CERTIFICATION OF WORK
PREVENTIVE MAINTENANCE

(To be completed by the Contractor and saved in the Contractor's CMMS)

FACID/Building: PA168 Date of Visit: 5/14/19

Contractor Personnel on Site:

1. Bill Davis
2. _____
3. _____
4. _____

Work Performed:

Preventive Maintenance - Services Completed (Annual, Quarterly, Monthly, equipment identification, etc.)

1. 8472FQ, 8592MO, 8658QT, 8752SA, 8522FQ, 8667QT, 8723SA
2. FILTERS, LIGHTING, GATE, ICE MAKER, REFRIGERATORS, WATER HEATERS,
3. CHILLER, CONDENSING UNITS, VAV, HUMIDIFIER,
4. _____
5. _____

CERTIFICATION OF WORK

To be signed by the Contractor:

Print Name: Bill Davis Date: 5/30/19

Signed: _____

To be signed by Facility Manager:

By signing the Certification of Work, the said government representative signature does not constitute acceptance of any work performed by the contractor, it only acknowledges that the contractor was on-site during the identified timeline:

Print Name/Rank: Kyle Dean Date: 5/30/19

Signed: _____

E-Mail: _____

PREVENTATIVE MAINTENANCE PROGRAM CHECKLIST

FAN COIL UNIT/ DUCTLESS MINI SPLIT

SITE AND BLDG #: PA168-B1

MECHANIC SIGNATURE: [signature] **DATE:** 5/19/15

LOCATION/RM #: **WO#** 8752 **ASSET #** 3008-3009

START TIME: 7 AM **FINISH TIME:** 2 PM

CHECK POINT	CHECKPOINT DESCRIPTION	TASK COMPLETE YES	TASK COMPLETE NO	NOTES/ ACTIONS (IF TASK COMPLETE IS CHECKED NO, PROVIDE EXPLANATION)
	SPECIAL INSTRUCTIONS			
1	In addition to the procedure(s) outlined in this standard, the equipment manufacturer's recommended maintenance procedure(s) and/or instruction(s) shall be strictly adhered to.	X		
2	Schedule shutdown with operating personnel, as needed.	X		
3	As needed, de-energize or discharge all hydraulic, electrical, mechanical, or thermal energy prior to beginning work. Follow lock out/tag out procedures at all times.	X		
	TO BE PERFORMED AT EACH INSPECTION SERVICE			
1	Check fan blades for dust buildup and clean if necessary.	X		
2	When applicable, check fan blades and moving parts for cracks and excessive wear.	X		
3	Tighten all electrical connectors to proper torque asneeded.	X		
4	Check that the fan runs properly in all speeds as applicable.	X		
5	Check dampers and rotating auto diffusers for dirt accumulations, clean as necessary. Check felt, repair or replace as necessary.	X		
6	Check damper actuators and linkage for proper operation as applicable. Adjust linkage on dampers if out of alignment.	X		
7	Lubricate mechanical connections of dampers sparingly as applicable.	X		
8	Check the valve(s) for signs of leakage and proper operation. If leak is detected, submit a UE.	X		
9	Clean coils by brushing, blowing, vacuuming, or pressure washing.	X		
10	Check coils for leaking, tightness of fittings.	X		
11	Use fin comb to straighten coil fins as needed.	X		
12	Check belts for wear and cracks, adjust tension or alignment as applicable. Replace belts when necessary.	X		
13	Check rigid couplings for alignment on direct drives, and for tightness of assembly	X		
14	Vacuum interior of unit.	X		

CHECK POINT	CHECKPOINT DESCRIPTION	TASK COMPLETE		NOTES/ ACTIONS (IF TASK COMPLETE IS CHECKED NO, PROVIDE EXPLANATION)
		YES	NO	
15	Check filter door for proper gasketing and air leaks. Correct as necessary.	X		
16	Change the filter as needed with the correct size and type filter.	X		
17	Insure that drain(s) are clear and running.	X		
18	Clean up work area.	X		

Note: The technician shall perform any repairs identified during PM up to $250 (direct labor and direct material cost) per PM occurrence. For any deficiencies found exceeding $250 open a corrective maintenance (CM) ticket and include the Asset #, WO #, photos, and a detailed discription of the deficiency.
To be perfomed by: General Maintenance Worker
Additional Notes:

PREVENTATIVE MAINTENANCE PROGRAM CHECKLIST

AIR HANDLER

SITE AND BLDG #: PA168-B1

MECHANIC SIGNATURE: [signature] **DATE:** 5/14/19

LOCATION/RM #: **WO#** 8752 **ASSET #** 3110/3112

START TIME: 7AM **FINISH TIME:** 2PM

CHECK POINT	CHECKPOINT DESCRIPTION	TASK COMPLETE YES	TASK COMPLETE NO	NOTES/ ACTIONS (IF TASK COMPLETE IS CHECKED NO, PROVIDE EXPLANATION)
SPECIAL INSTRUCTIONS				
1	In addition to the procedure(s) outlined in this standard, the equipment manufacturer's recommended maintenance procedure(s) and/or instruction(s) shall be strictly adhered to.	X		
2	Remove power at Drive or at Breaker Panel. Verify with tester or meter that power has been removed. Install lock out tag out if servicing alone or in confined space for safety precautions.	X		
TO BE PERFORMED AT EACH INSPECTION SERVICE				
1	Check fan blades and moving parts for cracks and excessive wear.	X		
2	Check running motor amperatures on all three phases (record in note column) notate L1, L2, and L3 amp draws.	X		L1_____ L2_____ L3_____
3	Tighten all electrical connectors/lugs to proper torque.	X		
4	If unit is a multi-zone air handler, then check each individual zone damper and associated controls.	X		
5	Check bearing collar set screws on fan shaft to make sure they are tight.	X		
6	Check filters for dirt accumulations, replace as necessary. Check belt, repair or replace as necessary.	X		
7	Check damper actuators and linkage for proper operation. Adjust linkage on dampers if out of alignment.	X		
8	Lubricate mechanical bearings and connections sparingly.	X		
9	Clean coils by brushing, blowing, vacuuming, or pressure washing.	X		
10	Check coils for leaking, tightness of fittings.	X		
11	Use fin comb to straighten coil fins.	X		
12	If applicable, clean strainer (annually).	X		
13	Flush and clean condensate pans and drains, remove all rust prepare metal and paint. Hose down coils and drain pans and wash with an appropriate EPA approved solution approved solution. Treat condensate pans with an EPA approved biocide.	X		

CHECK POINT	CHECKPOINT DESCRIPTION	TASK COMPLETE		NOTES/ ACTIONS (IF TASK COMPLETE IS CHECKED NO, PROVIDE EXPLANATION)
		YES	NO	
14	Check belts for wear and cracks, adjust tension or alignment. Replace belts when necessary. Multi-belt drives shall only be replaced with matched sets.			
15	Check rigid couplings for alignment on direct drives, and for tightness of assembly. Check flexible couplings for alignment and wear.			
16	Check and test freezestat for proper operation			
17	Vacuum interior of unit.			
18	Check filter doors and access doors for proper gasketing and air leaks. Correct as necessary.			
19	Lubricate fan shaft bearings while unit is running. Add grease slowly until slight bleeding is noted from the seals. Do not over lubricate. Remove old or excess lubricant.			
20	Clean up work area.			

Note: The technician shall perform any repairs identified during PM up to $250 (direct labor and direct material cost) per PM occurrence. For any deficiencies found exceeding $250 open a corrective maintenance (CM) ticket and include the Asset #, WO #, photos, and a detailed discription of the deficiency.
To be perfomed by: HVAC Technician
Additional Notes:

PREVENTATIVE MAINTENANCE PROGRAM CHECKLIST

AIR COOLED CHILLER, PACKAGE UNIT

SITE AND BLDG #: PA168-B1

MECHANIC SIGNATURE: [signature] **DATE:** 5/14/19

LOCATION/RM #: **WO#** 8752 **ASSET #** 3224

START TIME: 7AM **FINISH TIME:** 2PM

CHECK POINT	CHECKPOINT DESCRIPTION	TASK COMPLETE YES	TASK COMPLETE NO	NOTES/ ACTIONS (IF TASK COMPLETE IS CHECKED NO, PROVIDE EXPLANATION)
SPECIAL INSTRUCTIONS				
1	In addition to the procedure(s) outlined in this standard, the equipment manufacturer's recommended maintenance procedure(s) and/or instruction(s) shall be strictly adhered to.	X		
2	Follow lock out/tag out procedures at all times. De-energize or discharge all hydraulic, electrical, mechanical, or thermal energy prior to beginning work.	X		
3	Comply with the latest provisions of the Clean Air Act and Environmental Protection Agency (EPA) regulations as they apply to protection of stratospheric ozone.	X		
4	No intentional venting of refrigerants is permitted. During the servicing, maintenance, and repair of refrigeration equipment, the refrigerant must be recovered.	X		
5	Whenever refrigerant is added or removed from equipment, record the quantities on the appropriate forms. Forms tobe maintainted by technician in universal waste binder.	X		
6	Recover, recycle, or reclaim the refrigerant as appropriate.	X		
7	If disposal of the equipment item is required, follow regulations concerning removal of refrigerants and disposal of the item.	X		
8	If materials containing refrigerants are discarded, comply with EPA regulations as applicable.	X		
9	Refrigerant oils to be treated as hazardous waste.	X		
10	Closely follow all safety procedures described in the Safety Data Sheet (SDS) for the refrigerant and all labels on refrigerant containers.	X		
11	Remove access covers prior to accomplishing check points.	X		
TO BE PERFORMED AT EACH INSPECTION SERVICE				
CONDENSER				
1	Remove debris from air screen and clean underneath unit.	X		
2	Pressure wash coil with proper cleaning solution.	X		
3	Straighten fin tubes with fin comb.	X		

CHECK POINT	CHECKPOINT DESCRIPTION	TASK COMPLETE		NOTES/ ACTIONS (IF TASK COMPLETE IS CHECKED NO, PROVIDE EXPLANATION)
		YES	NO	
4	Check electrical wiring and tighten loose connections. Check fused disconnect switches for condition and operation.	X		
5	Check mounting for tightness.	X		
6	Check for corrosion. Clean and treat with inhibitor as needed.	X		
7	Check fan or blower for bent or damaged blades and imbalance.	X		
8	Lubricate shaft and motor bearings on fans and remove old or excess lubricant, if applicable.	X		
9	Inspect pulleys, belts, couplings, etc.; adjust tension and tighten mountings as necessary. Change badly worn belts. Multi-belt drives should be replaced with matched sets.	X		
EVAPORATOR				
1	Inspect evaporator for any obvious deficiencies.	X		
2	Inspect plumbing, valves and flanges for leaks and correct as needed.	X		
COMPRESSOR(S)				
1	Lubricate drive coupling, if applicable.	X		
2	Lubricate motor bearings (non-hermetic), if applicable.	X		
3	Check bearrings for vibrations or unuasual noises.	X		
4	Leak test unit with soap test or electronic device.	X		
5	Check compressor oil level., if applicable.	X		
6	Run machine; check action of controls, relays, switches, etc. to see that: a. Compressor(s) run at proper settings. b. Suction and discharge pressures are proper.	X		
7	Check vibration eliminators. Replace as necessary.	X		
8	Check safety controls for high pressure cut off.	X		
CONTROLS				
1	Confirm chiller is operating through building automation.	X		

Note: The technician shall perform any repairs identified during PM up to $250 (direct labor and direct material cost) per PM occurrence. For any deficiencies found exceeding $250 open a corrective maintenance (CM) ticket and include the Asset #, WO #, photos, and a detailed discription of the deficiency.

To be perfomed by: HVAC Technician

Additional Notes:

PREVENTATIVE MAINTENANCE PROGRAM CHECKLIST

OUTDOOR CONDENSING UNIT

SITE AND BLDG #: PA168-B1

MECHANIC SIGNATURE: 

DATE: 5/14/19

LOCATION/RM #:

WO# 8752

ASSET # 3326/3334

START TIME: 1 PM

FINISH TIME: 2 PM

CHECK POINT	CHECKPOINT DESCRIPTION	TASK COMPLETE YES	TASK COMPLETE NO	NOTES/ ACTIONS (IF TASK COMPLETE IS CHECKED NO, PROVIDE EXPLANATION)
	SPECIAL INSTRUCTIONS			
1	In addition to the procedure(s) outlined in this standard, the equipment manufacturer's recommended maintenance procedure(s) and/or instruction(s) shall be strictly adhered to.	X		
2	Schedule outage of unit with personnel in area the unit serves.	X		
3	Follow lock out/tag out procedures at all times. De-energize or discharge all hydraulic, electrical, mechanical, or thermal energy prior to beginning work.	X		
4	If disposal of the equipment is required, follow regulations concerning removal of refrigerants and disposal of the unit.	X		
	TO BE PERFORMED AT EACH INSPECTION SERVICE			
1	Remove debris from air screen and clean underneath unit.	X		
2	Wash coil with coil cleaning solution - Rinse Thoroughly	X		
3	Straighten fin tubes with fin comb, as needed.	X		
4	Check electrical connections for tightness.	X		
5	Check mounting base for tightness.	X		
6	Inspect fans for bent blades, unbalance, excessive noise and vibrations.	X		
7	Inspect all piping for leaks and tighten loose connections.	X		
8	Check wires at condenser electrical fused safety switches for tightness and burned insulation. Repair as necessary.	X		
9	Check supply air temperature to ensure unit is operating properly. If possible record room temperature.	X		
10	Inspect unit for overall condition and recommend for replacement or other needed repairs.	X		
11	Clean up work area.	X		

Note: The technician shall perform any repairs identified during PM up to $250 (direct labor and direct material cost) per PM occurrence. For any deficiencies found exceeding $250 open a corrective maintenance (CM) ticket and include the Asset #, WO #, photos, and a detailed discription of the deficiency.

To be perfomed by: HVAC Technician

Additional Notes:

PREVENTATIVE MAINTENANCE PROGRAM CHECKLIST

ENERGY RECOVERY VENTILATOR

SITE AND BLDG #: PA168-B1

MECHANIC SIGNATURE: [signature]

DATE: 7/14/19

LOCATION/RM #:

WO# 8752 **ASSET #** 3349

START TIME: 7 AM

FINISH TIME: 2 PM

CHECK POINT	CHECKPOINT DESCRIPTION	TASK COMPLETE YES	TASK COMPLETE NO	NOTES/ ACTIONS (IF TASK COMPLETE IS CHECKED NO, PROVIDE EXPLANATION)
	SPECIAL INSTRUCTIONS			
1	In addition to the procedure(s) outlined in this standard, the equipment manufacturer's recommended maintenance procedure(s) and/or instruction(s) shall be strictly adhered.	X		
2	Follow lock out/tag out procedures at all times. De-energize or discharge all hydraulic, electrical, mechanical, or thermal energy prior to beginning work.	X		
	TO BE PERFORMED AT EACH INSPECTION SERVICE			
1	Check all moving components for proper lubrication. Apply lubrication where required.	X		
2	Check dampers to ensure they open and close properly.	X		
3	Check all fan belts for wear, tension, alignment, and dirt accumulation.	X		
4	Check fan wheels and fasteners for oil and dust accumulation and clean as necessary.	✓		
5	Check, clean, and/or replace both internal and external filters as necessary.	X		

Note: The technician shall perform any repairs identified during PM up to $250 (direct labor and direct material cost) per PM occurrence. For any deficiencies found exceeding $250 open a corrective maintenance (CM) ticket and include the Asset #, WO #, photos, and a detailed discription of the deficiency.

To be perfomed by: HVAC Technician

Additional Notes:

PREVENTATIVE MAINTENANCE PROGRAM CHECKLIST

FURNACE

ACTIVITY AND BLDG #: PA168-B1

MECHANIC SIGNATURE: [signature] **DATE:** 5/14/19

LOCATION/RM #: **WO#** 8752 **ASSET #** 3404/3406

START TIME: 7AM **FINISH TIME:** 2 PM

CHECK POINT	CHECKPOINT DESCRIPTION	TASK COMPLETE YES	TASK COMPLETE NO	NOTES/ ACTIONS (IF TASK COMPLETE IS CHECKED NO, PROVIDE EXPLANATION)
	SPECIAL INSTRUCTIONS			
1	Review manufacturer's instructions.	X		
2	Follow lock out/tag out procedures at all times. De-energize or discharge all hydraulic, electrical, mechanical, or thermal energy prior to beginning work.	X		
	TO BE PERFORMED AT EACH INSPECTION SERVICE			
1	Remove furnace ends and access panels if applicable.	X		
2	Check the fire box liner or refractory for cracks and leaks.	X		
3	Check smoke stack for obstructions, leaks, etc.	X		
4	Clean bottom of smoke stack (breaching).	X		
5	Clean all fans and motors.	X		
6	Check operation of controls and safeties.	X		
7	Lubricate as required.	X		
8	Check and clean plenum (clean cooling coils and check for leaks, if	X		
9	Replace furnace and access panels ends if removed.	X		
10	Check all motors, belts, pulleys, shafts, etc. for alignment.	X		
11	Treat all rusted areas with rust inhibitor and touch up paint.	X		
12	Remove lock outs and tags. Restore fuel and power supply.	X		

Note: The technician shall perform any repairs identified during PM up to $250 (direct labor and direct material cost) per PM occurrence. For any deficiencies found exceeding $250 open a corrective maintenance (CM) ticket and include the Asset #, WO #, photos, and a detailed discription of the deficiency.

To be perfomed by: HVAC Technician

Additional Notes:

PREVENTATIVE MAINTENANCE PROGRAM CHECKLIST

VAV BOX

SITE AND BLDG #: PA168-B1

MECHANIC SIGNATURE: [signature] **DATE:** 5/14/19

LOCATION/RM #: **WO#** 8752 **ASSET #** 4783/4827

START TIME: 7AM **FINISH TIME:** 2PM

CHECK POINT	CHECKPOINT DESCRIPTION	TASK COMPLETE YES	TASK COMPLETE NO	NOTES/ ACTIONS (IF TASK COMPLETE IS CHECKED NO, PROVIDE EXPLANATION)
SPECIAL INSTRUCTIONS				
1	In addition to the procedure(s) outlined in this standard, the equipment manufacturer's recommended maintenance procedure(s) and/or instruction(s) shall be strictly adhered.	X		
2	Follow lock out/tag out procedures at all times. De-energize or discharge all hydraulic, electrical, mechanical, or thermal energy prior to beginning work.	X		
TO BE PERFORMED AT EACH INSPECTION SERVICE				
1	If EMS system permits, check that the operating controls activate damper per design specifications.	X		
2	If required, check damper linkage for tightness and lightly lubricate.	X		
3	If required, inspect dampers for free movement.	X		
4	If required, inspect actuators for tightness to mounting brackets.	X		
5	As needed, tighten electrical connections to servo motor.	X		
6	Inspect unit for overall condition and recommend for replacement or other needed repairs.	X		

Note: The technician shall perform any repairs identified during PM up to $250 (direct labor and direct material cost) per PM occurrence. For any deficiencies found exceeding $250 open a corrective maintenance (CM) ticket and include the Asset #, WO #, photos, and a detailed discription of the deficiency.

To be perfomed by: HVAC Technician

Additional Notes:

PREVENTATIVE MAINTENANCE PROGRAM CHECKLIST

HUMIDIFICATION SYSTEMS

SITE AND BLDG #: PA168-B1

MECHANIC SIGNATURE: [signature] **DATE:** 5/14/19

LOCATION/RM #: **WO#** 8752 **ASSET #** 5058

START TIME: 7 AM **FINISH TIME:** 2 PM

CHECK POINT	CHECKPOINT DESCRIPTION	TASK COMPLETE YES	TASK COMPLETE NO	NOTES/ ACTIONS (IF TASK COMPLETE IS CHECKED NO, PROVIDE EXPLANATION)
	SPECIAL INSTRUCTIONS			
1	Review manufacturer's instructions.	✓		
2	Turn off water supply for inspection.	✓		
3	Follow lock out/tag out procedures at all times. De-energize or discharge all hydraulic, electrical, mechanical, or thermal energy prior to beginning work.	✓		
4	Use of work gloves may be necessary due to caustic residual mineral deposits.	✓		
	TO BE PERFORMED AT EACH INSPECTION SERVICE			
1	Operate humidistat through its throttling range to verify activation, or deactivation of humidifier.	✓		
2	As needed, clean and flush condensate pans, drains, water pans, etc. Remove corrosion, and repaint or recoat as needed. If a corrosion preventive chemical is used, ensure that it does not become a part of the indoor air by creating large amounts of volatile organic compounds or irritants. Check the Safety Data Sheet (SDS) to see what hazardous products are present. If hazardous products are present rinse very well before the system is returned to use. Ensure that the paint lead level is 0.06% or less.	✓		
3	Check condition of heating element. Clean steam coils.	✓		
4	Clean steam/water spray nozzles. Adjust/replace as needed.	✓		
5	Inspect steam trap for proper operation.	✓		
6	Inspect pneumatic controller for air leaks.	✓		
7	Inspect water lines for leaks and corrosion. Tighten all connections and repair leaks.	✓		

Note: The technician shall perform any repairs identified during PM up to $250 (direct labor and direct material cost) per PM occurrence. For any deficiencies found exceeding $250 open a corrective maintenance (CM) ticket and include the Asset #, WO #, photos, and a detailed discription of the deficiency.

To be perfomed by: HVAC Technician

Additional Notes: