Grab a clipboard and take this map along on your treasure hunt. Focus on uncovering opportunities to save. When you find something, make notes about location; tools, materials, or expertise needed; or further research required. Feel free to add to or modify this list to suit your own needs.

Facility Name ___________________________  Floor _____  Date _______  Team ___________________________

### Property Management and Maintenance Teams
- Note your EUI and ENERGY STAR Score in Portfolio Manager.
- Ensure that facility energy management plan and operations & maintenance plan are up to date, and that appropriate staff has reviewed the latest versions.

### COMMON AREAS

#### Lighting
- Identify where lights may have been left on unnecessarily in unoccupied spaces, such as activity rooms, offices, and vacant units. Record your observations.
- Observe exterior areas such as parking lot lights and decorative exterior lighting during the day to determine if lighting has been left on in the daylight. Record your observations.
- Identify and assess opportunities to use automated lighting controls:
  - Occupancy/motion sensors for low-traffic areas.
  - Timers or daylight sensors to dim or turn off exterior and parking lot lights during the day.
  - Timers to turn off decorative lighting.
  - Dimming controls in locations where there is natural lighting (e.g., near windows, skylights, and light tubes).
- Confirm that installed lighting controls are operating as intended.
- Identify where reflectors can be practically added to existing lighting.
- Consider working with a lighting expert to identify whether any areas are over-lit compared to requirements or design levels; consider opportunities for de-lamping.
- Identify and de-energize and/or remove ballasts that are not in use.
Evaluate the opportunity to upgrade to more energy-efficient lighting options:

- Replace T12 fluorescents with tubular LEDs (TLEDs), or if not feasible, T8 or T5 fluorescents.
- Upgrade incandescent and CFL applications to LED (especially for task lighting or specialty applications).
- Use LED Exit signs in place of incandescent or CFL models.

### Building Envelope

- Inspect doors and windows to identify gaps or cracks that can be repaired.
  - Note damaged or missing weather stripping.
- Inspect trash room and trash chute doors to identify gaps, cracks, worn and/or leaky door seals/gaskets that can be repaired.
- Note air leaks that should be sealed with caulking or other sealant.
- Inspect insulation levels and identify inadequacies to be addressed (including loading docks and garage doors, if appropriate).
- Assess opportunity to install vinyl curtains in loading areas, if applicable.
- Note any doors left open to the outside and to any unheated or uncooled areas.
- Assess the opportunity to install solar film or other window coverings on east, west, or south exposures to reduce solar heat gain and heat loss.
- In warm climates, assess the opportunity to install a white roof covering when repairing or replacing the roof.

### Equipment/Plug Loads (If Applicable)

- Identify any new office or common area equipment that will be needed soon; make plans to ensure they are ENERGY STAR certified where possible.
- Identify any equipment left on overnight (including those left in sleep/idle or screen saver mode); develop a plan to address them.
- Identify and discontinue the use of personal heaters and fans in offices. The use of such personal devices may indicate broader hot/cold issues that should be addressed at the system level.
- Ensure that power management settings are activated on common area equipment such as TV monitors, printers, and copiers.
Ensure that large-screen TV monitors in common areas are turned off during unoccupied times.

Identify where power strips can be used to easily disconnect from power source. Consider the use of advanced power strips.

Check if vending machines are turned off or put in sleep mode at the end of the day. Consider installing motion/occupancy-based controls for vending machine lights.

Look for opportunities to replace older vending machines with new ENERGY STAR certified vending machines.

If your building has commercial kitchen and food service areas, follow the tips on the Treasure Map for Retail/Grocery Stores.

Identify any new common area laundry appliances that will be needed soon; make plans to ensure they are ENERGY STAR certified where possible.

HVAC

Ensure that thermostats and outside air temperature sensors are properly calibrated/maintained.

Ensure that thermostats are set to appropriate temperatures based on seasonal and local weather conditions.

Ensure that thermostats are properly located to be representative of the room or zone for which the temperature is being controlled.

Ensure that electronics are located away from thermostats.

Identify where locking covers for thermostats and ventilation controls can be installed to prevent unauthorized adjustments.

Confirm proper implementation of a temperature setback policy for heating/cooling during periods of low activity or occupancy, particularly for amenity spaces (including any special consideration for summer months or school breaks).

Identify any potential obstructions that limit free airflow to registers.

Ensure window shades are available to block excess heat gain; make a plan to educate students and staff about when to use them in common areas and resident units.
Ensure that HVAC system components are being maintained regularly, including:

- Replace filters as needed according to local and seasonal conditions.
- Inspect and clean evaporator and condenser coils.
- Clean fan blades and adjust belts as needed.
- Inspect water/steam pipes and ducts for leaks and/or inadequate insulation.
- Evaluate furnace/boiler efficiency and clean/tune up as needed (including boiler water treatment and inspection of steam traps, as appropriate).
- Check chiller and cooling tower components for fouling or corrosion; ensure proper water treatment is in place.

Evaluate how chillers operate during the cold months and determine if chiller or pumps can be shut off.

Identify and assess opportunities to use occupancy sensors to control HVAC in leasing office, personal offices, and amenity and common spaces.

If applicable, check underground parking garage ventilation systems to confirm that carbon monoxide (CO) sensors are properly calibrated, and that fans are only operating when specified CO levels have been exceeded.

Assess the opportunity to install CO monitoring/control for parking garage ventilation systems.

Check insulation on hot water heaters, pipes, and storage tanks, if applicable.

Consider tankless, on-demand water heaters for resident units and low-use areas.

**Advanced HVAC**

The items listed below can be complex to assess and implement and may or may not represent energy-saving opportunities depending on the equipment and current operations at your property. Work with your engineering team or HVAC experts to evaluate whether these analyses might be applicable.

- Identify and make plans to address instances of unnecessary simultaneous heating and cooling.
- Perform testing and balancing of air and water systems.
- Monitor make-up air ventilation and ensure the proper functioning of dampers to achieve outside air requirements.
- Verify and calibrate operation of variable air volume (VAV) boxes, where applicable.
- Check for unusual noise or vibration from compressors and motors, as this may indicate a decrease in performance.
- Evaluate boiler efficiency and clean/tune up as needed.
- Assess opportunities to install hot water reheat coils in place of electric reheat, and to use waste heat where possible.
- Assess the opportunity to install and use air-side economizers, so that outside air can be used for “free cooling.”
- Identify and assess opportunities for heat recovery (e.g., heat pumps, variable refrigerant systems).
- Identify and assess opportunities for installing variable frequency drives (VFDs) and implementing controls for fan and pump motors, and VAV boxes in the ductwork – especially where variable loads are being served.

**Refrigeration, Kitchen, and Food Service Equipment (If Applicable)**

- Ensure that unused refrigeration units are turned off.
- Check that minimum recommended refrigeration temperatures are being maintained.
- Verify operation of defrost timers and moisture sensors to ensure optimal performance.
- Identify any potential obstructions to ensure free airflow to cold air supply and return registers.
- Check for unusual noise or vibration from compressors and motors as this may indicate a decrease in performance.
- Assess plans for regularly cleaning refrigeration coils.
- Assess plans for regularly cleaning and disinfecting condensate drain pans.
- Identify for repair/replacement of refrigerator and freezer door seals or gaskets that are worn or leaking.
- Identify for repair/replacement of broken strip curtains.
- Identify where night curtains can be used.
- Consider adding doors to open refrigerated cases where feasible.
- Identify where automatic door closers for walk-in coolers can be installed.
- Consider venting or recovering the rejected heat off the refrigeration unit condensers.
- Identify opportunities to install electronically commutated motors (ECMs), if not already present on refrigeration equipment.
- Identify opportunities to install anti-sweat heat controls and LED lighting on refrigeration equipment, if not already present.
- Evaluate operating procedures for cooking/baking equipment to identify whether there are opportunities to reduce use (for example, preheating only when necessary, turning down/off equipment when not in use).
- Evaluate opportunities for updating to low-flow pre-rinse spray valves.

### Bathrooms
- Evaluate opportunities for installing low-flow showerheads and faucet aerators.
- Evaluate opportunities for installing high-efficiency toilets.

### RESIDENT UNITS
#### Vacant and Model Units
- Evaluate whether model units are powered down each night and powered back up in the mornings, or are left on 24/7.
- Identify where lights have been left on.
- Identify units that are fully conditioned while unoccupied; reset thermostats to appropriate settings for unoccupied spaces.
- Evaluate opportunities for replacing inefficient lighting with LEDs.
- Inspect PTAC filters, if applicable, and note for cleaning or replacement as needed.
- Identify any potential obstructions from HVAC registers to ensure free, more efficient airflow.
- Evaluate opportunities for installing ENERGY STAR certified appliances to replace older, less efficient models.
- Evaluate opportunities for installing low-flow showerheads and faucet aerators.
- Evaluate opportunities for installing high-efficiency toilets when repairing or replacing toilets.
- Identify door seals or gaskets on refrigerators and freezers that are worn or leaking, if applicable.
- Evaluate whether refrigerator coils are clean and free of obstructions, if applicable.