

Preventative Maintenance

A strong preventative maintenance plan details the regular and routine maintenance of equipment and assets in order to ensure smooth operations and prevent any costly unplanned downtime from unexpected equipment failure. Simply put, a good preventative maintenance plan ensures that things are fixed before they break.

The MISD Preventive Maintenance Program is designed to accommodate:

- Facility & site preservation,
- Major mechanical, electrical and plumbing (MEP) equipment,
- Recreational equipment, and
- Safety & security.

It also takes the following factors into consideration:

- Reduction of operational expenses in the use of equipment and facilities;
- Minimizing disruption of the educational program by reducing the number of breakdowns and the amount of downtime;
- Evaluation of replacement and regular maintenance cost in comparison to preventive maintenance cost; and
- Safety of students and staff.

The MISD Preventative Maintenance Plan includes regular inspections or service of district equipment and assets to ensure that the learning environment is ready for students and staff every day. The below schedule details the frequency of inspections and preventative maintenance activities/services (PM). The Director of Maintenance and the Director of Facilities are responsible for adhering to the schedule.

Required Inspections Include:

Description	Frequency
Boilers	Bi-Annually
Back Flow Systems	Annually
Elevators	Annually



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Fire Alarms	Annually
Fire Sprinklers	Annually
Gas Meters	Bi-Annually
Kitchen Hoods	Semi-Annually

Additional Inspections or PM Service:

Description	Frequency
Grease Traps	Annually
HVAC - AHUs	Semi-Annually
HVAC - Air Filters	Semi-Annually/Portables every 3 months
HVAC - Boilers	Semi-Annually
HVAC - Chiller Cleanings, followed by Contractor Evaluation	Annually
HVAC - Cooling Tower	Annually
HVAC - Cooling Tower (water softener)	Weekly
HVAC - RTU	Semi-Annually
HVAC - Water Chemicals for Chillers & Boilers	Monthly
Ice Machines	Annually
Irrigation Systems	Annually
Playgrounds	Annually
RO - Filter Changes	Monthly
RO - Hoses	Annually
RO - Tank Sanitation	Monthly
Track - Cleaning	Monthly



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Track - Inspection	Annually
Turf - Deep Clean	Annually
Turf - Sweeping	Monthly
Turf - Inspection	Annually

Proposed for 2023-2024

Description	Frequency
Roof Inspections	Semi-Annually

In addition to the scheduled inspections and preventative maintenance tasks identified above, the following occurs on a daily basis:

1. Check Central Plant operations.
2. Check Central Plan energy management systems.
3. Check security systems.

Any concerns or deficiencies identified will be addressed as a priority.

Additionally, the MISD Preventative Maintenance Plan includes a regular schedule for items within district facilities that require regular replacement and/or rejuvenation. The below schedule details the frequency of these tasks. The Director of Facilities is responsible for adhering to the schedule.

Description	Frequency
Carpet	15 years
Flooring - Secondary Gyms (refinish)*	2 - 3 years
Flooring - Secondary Gyms (resurface)*	10 - 15 years
Flooring - Secondary Gyms (replacement)	50 years
Flooring - VCT (replacement)	15 years
Flooring - VCT (stripped & waxed)	Annually
Paint - Exterior	10 years



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Paint - Interior	10 years
Paint - Parking Lot Striping	5 years
Playground - Equipment*	15 - 20 years
Playground - Surface (non-turf)*	Annually
Tennis Courts (resurface)*	5-8 years
Track (replacement)*	15-20 years
Track (resurface)*	5-8 years
Turf Fields (replacement)*	10 years

* Environmental factors, including weather conditions and use, can impact the resurface/replacement schedule. This schedule should be utilized as a “rule of thumb” only and the safety of the surface for student use will drive the need to be resurfaced/replaced.

*As athletic areas/surfaces are addressed, the SPS team will evaluate additional components of courts, fields, and/or gyms to ensure appropriate functionality. The SPS team will partner with the Athletic Department to address any additional identified deficiencies.

Custodial Services

The custodial staff plays a crucial role in the education of MISD students by providing classrooms and facilities that are safe, clean and ready for learning each day. The Director of Custodial Services is responsible for ensuring that custodial staff follow consistent cleaning procedures and are provided ample training.

Grounds Maintenance

Lawn Maintenance

Mowing Schedule			
Location	Nov. - Feb.	March - May, October	June - September
Elementary	Monthly	Bi-Weekly	Weekly
Secondary	Monthly	Bi-Weekly	Weekly



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Sports Complexes	Daily	Daily	Daily
Misc. Sites (SPS, TWC, AG, Admin)	Monthly	Bi-Weekly	Bi-Weekly
Undeveloped Land	Monthly	Bi-Weekly	Bi-Weekly
Tree Pruning			
District Wide	November - February		
Shrub Trimming			
District Wide	April, July, November		

Herbicide applications are done around athletic areas twice a year and pest control is three times a year.

Irrigation

The primary purpose of a landscape irrigation system is to deliver supplemental water when rainfall is not sufficient to maintain the turfgrass to meet its intended purpose. A quality irrigation system and its proper maintenance are required to efficiently distribute water in a way that adequately maintains the turfgrass' health while conserving and protecting water resources and the environment.

The MISD Irrigation Foreman implements a seasonal irrigation schedule to ensure the health of our turfgrass at all MISD facilities where irrigation systems are installed.

Safety & Security

MISD will comply with Section 61.031 of the Commissioner's Rules Concerning School Facilities and shall perform twice-yearly maintenance checks to ensure the following:

- instructional facility exterior doors, door frame and associated components function properly, and by default are set to a closed, latched, and locked status;
- the locking mechanism for any ground-level windows that can be opened function properly;
- any perimeter barriers and related gates function properly;



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- all panic alert or similar emergency notification systems in classrooms and campus central offices function properly, which includes at least verification from multiple campus staff and classroom locations that a notification can be issued and received by the appropriately designated personnel, that the alert is successfully broadcast to all campus staff and to appropriate law enforcement and emergency responders, and that a potential threat observed on video triggers an alert from video surveillance monitoring systems;
- all phones report location services properly when engaging 911/E911 systems;
- all exterior master key boxes function properly and the keys they contain function properly;
- law enforcement and emergency responder two-way radios operate effectively within each instructional facility;
- two-way radios used by school system peace officers, school resource officers, or school marshals properly communicate with local law enforcement and emergency response services.

Roof access doors should default to a locked, latched, and closed position when not actively in use and be lockable from the interior.

Any deficiencies identified will be addressed as a priority.

Work Orders

School Plant Services utilizes FMX as its work order management system. This system allows work orders to be submitted, prioritized and assigned across our organization to streamline communication and resolve issues faster.

Work orders are prioritized as follows:

Priority 1 - Emergency

The concern poses an immediate danger to public health and safety, may cause disruption to normal operations, and could possibly cause significant financial loss. Examples of Emergency Works Orders address the following:

- Asbestos disturbance
- Power Outage
- Damaged door locks and handles
- Controlled access battery replacement
- Ruptured water lines, and
- HVAC failure in a wing of a building, a campus, or a large activity area.



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Priority 2 - Priority (Non-Emergency)

The concern poses a disruption to the learning environment, but does not pose an immediate danger to public health and safety. Examples of Priority Work Orders include:

- HVAC failure
- Plumbing (water leaks and malfunctioning fixtures, including irrigation systems)

Priority 3 - Routine

Routine requests that have little to no impact on the learning environment or normal school operation.

Priority 4 - Project, Deferred or Scheduled Maintenance

Operational Efficiency Management Standards

Purpose:

The Operational Efficiency Management Standards provide a best-practice framework of procedures to support the District's operational efficiency and minimize the cost of energy throughout the district.

Energy efficient operation means operating an energy consuming device so that it uses only as much energy as necessary to fulfill its intended function. The primary objective of an effective operational efficiency management standards are to eliminate or minimize energy waste and control costs while maintaining a comfortable and safe environment for students and staff.

Goal:

To assure maximum operating efficiency of lighting and HVAC systems, the primary energy consuming systems in the district. We will also enlist end-users to help make sure that lights are turned off in unoccupied rooms, exterior doors and windows are closed, etc.

Campus Support:

Campuses are encouraged to appoint an Energy Champion who will be familiar with and support the district's energy goals and the operational guidelines established for



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achieving them. Campus Energy Champion will stress the importance of energy efficiency in general while reinforcing the expectation of:

1. Turning off lights when not in use,
2. Closing doors, and
3. Shutting down computers, printers & CleverTouches each day.

Utility Standards of Operation:

Heating Ventilation & Air Conditioning (HVAC)

1. Thermostats/controls will be set and maintained by the HVAC Department. During heating mode (November 1 through March 15), equipment will be set to maintain the temperature between 69 and 72 degrees. During cooling mode (March 16 through October 31), equipment will be set to maintain the temperature between 71 and 74 degrees. Special consideration will be given for drastic weather conditions, as well as to certain preschool and special education classrooms. Warehouse and Maintenance areas where full-time staff are not assigned and where equipment is available will be maintained at 55 degrees during the heating season. The Principal, or their designee, will approve requests for temperature adjustments prior to submitting a work request to the Maintenance Office for the changes.
2. Space Heaters are prohibited unless issued by the Maintenance Department to control temperature or during an equipment failure. Space heaters decrease operating efficiency in the operation of central equipment.
3. Campus Administrators will ensure that all doors and windows remain closed while HVAC equipment is in operation; classroom doors should remain closed during the school day to help regulate temperature and humidity and because required as a safety precaution. Broken and/or poorly sealed windows and doors should have work orders created for their repair.
4. Under no circumstances will staff block, close, or alter supply or return air grilles. The air is balanced in our buildings and altering an air grill's settings will put the system into an unbalanced, less efficient operating mode.
5. Under no circumstances will staff block thermostats. Blocking the thermostat creates a false reading that impacts classroom comfort.
6. Malfunctioning equipment should be immediately reported to the Maintenance Department for repair.

7. Non-occupied areas will be maintained at 55 degrees during heating mode and 82 degrees during cooling mode.
8. After-hours requests for HVAC should be made 72 hours prior to the event. Where feasible, events occurring simultaneously will be scheduled in the same area of the building so that only one HVAC system has to be turned on. Small group activities should not be scheduled in the large areas of the building. Area usage will be coordinated with the Principal and Custodial staff in order to reduce energy consumption.
9. Special consideration will be given to the location of summer school classes to ensure the most cost-effective operation of cooling equipment.

Lighting (Interior and Exterior)

- 1.** Lighting will be shut off if rooms are unoccupied.
- 2.** Staff / Teachers shall be responsible for shutting off lights in their area at the end of the day or class period. Custodial crews shall turn off hallways lights (allowing for adequate safe-passage lighting) 30 minutes after dismissal.
- 3.** While cleaning, custodial staff will only turn on lights for the area they are cleaning. When complete, the lights will be turned off before proceeding to the next area.
- 4.** Exterior lighting will be controlled with photo-cells, timers or both. At larger campuses, controllers will be used to turn off most parking lot lights at midnight while still allowing perimeter lighting to remain on for security purposes. Perimeter lighting will remain on from dusk to dawn.

Technology Equipment

1. Teachers and staff will be responsible for shutting down computers at the end of the work day. If left on, campus computers will have the power options set to shut down at 7PM each day.
2. All computers will have the power options set to turn monitors off after 10 minutes of inactivity and to sleep after 30 minutes of inactivity.
3. CleverTouches and printers shall be manually turned off at the end of each day or during long periods of inactivity.
4. Copy machines have power options set to low energy mode after 60 minutes of inactivity.



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Additional Equipment

Refrigerators, microwaves, and other small appliances are allowed but staff is required to unplug these items during energy shutdown times / long holiday breaks.

Building Energy Audits:

MISD Maintenance Department staff will audit individual campuses/buildings periodically for energy usage to ensure that usage patterns coincide with the established standards. Typical audits will review lighting, heating/AC, and water usage to identify ways to conserve energy which will, in turn, allow the district to be better stewards of taxpayer dollars and decrease the district's carbon footprint.