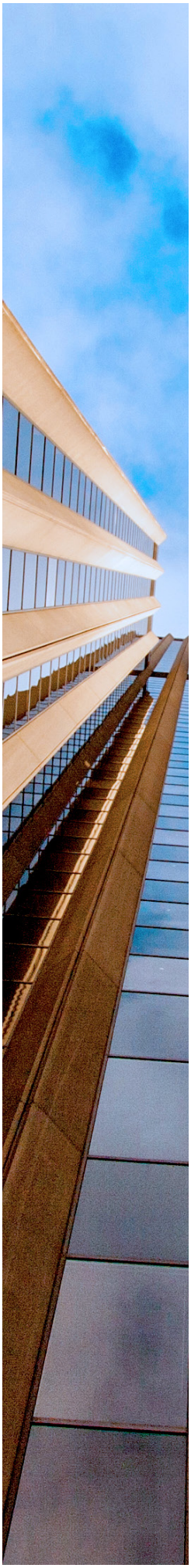

SEATTLE building tune-ups

BUILDING OWNER'S GUIDE

UNDERSTANDING THE TUNE-UPS PROCESS & REQUIREMENTS

This guide will help building owners and managers understand the Building Tune-Ups process. This information will orient you to what a Tune-Up Specialist will evaluate and verify in your building, so you can assess the required scope of work for your property.

STAGES OF THE TUNE-UP PROCESS

1 Find a Qualified Tune-Up Specialist

The City requires that the person conducting the building tune-up meets the qualifications of a Tune-Up Specialist. Tune-Up Specialists must have at least seven years of experience, including educational and/or professional experience, with commercial building operations and/or building energy management, and possess at least one of seven different professional certifications (visit seattle.gov/buildingtuneups for details). The Tune-Up Specialist must also complete and pass the City's required Tune-Up Specialist Training.

Seattle has many qualified Tune-Up Specialists. If your building has a regular maintenance contract, the firm may have staff qualified to conduct a tune-up. The Tune-Up Specialist should work collaboratively with your in-house staff and communicate with existing maintenance providers during all phases.

Building owners are free to develop a scope of work and hire a qualified Tune-Up Specialist of their choosing. Building Potential has a directory of qualified Tune-Ups Specialists at www.buildingpotential.org/industry-resources/building-tune-ups-service-providers/.

2 Conduct a Building Assessment

The Building Tune-Ups Assessment phase uses a whole building approach to review building systems to detect operational or maintenance problems. This systems-wide approach to evaluating a building is intended to help owners and facility managers discover hidden energy savings in mechanical and operational systems. Systems reviewed include: HVAC, lighting, domestic hot water, water usage, and the building envelope.

3 Identify Required and Voluntary Corrective Actions

During the Assessment, the Tune-Up Specialist will identify where the building meets operational or maintenance best practices, and where it has a deficiency and needs a Corrective Action. If a deficiency is found, the Tune-Up Specialist must identify a Corrective Action to fix the deficiency. Some are Required Corrective Actions (those in green) that must be implemented, and others are Voluntary Corrective Actions (yellow) whose implementation is optional. Voluntary Corrective Actions may include recommended improvements, further assessments or capital improvements that will generate immediate or long-term energy and water savings.

4 Implement Corrective Actions

Post Assessment, the Tune-Up Specialist will review their findings with you, explain the Required and Voluntary Corrective Actions, and discuss ways to implement the corrections. Implementation of Corrective Actions may be completed by the Tune-Up Specialist or someone else qualified to do so, such as in-house facility staff or another vendor.

5 Verify Changes

After implementation, the Tune-Up Specialist must verify that Corrective Actions have been completed and that all systems are functioning as intended.

6 Report to the City

Lastly, the Tune-Up Specialist must complete the Seattle Building Tune-Ups Summary Report, review the completed report with the building owner, and submit to the City of Seattle via the Seattle Services Portal by the building's associated due date.

WHAT TO EXPECT DURING THE ASSESSMENT

A comprehensive approach to assessing your building's systems and operations is central to the Building Tune-Ups process. Here's an overview of what your Tune-Up Specialist will evaluate when conducting the Assessment, as well as which Corrective Actions are voluntary or required.

BENCHMARKING VERIFICATION

The Tune-Up Specialist will review your building's existing ENERGY STAR Portfolio Manager benchmarking report to verify that the required information and utility consumption data are accurate and up-to-date. You will need to provide the building's Portfolio Manager Building ID and access to the account, username and password, for the Tune-Up Specialist to conduct the Verification.

BUILDING CHARACTERISTICS

The Tune-Up Specialist will also collect additional details about the building such as:

- Gross non-residential floor area
- Parking garage area
- Year built and description of major remodels
- Percent building occupied
- HVAC and lighting in spaces where the building uses the most energy
- Significant water uses, including irrigation
- Information about building materials (roof, walls)

BILLING ANALYSIS

The Tune-Up Specialist will also review water billing data for the previous two calendar years and energy use for heating and cooling for the last 12 months. Details of yearly water and energy use will be noted with an explanation for any abnormal seasonality fluctuations that may indicate energy and water saving opportunities.

BUILDING SYSTEMS

Your Tune-Up Specialist must assess all Building Assessment elements. To do this, they will look both at the physical equipment and any "building automation systems" or "building controls" that may be present in the building and may be accessible via a computer-based program.

If a deficiency is found, the Required Corrective Actions must be implemented. Implementation of the Voluntary Corrective Actions is optional. The Tune-Up Specialist will note areas where an Assessment Element does not apply to a building (for example, the building does not have a cooling tower). They may also note and briefly explain extenuating circumstances that would prevent implementation of a Required Corrective Action (for example, HVAC heating setpoints need to be higher than recommended standards to accommodate a special needs classroom in a school).

SECOND TUNE-UP CYCLE

BUILDING SIZE*	DUE
200,000+ SF	October 1, 2023
100,000-199,999 SF	October 1, 2024
70,000-99,999 SF	October 1, 2025
50,000-69,999 SF	October 1, 2026

** Excluding parking*

LIGHTING

BUILDING ASSESSMENT	CORRECTIVE ACTION & IMPLEMENTATION IF DEFICIENCY FOUND, TUNE-UP SPECIALIST WILL...
Identify any areas where lighting levels appear to be significantly higher than appropriate for the space use and occupant needs.	Recommend areas that could benefit from dimming or delamping and/or where the lighting power density can be improved. **Implementation is voluntary.**
Verify lighting sensors are working and located appropriately for the current functioning of the building.	Identify areas that could benefit from occupancy or daylight sensors. **Implementation is voluntary.**
Review lighting controls schedule and sequences.	Set or adjust schedules as appropriate to match actual building use patterns. **Implementation is required.**
Identify inefficient lighting equipment (such as incandescent, T12, or metal halide lighting).	Recommend lighting replacement(s). **Implementation is voluntary.**

HVAC

MAINTENANCE

BUILDING ASSESSMENT	CORRECTIVE ACTION & IMPLEMENTATION IF DEFICIENCY FOUND, TUNE-UP SPECIALIST WILL...
Verify HVAC equipment (grilles, coils, and ducts) is clean and adequately maintained according to ANSI/ASHRAE/ACCA Standard 180-2012 (or current edition).	Clean where adversely impacting the system. **Implementation is required.**
Check filters and strainers.	Clean or replace filters and strainers where appropriate and where they are adversely impacting system performance. **Implementation is required.**
	Recommend maintenance as appropriate. **Implementation is voluntary.**
Verify equipment observed (motors, fans, pumps, belts, pulleys, bearings, and steam traps) is in good working condition. Refer to ANSI/ASHRAE/ACCA Standard 180-2012 (or current edition).	Repair as appropriate where it is generally a standard or regular maintenance action. **Implementation is required.**
	Recommend repairs or replacement if the scope of work is more than standard maintenance. **Implementation is voluntary.**
If ducts and pipes are visible and accessible, verify HVAC duct and pipe insulation are in place.	Recommend installation or repair of insulation as appropriate. **Implementation is voluntary.**
Check valves and dampers.	Adjust to ANSI/ASHRAE/ACCA Standard 180-2012 (or current edition) if not opening and closing fully. **Implementation is required.**
Identify equipment approaching the end of its service life, per ASHRAE Service Life Database.	Recommend a replacement plan and schedule as appropriate. **Implementation is voluntary.**

Note: Implementation may be completed by Tune-Up Specialist, owner in-house staff, or other qualified vendor.

HVAC

OPERATIONS

BUILDING ASSESSMENT	CORRECTIVE ACTION & IMPLEMENTATION IF DEFICIENCY FOUND, TUNE-UP SPECIALIST WILL...
Review HVAC equipment schedules.	Set schedules to optimize operations for actual building occupancy patterns. **Implementation is required.**
Review HVAC set points.	Set or adjust to optimize function and energy efficiency of operations as appropriate to support the building use and occupant needs. **Implementation is required.**
Review reset schedules.	Establish or adjust schedules as appropriate. **Implementation is required.**
Review optimal stop/start capabilities.	Implement optimal stop/start capabilities as appropriate to support the building use and occupant needs. **Implementation is required.**
Verify HVAC sensors are functioning, calibrated, and in appropriate locations. Identify where sensors should be repaired, adjusted, calibrated, or moved.	Adjust/calibrate sensors as appropriate **(required)**, or recommend repairs if broken. **Implementation of repairs is voluntary.**
Verify HVAC controls are functioning as intended.	Adjust control sequences as appropriate for current facility requirements. **Implementation is required.**
Review HVAC controls for unintended or inappropriate instances of simultaneous heating and cooling.	Adjust HVAC controls to reduce or eliminate any unintended or inappropriate instances of simultaneous heating and cooling. **Implementation is required.**
Note any indications of significant air-balancing issues.	Recommend rebalancing of HVAC air and water systems where significant efficiency or comfort improvements can be achieved. **Implementation is voluntary.**
Identify areas with indications that ventilation rates may vary significantly from ASHRAE 62.1 standards and be inappropriate for current facility requirements.	Recommend an analysis of ventilation system. **Implementation is voluntary.**
Identify zones that are dominating multi-zone system operations.	Recommend solutions to isolate these zones. **Implementation is voluntary.**

BUILDING ENVELOPE

BUILDING ASSESSMENT	CORRECTIVE ACTION & IMPLEMENTATION IF DEFICIENCY FOUND, TUNE-UP SPECIALIST WILL...
Assess for roof penetrations and damage to siding.	Recommend repairs if scope of work is more than standard maintenance. **Implementation is voluntary.**
Identify duct leaks (such as disconnects and/or holes).	Recommend repairs if scope of work is more than standard maintenance. **Implementation is voluntary.**
Identify any uninsulated attic areas or where attic insulation has been disturbed.	Recommend repairs if scope of work is more than standard maintenance. **Implementation is voluntary.**

Note: Implementation may be completed by Tune-Up Specialist, owner in-house staff, or other qualified vendor.

WATER USE & DOMESTIC HOT WATER

BUILDING ASSESSMENT	CORRECTIVE ACTION & IMPLEMENTATION IF DEFICIENCY FOUND, TUNE-UP SPECIALIST WILL...
Verify cooling tower conductivity meter used to control blow down is calibrated and functioning correctly.	Adjust as appropriate. **Implementation is required.**
	Recommend repairs as appropriate. **Implementation is voluntary.**
Evaluate cooling towers for water leaks and excess water consumption.	Repair as appropriate for standard or regular maintenance actions. **Implementation is required.**
In irrigated areas over 500 square feet, verify irrigation schedules are in place and review schedules.	Identify opportunities for schedule improvements to improve efficiency and recommend appropriate action. **Implementation is voluntary.**
Verify irrigation rain sensors are calibrated, functioning properly, and located appropriately to collect relevant moisture data to trigger the operating system.	Adjust, calibrate, or repair as appropriate. **Implementation is required.**
Review water feature schedules.	Set to shutdown during nighttime or unoccupied periods as appropriate. **Implementation is required.**
Check irrigation system for leaks, overspray, broken heads, foliage blocking, plugged nozzles, excess pressure, or other operational problems.	Adjust and repair as appropriate for standard or regular maintenance actions. **Implementation is required.**
	Recommended repairs if scope of work is more than standard maintenance. **Implementation is voluntary.**
Check plumbing fixtures for leaks.	Repair as appropriate for standard or regular maintenance actions. **Implementation is required.**
	Recommend repairs if scope of work is more than standard maintenance. **Implementation is voluntary.**
Check hands free sensor-activated plumbing fixtures for proper operation.	Recommend repairs if scope of work is more than standard maintenance. **Implementation is voluntary.**
Check water flow fixtures.	Recommend repairs if scope of work is more than standard maintenance. **Implementation is voluntary.**
Review domestic hot water temperature set points.	Adjust set points to improve efficiency as appropriate for building and occupant needs. **Implementation is required.**
Review circulation pump controls.	Set or adjust as appropriate according to ANSI/ASHRAE/ACCA Standard 180-2012 (or current edition). **Implementation is required.**

Note: Implementation may be completed by a Tune-Up Specialist, owner in-house staff, or other qualified vendor.