenance programs performed by college personnel district wide. It has been divided in to the following categories....

- I) AIR CONDITIONING - HVACR

- II) ELECTRICAL

- III) LIFE/SAFETY

- IV) GENERAL BLDG. MAINTENANCE

- V) PLUMBING

- VI) GROUNDS

Latest Revision February 2012

General Notes :

- 1) (Documentation Required) - Shall be listed next to all equipment that needs to be inspected and logged.

- 2) All records shall be kept on campus and a copy, unless directed otherwise shall be submitted to the Director of Facilities by March 1st of each year

- 3) If not listed as either contractor or District staff responsibility all work should be performed by campus based maintenance personnel

I) AIR CONDITIONING - HVACR

- A. CHILLERS (* Documentation Required)
- B. COOLING TOWERS (* Documentation Required)
- C. CHEMICAL WATER TREATMENT
- D. CONDENSATE & CONDENSER PUMPS (* Documentation Required)
- E. AIR COMPRESSORS & AIR DRYERS
- F. AIR HANDLER UNITS (Documentation Required)
- G. BOILERS & GAS FIRED HEATERS (Documentation Required)
- H. EMS
- I. REFRIGERATION EQUIPMENT
- J. A/C CONTROL SYSTEMS
- K. ICE MACHINES
- L. EXHAUST FANS
- M. CHEMICAL FUME HOODS (Documentation Required)
- N. FREON DETECTION UNITS (Documentation Required)
- O. BIOLOGICAL SAFETY CABINETS (Documentation Required)
- P. PAINT BOOTH
- Q. SPECIALTY AIR SYSTEMS

General Note:

* See Appendix A - Central Campus Chiller Log for documentation example

- A. 1) CHILLERS - CENTRIFUGAL & SCREW
 - a) Inspected and logged daily (M-F).
 - b) Complete chiller maintenance done by licensed A/C contractor on quarterly, semi-annual and annual basis.
 - c) Thermal scanned every other year by outside contractor
 - d) Each chiller is eddy scanned every three years on a rotating basis by an outside contractor
- 2) CHILLERS – AIR COOLED
 - a) Visually inspected quarterly
 - b) Coils cleaned annually and recoated every 5 years or as needed

- B. COOLING TOWERS
 - 1) Inspected and logged daily (M-F)
 - 2) Towers, sumps and strainers cleaned annually or as needed.
 - 3) Tower transmission (including oil, fittings, shafts and couplings), bearings and hot boxes are checked quarterly.
 - 4) Wood towers are sealed with a wood preservative annually
 - 5) Synthetic transmission oil shall be changed every 5 years by District personnel

- C. CHEMICAL WATER TREATMENT
 - 1) Inspected daily.
 - 2) Confirmed biweekly by chemical treatment vendor and reports are sent to Facility managers and District A/C staff via e-mail

- D. CHILLED WATER & CONDENSOR PUMPS
 - 1) Inspected and logged daily (M-F).

- 2) Quarterly inspection of motor and pump bearings and seals (greased as needed)
- 3) Quarterly inspection of pump coupling for tightness, wear and alignment.

E. AIR COMPRESSORS , AIR DRYER & VACUUM PUMPS (Where applicable)

- 1) Plant compressors – checked daily (M-F).
- 2) Campus/ building compressor – checked weekly.
- 3) Change oil and adjust belts or replaced as needed -- quarterly
- 4) Check air drier and auto drain - weekly
- 5) Check pressure regulator - monthly
- 6) Check pressure relief valve – monthly
- 7) Check water separator – monthly
- 8) Check Vacuum pumps - Daily

F. AIR HANDLER UNITS

- 1) Filters – visually checked and logged monthly replaced or as needed.
- 2) Belts – inspected monthly for wear, tension and proper alignment at filter change, adjusted or replaced as needed.
- 3) Bearings – inspected for abnormal wear or noise and greased as necessary (at least bi-annually) at monthly filter changes.
- 4) Condensate Lines & Pans – inspected for algae and rust build up monthly at filter changes.
- 5) Coils – inspected for dirt, algae and corrosion and cleaned annually or as needed.
- 6) Blower Wheels – inspected annually for rust, imbalance and abnormal noise at time of coil cleaning.
- 7) Inlet guide vanes & outside air dampers – check operation and lubricate **quarterly with Kimball Midwest Torq "CB" Penetrating Oil**
- 8) VAV Boxes – check damper actuator and controls – **twice a year**

- 9) Chilled water valves – Shall be checked monthly or as needed

G. BOILERS & GAS FIRED HEATERS

- 1) Inspected quarterly for leaks and proper operation by District personnel
- 2) Inspected annually by certified boiler inspector and documentation is filed and certificate is placed at boiler location
- 3) Thermal scans done every other year by outside contractor

H. ENERGY MANAGEMENT SYSTEMS

- 1) Monitored continually by District A/C staff, Facilities Managers and maintenance staff
- 2) Check and replace lithium controller batteries every 5 years and date them at time of change by District
- 3) Clean dust from controllers twice yearly or as needed
- 4) Check HOA switches yearly
- 5) Check temperature sensors daily with EMS start up
- 6) Check status switches monthly
- 7) Check controller input and output connections yearly.

I. REFRIGERATION EQUIPMENT

- 1) Clean condensers – quarterly by District personnel
- 2) Check the Freon charge – annually by District personnel
- 3) Clean evaporator – annually by District personnel
- 4) Clean pan and drain line – annually by District personnel
- 5) Check box temperature – daily by cafeteria personnel, **annually by District personnel**
- 6) Check and calibrate controls – annually by District personnel
- 7) Lubricate motors – annually if necessary by District personnel

- 8) Check sight glass for bubbles – annually by District personnel

J. A/C CONTROL SYSTEMS

- 1) Check pneumatic pressure regulator - monthly
- 2) Check pneumatic pressure relief valve – monthly
- 3) Check and calibrate pneumatic receiver controllers – annually by District personnel
- 4) Check and calibrate pneumatic thermostats - annually
- 5) Check and calibrate pneumatic temperature transmitters – annually by District personnel
- 6) DDC input and output points are checked daily by A/C/EMS mechanics as well as program operation.
- 7) **CO2 Sensors – Calibrate annually using trace gas kit – District personnel**

K. ICE MACHINES

- 1) Clean **condenser** coils – semi-annually by **Campus Maint.** personnel
- 2) Change filters
 - a) Water filters - Checked quarterly, changed annually or as needed depending on water quality
 - b) Air filter (if applicable) – Checked monthly replaced as needed
- 3) Flush annually by District personnel
- 4) Clean ice bins with proper cleaning agent – annually by District personnel

L. EXHAUST FANS

- 1) Inspected monthly for proper operation **by Campus Maint. personnel**
- 2) Check belts, bearings, pulleys and blades – quarterly **by Campus Maint. personnel**
- 3) Clean motor, blade and housing – quarterly or as needed **by Campus Maint. personnel**

M. CHEMICAL FUME HOODS

- 1) Visually inspected daily or as used by program personnel
- 2) Inspected, calibrated and recertified annually by certified contractor
- 3) Filters replaced as needed by Certified Contractor

N. FREON DETECTION UNITS

- 1) Visually inspected weekly by maintenance staff for proper operation
- 2) Inspected, recertified, calibrated and filters changed annually by certified contractor

O. BIOLOGICAL SAFETY CABINETS

- 1) Visually inspected daily by program personnel
- 2) Inspected, calibrated, recertified and HEPA filters changed annually by certified contractor **hired by program personnel**
- 3)

P. PAINT BOOTH

- 1) Pressure equipment, hoses and couplings inspected monthly by paint staff
- 2) Filter media replaced quarterly or as needed by paint staff
- 3) Rooftop exhaust filters inspected **twice a year** by paint staff and replaced annually or as needed by maintenance staff

Q. SPECIALTY AIR SYSTEMS

- 1) Per NFPA 45 all laboratory and exhaust fan systems shall be tested and verified annually by a certified test and balance contractor
- 2) Per Florida Statue the shooting range ventilation system shall be tested and verified annually by a certified test and balance contractor coordinated **by Lake Worth Facilities Manager**

II) ELECTRICAL

- A. LIGHTING
- B. TIMECLOCKS, PHOTOCELLS, LIGHTING CONTACTORS
- C. TRANSFORMERS
- D. SWITCHGEAR / DISTRICT PANELS
- E. VARIABLE SPEED DRIVES
- F. MOTOR / STARTERS
- G. PHOTOVOLTAIC SOLAR PANELS

A. LIGHTING

- 1) Interior – classrooms, offices, common areas etc.
 - a) Checked nightly by custodial, security and night maintenance staff.
 - b) Repaired or replaced as needed.
- 2) Exterior – parking lot, walkway, security etc.
 - a) Checked nightly by custodial, security and night maintenance staff.
 - b) Repaired or replaced as needed.
- 3) Theater, sports fields and specialty areas should be lamped with the maximum long life lamp possible for each application

B. TIMECLOCKS, PHOTOCELLS, LIGHTING CONTACTORS

- 1) Checked **twice a year** at daylight savings time, time change (March & November).
- 2) Repaired or replaced as needed.
- 3) Irrigation

C. DISTRIBUTION TRANSFORMERS/PAD MOUNTED SWITCHES

- 1) Visual inspections done quarterly on pad mounts, switches and vaults **by campus maintenance personnel**.
 - a) Inspect for vegetation growth with enclosure or vegetation debris laying on the transformer housing
 - b) Check for any sign of leakage from transformer housing
 - c) Inspect housing of transformer to assure that no rusting or damage has occurred since last inspection
- 2) Thermographic scans done annually year by outside contractor

D. SWITCHGEAR AND DISTRIBUTION PANELS

- 1) De-energized maintenance done on alternating years with thermographic scans done by district personnel or contractor

- 2) De-energized maintenance includes cleaning of panels, all connections shall be re-torqued, and visual inspection to locate any discoloration or hot spots done by district personnel or contractor

E. VARIABLE SPEED DRIVES

- 1) Thermographic scans done every other year by outside contractor
- 2) Check fans - monthly
- 3) Blow out dust – Bi-annually
- 4) Check filters monthly on exterior drives

F. MOTORS/ STARTERS

- 1) Thermographic scans done every other year by outside contractor
- 2) Clean and inspect contacts - annually
- 3) Lubricate slides – annually

G. PHOTOVOLTAIC SOLAR PANELS

- 1) Shall be cleaned **twice a year** or as need by campus staff.

III) LIFE/SAFETY

- A. FIRE EXTINGUISHERS (Documentation Required)
- B. FIRE SUPPRESSION SYSTEMS (FM-200, ANSUL, SPRINKLER) (Documentation Required)
- C. FIRE PUMPS (Documentation Required)
- D. FIRE HYDRANTS, HOSES AND STAND PIPES (Documentation Required)
- E. SECURITY SYSTEMS
- F. FIRE ALARM SYSTEM (Documentation Required)
- G. GENERATOR / ATS SWITCH (Documentation required see **Appendix B** for example)
- H. BATTERY BACK UP EXIT/EMERGENCY LIGHTS AND CABINETS (Documentation Required)
- I. BLEACHER INSPECTION (Documentation Required)
- J. CODE BLUE/EMERGENCY PHONES
- K. AUTOMATIC EXTERNAL DEFIBRILATORS
- L. RATED DOOR ASSEMBLY INSPECTIONS

A. FIRE EXTINGUISHERS

- 1) Inspected and tagged annually by State certified company.
- 2) Inspected annually by college fire inspector.
- 3) Visually inspected and logged monthly by security personnel

B. FIRE SUPPRESSION SYSTEMS
(FM -200, Ansul and Sprinkler/Stand Pipes)

- 1) Sprinkler systems and wet/dry stand pipes inspected, tested and tagged quarterly by State certified company.
- 2) Inspected annually by college fire inspector.
- 3) Ansul and FM – 200 systems are inspected, tested and tagged semiannually by State certified company and annually by college Fire Inspector.
- 5) All suppression systems are visually inspected and logged monthly by maintenance personnel
- 6) Kitchen hoods shall be cleaned daily by kitchen personnel and pressure cleaned, degreased and tagged every 6 months by hood cleaning contractor per NFPA.

C. FIRE PUMPS

- 1) Inspected, tested and tagged annually by State certified company
- 2) Inspected annually by college fire inspector.
- 3) Visually inspected, logged and test run weekly by maintenance personnel.

D. FIRE HYDRANTS, HOSES AND FIRE BACKFLOWS

- 1) Fire hydrants and fire backflows are tested annually (backflows are tagged) by state certified company
- 2) Fire hoses are inspected annually and pressure tested every five years by state certified contractor

- 3) Inspected annually by college fire inspector.

E. SECURITY SYSTEM

- 1) Checked weekly by Security or designated staff repaired as needed. Tested annually by District staff.
- 2) Check back-up batteries annually, replace every 2 years.

F. FIRE ALARM SYSTEMS

- 1) Tested and certified annually by certified fire alarm contractor and by college Fire Inspector.
- 2) Check back-up batteries annually, replace as needed by District staff
- 3) Fire curtains, smoke hatches and vertical/horizontal fire doors shall be tested annually with the building fire alarm certification by certified fire alarm Contractor

G. GENERATOR / ATS SWITCHES

- 1) Tested, inspected, and logged monthly by campus maintenance personnel.
- 2) Complete generator maintenance done by a licensed generator company on quarterly and annual basis.
- 3) A T S switches operated weekly by time clock, inspected, logged and tested quarterly by generator company for proper operation
- 4) Load bank testing performed annually on our IT and ETC generator by generator company
- 5) Generator fuel tank inspections are performed monthly on A.S.T. tanks with a fuel storage capacity over 550 gallons by District Grounds Supervisor. Inspections cover secondary containment, tank exterior integrity and liquid accumulation removal if any occurs. A fuel tank inspection consultant performs annual inspection and certification of interstitial alarms. Palm Beach County department of Environmental Protection annually inspects fuel tanks exceeding 550-gallon capacity.

H. BATTERY BACK UP EXIT / EMERGENCY LIGHTS AND CABINETS

- 1) Inspected, tested, and logged monthly by campus maintenance personnel and documented per NFPA

2) Inspected annually by college Fire Inspector .

I. BLEACHER INSPECTION

1) Bleacher inspections performed every two years by a structural engineering firm and all documentation shall be filed on each campus for review.

2) Inspect bleachers on sports fields (fixed, mobile types) – every two years

J CODE BLUE/EMERGENCY PHONES

1) Inspected and tested weekly by Security

2) Back up batteries (Code Blue) checked annually and replace every 2 years by District personnel

K AUTOMATIC EXTERNAL DEFIBRILATORS

1) Inspected and tested monthly by Security

2) Batteries changed every 2 years or as needed by Security

L. RATED DOOR ASSEMBLY INSPECTIONS

1) Per NFPA 80 all rated door assemblies shall be inspected annually by a certified door inspector if adopted in code

IV) GENERAL BUILDING MAINTENANCE

- A. ROOFS AND GUTTERS
- B. PAINTING
- C. CLOCKS
- D. EXIT DEVICES AND DOOR HARDWARE
- E. ELEVATORS AND CHAIR LIFTS
- F. PRESSURE CLEANING
- G. INTERIOR PEST CONTROL
- H. WINDOW WASHING
- I. BATTERY OPERATED EQUIPMENT
- J. INTERIOR BUILDING CLEANING
- K. AUTOMATIC DOORS
- L. FOLDING PARTIONS AND WALL SYSTEMS
- M. ELECTRIC GATES

N. OVERHEAD GARAGE BAY DOORS

O. FIRING RANGE

P. DYSON HAND DRYERS

A. ROOFS AND GUTTERS

- 1) Inspected **twice a year** (April and November) by **campus** maintenance personnel.
- 2) **Campus** maintenance staff inspecting roofs **twice a year** should check all of the following items:
 - a) Check that there is no area of the roof where water is ponding
 - b) Inspect all roof drains and roof sumps to assure that they are clear of debris and obstructions (including leaves and loose gravel) and that drain strainers are not damaged
 - c) Remove all accumulated foreign objects and /or vegetation from roof area and gutters
 - d) Check all metal flashings, expansion joints and gutters to assure they are tight and not showing signs of separation or rusting
 - e) Walk entire roof area to check for blister, soft spots, missing gravel (on built- up systems) and split or loose felts
 - f) Check all roof top equipment, including lightning protection systems and roof hatches, to verify that they are still properly anchored, not showing signs of rusting or wear and visually is in good condition
 - g) Fill any depressed pitch pan with proper material and crown to assure moisture runoff
 - h) Check all base flashing material at parapets to assure that flashing has not cracked or separated
 - i) Check condition of any skylight(s) to assure that frame work, glazing and flashings are in good repair
 - j) Check for signs of animals on the roofs

- k) Any signs of problems identified during this inspection should be discussed in detail with the Campus Facility Manager and arrangements need to be made to effect repairs as quickly as is possible.
- l) Facilities planning will hire qualified consultants to perform district wide conditional assessments of roofs. Generally this will occur every 10 years or less. Reports and information on needed and recommended repairs will be issued to all campus based Facility Managers at the conclusion of the assessment outlining special repairs required. Campus based Facilities Managers will direct qualified staff or contractors to make these needed repairs

B. 1) PAINTING – INTERIOR

- a) Per schedule attached in **Appendix C1**
- b) The Campus Facility Managers should have close inspection performed annually (usually in May) of all corridor walls in all classroom and lab buildings to determine if walls need to be repainted before start of fall term.
- c) **Low VOC** interior painting products shall be used where applicable

2) EXTERIOR

- a) Per schedule attached in **Appendix C2**
- b) Building exterior shall be painted every **7 to10** years as needed on a rotating district schedule.
- c) Campus Facility Managers on site should notify the District Supervisor of Maintenance if exterior of building walls are in need of pressure cleaning or repainting
- d) All paint products used on the exterior of buildings must have a minimum of seven year written warranty against product failure.
- e) **Low VOC** exterior painting products shall be used where applicable

C. CLOCKS

- 1) Checked twice a year during daylight savings time (March and November). Repair or replace as needed.
- 2) Batteries replaced annually during November time change.

D. EXIT DEVICES AND DOOR HARDWARE

- 1) Checked twice a year.
- 2) Repaired or replaced as needed.
- 3) Lubricated annually or as needed.

- 4) Pad locks shall be checked and lubricated twice a year

E. ELEVATORS AND CHAIRLIFTS

- 1) Inspected daily by security personnel.
- 2) Complete elevator maintenance done by licensed elevator contractor on monthly, quarterly, semi-annual and annual basis.
- 3) Annually inspected and certified by elevator inspection contractor.

F. PRESSURE CLEANING

- 1) **Pressure** cleaning performed by **cleaning** contractors within 50' of the building annually
- 2) Exterior stairways, steps and walkways should be inspected by Facilities Managers monthly and pressure cleaned by outside contractor or Facilities staff as needed.

G. INTERIOR PEST CONTROL

- 1) Interior spraying done on monthly basis by license contractor or as needed and will also perform special call backs as needed.

H. WINDOW CLEANING

- 1) Interior window cleaning performed by college or contracted custodial personnel based on the cleaning scheduled attached in Appendix D
- 2) Exterior window cleaning shall be performed by licensed contractor twice a year.
- 3) The indoor theater windows at Dolly Hand and Eissey Theaters performed by licensed contractor once a year.

I. BATTERY OPERATED EQUIPMENT

- 1) Battery operated equipment such as flushometers, door alarms, thermostats and door combination locks shall be changed annually in November during time change.

J. INTERIOR BUILDING CLEANING

- 1) Building interiors are cleaned daily (**Mon - Sat**) by college personnel and contracted custodial service per cleaning schedule attached in **Appendix D**
- 2) Day porter or college custodial staff shall perform campus cleaning on all campuses **Mon - Sat**

K. AUTOMATIC DOORS

- 1) Inspected daily for proper operation by security staff as they open buildings
- 2) Inspected quarterly by District locksmith for proper operation and repaired as needed

L. FOLDING PARTIONS AND WALL SYSTEMS

- 1) Tracks shall be cleaned and fittings lubricated annually or as needed by campus **maintenance staff**

M. ELECTRIC GATES

- 1) Inspected and greased annually by **campus** maintenance staff.

N. OVERHEAD GARAGE BAY DOORS

- 1) Inspected and greased annually by **campus** maintenance staff.

O. FIRING RANGE

- 1) Inspect all mechanical equipment related to range **quarterly by District staff**
- 2) Inspect AC filters monthly **by campus staff**

P. DYSON HAND DRYERS

- 1) **Inspect air flow annually**
- 2) **Test hand dryer operation weekly for normal operation by custodial staff**
- 3) **Cleaned daily by custodial staff**

V) PLUMBING

- A. BACK FLOW PREVENTORS
- B. FIRE HYDRANTS
- C. WATER HEATERS
- D. TRAP CLEANINGS
- E. VALVES
- F. ELECTRIC WATER COOLERS
- G. DISTILLING UNITS
- H. GREASE TRAPS
- I. CIRCULATING PUMPS
- J. LIFT STATIONS
- K. DILUTION TANKS
- L. EYE WASH STATIONS AND SHOWERS
- M. OIL/WATER SEPERATORS

N. SANITARY LINES

O. CISTERNS

P. AUTOMATIC FLUSH VALVES

A. BACK FLOW PREVENTORS

- 1) Potable water backflows are tested and certified annually, by college plumber in March of each year during the spring break closing
- 2) Fire backflows are tested and certified by our Life/Safety contractor annually in December during the Christmas closing

B. FIRE HYDRANTS

- 1) Flushed **annually** by district plumber
- 2) Tested and certified by our Life/Safety contractor annually in December during the holiday closing

C. WATER HEATERS

- 1) Flushed and visually inspected annually by District **Plumber**
- 2) Relief valves should be tested **twice a year** by District **Plumber**
- 3) Drain pans should be checked annually for water leaks or dirt that could clog the pan.
- 4) Gas water heater water filters shall be cleaned monthly by campus staff.

D. SEDIMENT TRAP CLEANING

- 1) Inspected and cleaned **twice a year** or as needed by **campus** maintenance staff

E. POTABLE WATER VALVES

- 1) Inspect and exercise valves – annually by district staff
- 2) All old gate type valves shall be replaced with ball valves and these replacements shall be scheduled when the college is closed

F. ELECTRIC WATER COOLERS

- 1) Annually checked for proper operation, clean coils, *filters* and fan blades, check flow at bubbler by maintenance staff

G. DISTILLING UNITS

- 1) Inspected annually for proper operation, units are cleaned, de-scaled and elements are checked by maintenance staff
- 2) Units with filters should be changed annually or as needed by maintenance staff

H. GREASE TRAPS

- 1) Inspected quarterly by District, cleaned annually or sooner by contractor depending on use.

I. CIRCULATING PUMPS

Inspected **twice a year** for proper operation, lubricate monthly or as needed by maintenance staff

J. LIFT STATIONS

- 1) Inspected quarterly for proper operation by District **Plumber** and cleaned as needed by licensed contractor

K. DILUTION TANKS

- 1) Inspected annually and regenerated as needed by District, if cleaning is required Work shall be performed by a licensed contractor

L. EYE WASH STATIONS AND SHOWERS

- 1) Visually inspected daily or as used by program personnel
- 2) Inspected annually for proper operation and flow patterns by **campus maintenance staff**

M. OIL/WATER SEPERATORS

- 1) Visually inspected **twice a year** by program personnel

- 2) Cleaned, vacuumed, pumped out and properly disposed of annually or as needed by certified contractor

N. SANITARY LINES

- 1) Shall be carefully unclogged to prevent the possibility of a hazardous leak or spill and personal protective equipment shall be worn at all times by both district and maintenance staff
- 2) Lines should have a camera inspection **twice a year** or as needed

O. CISTERNS

- 1) Floating filter in cistern needs to be cleaned annually by campus **mainenance staff.**

P. AUTOMATIC FLUSH VALVES

- 1) Batteries change annually

VI) GROUNDS

- A. VEHICLE MAINTENANCE
- B. TURF
- C. WALKWAYS
- D. PARKING LOTS
- E. IRRIGATION
- F. EXTERIOR PEST CONTROL
- G. TREE TRIMMING
- H. ORNAMENTAL CARE
- I. FUEL STATION
- J. GROUNDS INSPECTIONS
- K. STORM SEWERS
- L. RECYCLE BINS
- M. GROUNDS EQUIPMENT

N. GOLF CARTS

O. FOUNTAINS/PONDS

A. VEHICLE MAINTENANCE:

1) INSPECTIONS

Fleet Services Concern Checklist When vehicles and equipment are in for service, each mechanic will go through a checklist. If any defects are determined, they will make a notation of this. Repairs will be remedied. The form will be filled out and filed appropriately. Security staff inspects the Fleet cars for cleanliness and determine when to issue work orders for this service.

2) More Comprehensive Inspection of vehicles is performed every three months. This includes safety equipment in vehicle, damage assessments, tire wear, all fluid check, headlamp, tail lamp, turn signal, warning flasher, drive axle service, chassis lubrication by in-house staff.

3) Fleet-oil and filter changes At 6 month's intervals or 3000 miles campus or district staff changes oil and filters.

4) Tire Rotation every 5,000 miles by District staff.

5) Wiper Blade Replacement every six months wiper blades are replaced by Campus staff.

6) Exhaust System Inspection is performed twice a year to inspect for leaking or deteriorating parts. Replaced as needed by District staff.

7) Brake System Inspection At 15,000 mile intervals items inspected are disc brake pads for wear, rear brake drums, wheel cylinder, calipers brake linings, parking brake adjustment, check rotors for wear or gouging. Clean and repack wheel bearings by District staff.

8) Drive Train Inspection, check transmission fluids 4 times per year, or if any mechanical problems exist (slipping, erratic shifting) by District staff.

- 9) Wheel Alignment Wheel alignment of front wheels is out-sourced to a local wheel alignment facility when necessary by District staff.
- 10) Transmission Service At 30,000 miles or refer to manufacturers recommendation, drain, refill automatic transmission fluids, replace filter, and adjust bands by District staff. Major repairs are outsourced.
- 11) Other Fleet Services Criminal Justice vehicles are repaired as needed through college work order system with in-house staff. Athletic Department vehicles receive oil and filter changes every 6 months or 3,000 miles by in-house staff. Vehicles are repaired as needed through college work order system with District staff.
- 12) Mobile Fleet Services Vehicles and equipment off the main campus are serviced and repaired by the District mobile fleet mechanic. Mechanic responds to emergency road repairs, repairs from work orders via e-mail or dispatched by mobile radio.
- 13) EMS/Fire Services Vehicles receive maintenance for minor mechanical repairs through college work order system by District staff.
- 14) Safety Inspections are performed during any maintenance to vehicles or equipment to assess any malfunctioning components by. Inspectors will use a checklist designed within the guidelines of the equipment and vehicle manufacturer. The checklist will be filled out by the persons conducting the inspection and noted if any components pass or fail. The inspectors have the responsibility to remove the failed equipment from the fleet and will then generate a work order to be sent and filed by the facilities auto mechanic. All safety repairs will be prioritized and completed in a timely manner. When these repairs are made the District mechanic will then test operate the equipment and return to the fleet if found safe to operate. D.O.T. inspection to dump truck will be completed by an authorized inspection company.
- 15) Electric Utility Vehicle Periodic Service Schedule: Pre-Operation daily by operator. check tire inflation, visually inspect charge cord and plug for loose connections .Be sure brakes function properly, parking brake should release when the accelerator or brake pedal is pressed. Brake system inspected and adjusted **twice a year** by trained technician. **Twice a month** batteries need fluids **are to be** inspected and filled by campus staff. Monthly service for battery cleaning including checking cleaning battery terminals, adjusting tire pressure by campus staff. **Twice a year** service check brake cables for damage check all contacts and wire connections check and adjust steering and suspension components by District. **Twice a year** lubricate linkage and steering components by District. An annual inspection of transaxle and front wheel bearings to be performed by District staff.

B. TURF

- 1) Sports Turf is mowed weekly by campus staff. Verticutted once a year by campus staff. Aerified twice a year by campus staff.
- 2) Sports Fields fertilized eight times a year by District staff.
- 3) Pre-emergent Herbicides are applied twice a year by campus staff.
- 4) Insecticide Spraying of Sports Turf is sprayed on a needed basis by District staff.
- 5) Selective Herbicide Treatment weeds are sprayed on Bermuda turf grass as needed using specialized equipment by District staff.
- 6) Baseball & Softball Clay Infields are dragged and raked daily by campus staff.
- 7) Clay and Turf Edging is performed eight times a year by campus staff.
- 8) Turf Replacement around baseball infield is replaced as needed due to wear and tear of the college and local and touring college teams.
- 9) Turf Striping is striped on soccer and baseball fields as needed by in-house staff. Turf on softball field is striped as needed by campus staff.
- 10) Turf Mowing is performed weekly during growing season. During winter season, some areas are mowed at 2-week intervals, by campus staff.
- 11) Common Area Turf Fertilization is fertilized 5-6 times per year by Campus staff.
- 12) Common Area Turf Pest Control insecticides are sprayed or granular insecticide Is applied 5-6 times per year by licensed campus staff.
- 13) Pre-emergent Herbicide Treatment, granular herbicides are applied twice a year by licensed campus staff.
- 14) Selective Herbicide Treatment, spray able herbicides are applied as needed basis by licensed campus staff.
- 15) Turf Replacement generally occurs after a building or courtyard is re-constructed, new sidewalk installed, flooding of low-lying areas, or pest damage. Turf is replaced by campus staff.

C. WALKWAYS

- 1) **Trimmed** and edged on a routine basis.
- 2) Sidewalks are blown off weekly or as needed
- 3) Sidewalks Expansion Control Joints are inspected monthly for slip and trip hazards by facilities, security staff.
- 4) Sidewalk Repairs and Replacement are generally performed by an outside contractor.
- 5) Pressure Cleaned on an as needed basis.

D. PARKING LOTS

- 1) Trash and Debris is removed daily, trashcans are emptied daily by campus staff.
- 2) Parking Bumpers shall be inspected by campus staff annually and replaced by an outside contractor or by college staff as needed
- 3) Striping of parking lanes shall be inspected by campus staff annually, re-striping is performed by campus staff or an outside contractor
- 4) Catch Basins are cleaned of debris after every rain event to prevent grate clogging.
- 5) Vacuuming of Lots during the fall and winter months lots are vacuumed as needed. During spring and summer usually once, a month District staff performs all work.
- 6) Resurfacing of Pavement is performed by outside vendor.
- 7) Pot Holes and Patching is performed during a major construction project by outside vendor. **Campus grounds** staff repairs small potholes
- 8) Traffic Signs are replaced on a needed basis with DOT approved signs.
- 9) Road Striping shall be inspected annually by campus **grounds** staff, re-striping shall be performed by outside contractor or college staff as needed
- 10) Speed Humps are inspected annually and **painted** as needed.
- 11) Pervious Pavement shall be inspected monthly for loose debris impediments by

campus grounds staff. Pressure washing may be employed prior to sweeping to loosen debris. Vacuum or sweep to keep the surface free of debris as needed. Inspect pavement surface for deterioration or spalding annually by campus grounds staff.

E. IRRIGATION

- 1) Mainline Pipe Breaks are repaired by **District irrigation Mechanics** around the district as needed.
- 2) Sprinkler Heads are tested each week for clogged nozzles or broken pop ups and rotation if they are rotor heads.
- 3) Irrigation Valve Operations are inspected each week by **campus ground**. Work orders are generated for valve solenoid replacement, filter and screen cleaning or replacement of inoperable valve assemblies.
- 4) Pump Stations around the district are inspected weekly for proper operation. This entails filter cleaning, pressure checks, and electro-mechanical inspection for malfunctions by **District irrigation mechanics**. Irrigation Variable frequency drives have their filters changed monthly by **campus lead ground workers**.
- 5) Turbine Pumps are lubricated **twice a month**, all operations checked and logged by District **irrigation mechanics**.
- 6) Centrifugal Pumps are inspected weekly for proper operation and shall be lubricated monthly or as needed. The water pressure check shall be evaluated and logged by **District irrigation mechanics**.
- 7) Submersible Pumps shall be inspected for proper operation, water pressures shall be tested monthly. Adjustments shall be made as needed per manufacturer specifications. Air bladder tanks pressure is inspected quarterly by **District irrigation mechanics**.
- 8) Anti-Rust Treatment – pumps are inspected weekly for proper operation, rust preventative product levels in barrels is checked weekly by **campus lead grounds worker**. Vendors on two sites (Gardens, Boca) fill rust product Lake Worth performs this monthly.
- 9) Liquid Fertilizer Tanks -Tanks and pumps are inspected monthly or when additional products are added by campus **grounds**.
- 10) Irrigation Time Clocks/VFD's – Shall be checked internally once a month for ants or other insects and treated as needed by campus **grounds**

F. EXTERIOR PEST CONTROL

- 1) Exterior Pest Control is performed by state licensed staff at each campus.
- 2) Weed Control is performed as needed on lakes/ponds and are removed by **outside licensed contractor**
- 3) Pre-emergent Weed Control is performed and products are applied twice annually, spring and fall months by **lead grounds worker**
- 4) Flower and Ornamental Beds are sprayed as needed by **lead grounds worker**, otherwise weeds are removed manually.
- 5) Insecticides are applied by **lead grounds worker** as needed using I.P.M. (integrated pest management).
- 6) Disease Control products are applied as needed by **lead grounds worker**.
- 7) Fire Ant Control is performed as needed by **college staff**
- 8) Wasp and Hornet Control is performed as needed by **college staff**
- 9) Termite Prevention The Historical Bldg is under an annual contract to prevent re-infestation of dry wood and subterranean termites. Contract certifies that contractors are licensed with the state.

G. TREE TRIMMING

- 1) Tree Trimming Deciduous Trees
Trees are pruned once a year by **campus grounds** , major tree work is contracted to a certified tree company as needed preferably between January and June.
- 2) Palm Tree Pruning is performed on an as needed basis to remove fruit or dying palm fronds usually twice a year by **campus grounds staff**.
- 3) Tree Installation is performed by a licensed tree company on an as needed basis. Some small palms are installed by **campus grounds staff** on an as needed basis.
- 4) Tree Take Downs large trees are out sourced to a licensed tree professional. **Campus grounds staff** may removes small trees as needed.

H. ORNAMENTAL CARE

- 1) Ornamentals are planted and maintained by college employees on a routine basis. Plants are replaced as needed basis. Plants are cared for on a monthly basis through pruning or shaping by **campus grounds staff**.
- 2) Annual Flowers are planted and maintained by **campus grounds staff** seasonally. (Usually twice a year). Not all campuses plant these.
- 3) Pruning Ornamentals at a minimum interval of six weeks hedges and ornamentals are pruned and detailed to precise specifications by **campus grounds staff**.
- 4) Ornamental Fertilization Plants are fertilized quarterly with formulated fertilizers by **campus grounds staff**.
- 5) Ornamental Pest Control
Ornamentals are inspected and treated on a needed basis by a licensed pesticide applicator within the **campus grounds staff**.

I. FUEL STATION

- 1) Pump Fuel Island terminal and attached pump are inspected each month and logged into a Fuel station log manual. Inside of pump is inspected for fuel leaks and any other abnormalities. Belts are checked for any wear. Fuel dispensing hose's are checked for wear. Dispensing nozzle is inspected for leaks and trigger wear. Under pump fuel containment box is inspected for fuel spills and logged if any is present.

Fuel Tanks Tanks are inspected quarterly for paint defects. Tanks are inspected weekly for fuel leaks. Over-Flow spill containment bucket is inspected during each tanks re-fueling for abnormalities. Interstitial area between double walled steel tanks is inspected for leaks quarterly. Underground interstitial fuel piping is inspected monthly for residual fuels, water, or leaks.

J. GROUNDS ASSESSMENTS (See attached in **Appendix E**)

- 1) Conducted annually by lead worker and District Grounds Supervisor **or designee**
- 2) Assessment reports are developed District Grounds Supervisor **or designee**
- 3) Director of Facilities, District Grounds Supervisor and Campus Facilities Managers meet with grounds staff and discuss the campus assessment reports.

K. STORM SEWERS

- 1) Storm grates are cleaned prior to major storm events by **campus grounds staff**.
- 2) Storm basins are inspected for debris routinely by **leads ground worker**.
- 3) Storm sewer pipe should be inspected with cameras as needed.

L. RECYCLE CONTAINERS

- 1) 95 gallon wheeled containers are washed and sanitized with water hose or pressure washer monthly.
- 2) Containers should be inspected weekly for defects in components.
- 3) Containers and lids are cleaned as needed

M. GROUNDS EQUIPMENT

- 1) Mowers: Refer to manufacturer Service Interval chart in all equipment operators manual for frequency of general service. Engine oil and oil filter changes range from 100 to 200 hour interval. Hydraulic fluids and filter change intervals range from 200 to 500 hours of operation. Lubrication of cutting decks should be performed daily after cleaning. All fluid check prior to operation. Serviced by **campus grounds staff**
- 2) Tractors: Refer to manufacturer Service Interval chart in all equipment operators manual for frequency of general service. Engine oil and filter changes range from 250 to 500 hours of operation. Hydraulic fluids and filter change intervals range from 500 to 1000 hours of operation. Lubrication intervals variable from 25 hours to 50 hours of operation. Refer to operators manual. All fluid check prior to operation. Serviced by **District Vehicle Mechanics**.
- 3) String Trimmers, Hedge Trimmers, Grass Edgers : Clean after each use, change fuel filters seasonally, change air filter seasonally. Serviced by **campus grounds staff**

- 4) Aerial Lift Equipment: Refer to manufacturer Operation and Safety Manual for service interval specifications with oil ,air ,fuel conditions. Engine oil and oil filter changes range from 150 hours to 500 hours. Change in accordance with engine service manual. Hydraulic fluid service interval range from 24 months to 1200 hours. Hydraulic filters service interval range from 300 to 500 hours or as indicated by equipment visual condition indicator. Lubrication intervals varie from 150 hours to 1200 hours refer to general specifications in all operator maintenance manuals. All fluid check prior to operation. Serviced by **District Vehicle Mechanics or licensed contractor**
- 5) Forklift: Refer to manufacturer maintenance manual for service interval specifications with oil air and fuel conditions. Engine oil and filter change is at 300 hour intervals. Hydraulic fluid service interval change fluid at 2000 hour. Change hydraulic filter range from 1500 to 2000 hours. Transmission fluid service interval change fluid at 2000 hours. Transmission filter service interval change filter at 2000 hours. Lubrication of fittings service interval at 1000 hours. Lubrication of fork mast and carriage service interval at 250 hours. All fluid check prior to operation. Serviced by **District Vehicle Mechanics or licensed contractor**.

N. GOLF CARTS

- 1) Safety inspection (lights, brakes, operation) – Annually by District Mechanic

O. FOUNTAINS/PONDS

- 1) Fountains shall be inspected weekly to check the chemicals, brush the pebble tech, clean out any debris and check for proper operation. Skimmer baskets and filters shall be cleaned monthly
- 2) Floating fountains shall be inspected and cleaned annually (**twice a year** at Belle Glade). Lighting shall also be check at this time and any bad bulbs should be replaced in the Fountains by **District Irrigation Mechanic**
- 3) **Pond skimmer basket and filters shall be cleaned monthly, UV lights in filters and pumps shall be inspected monthly**

P. EXTERIOR FURNITURE

- 1) Tables shall be inspected at least once a year during the annual grounds inspections. Cleaning shall occur as needed by custodial staff
- 2) Benches shall be inspected at least once a year during the annual grounds inspections. Cleaning shall occur as needed by custodial staff.
- 3) Trash Receptacles shall be inspected at least once a year during the annual grounds inspections. cleaning shall occur monthly by custodial staff
- 4) Ash Urns shall be cleaned weekly by campus staff. New media product shall be added as needed. Inspections shall occur during the annual grounds inspections.
- 5) Umbrellas shall be inspected at each use for defects. Cleaning shall occur as needed.

APPENDIX

APPENDIX A - Central Campus Chiller Log

APPENDIX B – Generator Log

APPENDIX C 1 – Interior Painting Schedule

APPENDIX C 2 - Exterior Painting Schedule

APPENDIX D – Building Interior Cleaning Schedule

APPENDIX E – Annual Grounds Condition Assessment