

# Maintenance and Operations

Update for Wake County Commissioners

May 22, 2025



# Maintenance + Operations Staffing

## At a Glance

# Available Positions	305
# Total Filled Positions	268
# Total Vacancies	37
Vacancy Rate	12%



## Open Positions

	Available	Vacancy	% Filled	Compensation
Custodian	22	10	55%	Grade 18
Facility Maintenance Technician	81	6	93%	Grade 22
Head Custodian	35	3	91%	Grade 20
Communications, Master Craftsman	3	2	33%	Grade 25
Environmental and Grounds, Craftsman	5	2	60%	Grade 21
Refrigeration, Master Craftsman	2	1	50%	Grade 27
Plumbing, Master Craftsman	4	1	75%	Grade 26
HVAC, Craftsman	6	1	83%	Grade 25
Communications, Craftsman	2	1	50%	Grade 24
Electrical, Craftsman	4	1	75%	Grade 24
Security Technician	3	1	67%	Grade 25
Boilers, Technical Specialist	2	1	50%	Grade 30
Elevator Mechanic, Technical Specialist	2	1	50%	Grade 30



**View Salary Schedules:**

[wcpss.net/salarieschedules](http://wcpss.net/salarieschedules)







## Recommended Staffing Guidelines

The following table outlines recommended staffing levels by trade to support efficient, preventive maintenance and safe school operations.

Specifically from APPA's Operational Guidelines for Educational Facilities series (Custodial, Maintenance, Grounds volumes). These guidelines define staffing levels across five performance tiers (Levels 1–5), with Level 1 being the highest (cleanest/most proactive) and Level 5 the lowest (crisis response only). Many large districts use Level 3 staffing as their budgetary baseline due to constraints, but aim for Level 2 where possible — balancing preventive care, staffing efficiency, and cost.

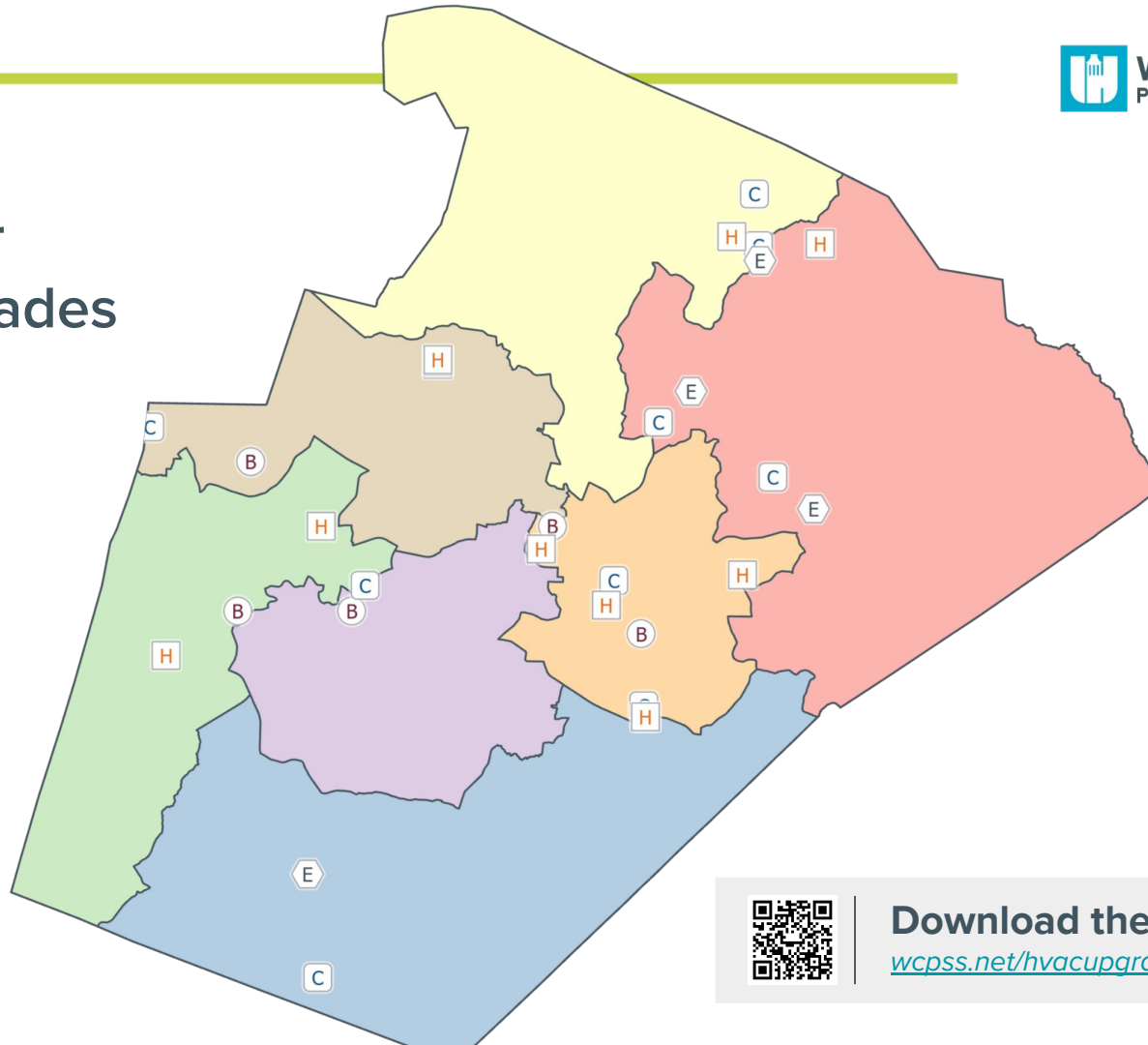
	Level 2 Staffing	Level 3 Staffing	WCPSS Total Positions
<b>HVAC Craftsmen/Technicians</b>	90–120 (1 per 200k–300k ft <sup>2</sup> )	54 technicians (1 per 500k ft <sup>2</sup> )	20
<b>Boiler Technicians</b>	3-5 Master Boiler Technicians	2–3 Master Boiler Technicians	2
<b>Electricians</b>	15–25 (1 per 1–2M ft <sup>2</sup> )	13 Electricians (1 per 2M ft <sup>2</sup> )	10
<b>Plumbers</b>	15–25 (1 per 1–2M ft <sup>2</sup> )	13 Plumbers (1 per 2M ft <sup>2</sup> )	9

# Completed HVAC/Chiller Facility Upgrades

-  Boiler
-  Chiller
-  Energy Plant
-  HVAC

Board of Commissioner  
District Number





-  1
-  2
-  3
-  4
-  5
-  6
-  7



**Download the data:**  
[wcpss.net/hvacupgrades](https://wcpss.net/hvacupgrades)

# In Progress HVAC/Chiller Facility Upgrades

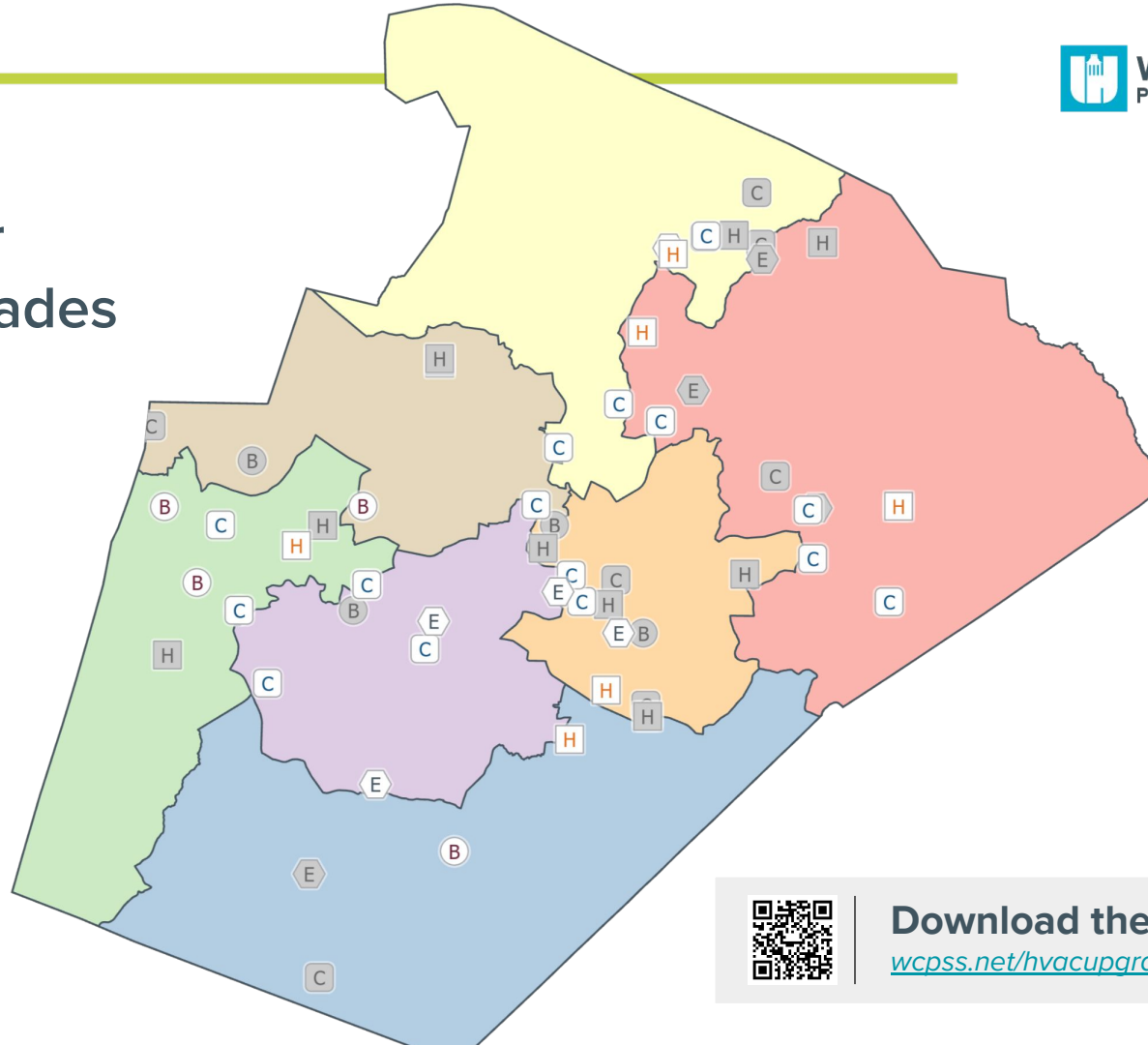
2025 - Present

-  Boiler
-  Chiller
-  Energy Plant
-  HVAC

(Completed projects  
displayed in grey)

Board of Commissioner  
District Number

-  1
-  2
-  3
-  4
-  5
-  6
-  7



**Download the data:**  
[wcpss.net/hvacupgrades](https://wcpss.net/hvacupgrades)

Over **one in three** schools lost at least one instructional day in the **past two years** due to HVAC-related issues.

HVAC upgrades are underway at the following schools that lost instructional days from 2023-2025:

- Carpenter ES
- Carroll MS
- Cary HS
- Durant MS
- East Millbrook MS
- East Wake HS
- Forest Pines ES
- Forestville ES
- Green Hope ES
- Knightdale ES
- Lake Myra ES
- Lufkin Rd MS
- Middle Creek HS
- Millbrook HS
- Moore Square MS
- North Forest Pines ES
- Oberlin MS
- Poe ES
- Reedy Creek MS
- Salem MS
- Southeast Raleigh HS
- Timbers Drive ES
- Turner Creek ES
- Wakefield ES
- Wakefield HS
- Washington ES
- Weatherstone ES



# Maintenance + Operations Prioritization Guideline

	<div>5</div> <b>EMERGENCY</b> <b>&lt; 24 HOURS</b> <b>(IMMEDIATE)</b>	<div>4</div> <b>URGENT</b> <b>&lt; 7 DAYS</b>	<div>3</div> <b>NORMAL - P1</b> <b>&lt; 30 DAYS</b>	<div>2</div> <b>NORMAL - P2</b> <b>&lt; 60 DAYS</b>	<div>1</div> <b>COSMETIC</b> <b>&lt; 180 DAYS</b>
Description	<ul style="list-style-type: none"> <li>• Critical equipment/systems shutdown</li> <li>• Sewer/ HAZMAT spill</li> <li>• Natural Disaster</li> <li>• Immediate danger to health, welfare, and safety</li> </ul>	<ul style="list-style-type: none"> <li>• Conditions that if left uncorrected would either interrupt or degrade the site</li> <li>• Critical plant backup equipment malfunction</li> <li>• Urgent safety or security issue</li> <li>• Offensive or hazardous to staff</li> <li>• Confirmed IAQ issue</li> <li>• Non-HAZMAT spill</li> </ul>	<ul style="list-style-type: none"> <li>• General maintenance activities that do not impact learning, safety or security risk</li> <li>• Inconvenience to personnel</li> <li>• Phase one IAQ Assessment</li> <li>• Lead Paint Analysis</li> <li>• Disposal of regulated waste</li> <li>• General IAQ Concern</li> <li>• Failures that create minor issues for the building or working environment</li> </ul>	<ul style="list-style-type: none"> <li>• Work needed to correct conditions identified as non-hazardous and/or not disruptive to existing educational program</li> </ul>	<ul style="list-style-type: none"> <li>• Improves overall appearance of campus and reduces deterioration</li> </ul>
Examples	<ul style="list-style-type: none"> <li>• HVAC, Boilers, chillers, ovens</li> <li>• Loss of utilities, exposed wiring</li> <li>• Major spills or leaks</li> <li>• Gang related graffiti</li> <li>• Exterior doors unsecured</li> <li>• 1<sup>st</sup> floor broken windows</li> </ul>	<ul style="list-style-type: none"> <li>• Backup boiler, backup chiller, backup oven, Single HVAC</li> <li>• Minor plumbing, roofing leaks</li> <li>• Graffiti (non-gang related)</li> <li>• Broken interior door lock</li> <li>• Broken or continuously running urinals/commodos</li> </ul>	<ul style="list-style-type: none"> <li>• Emergency/exit lights, classroom lights</li> <li>• Broken window (2<sup>nd</sup> floor &amp; above)</li> <li>• Loose door handle</li> <li>• Damaged ceiling tiles</li> <li>• Warm or cool classroom</li> <li>• Key requests/program access codes</li> <li>• Dripping faucets</li> </ul>	<ul style="list-style-type: none"> <li>• Auditorium &amp; gym lights (where adequate lighting exists)</li> <li>• Small drywall repair</li> <li>• Floor tile replacement</li> <li>• Relocating HVAC sensor</li> <li>• Broken/cracked glass replacement</li> <li>• Repairs to individual lights (interior/site) - where there is sufficient lighting</li> </ul>	<ul style="list-style-type: none"> <li>• Painting</li> <li>• Mulching</li> <li>• Small drywall repair</li> <li>• Carpet repair</li> <li>• Cosmetic work</li> <li>• Minor alterations &amp; improvements</li> </ul>



# School Facilities Closure Decisions

## 1. Issue Detected →

- HVAC / Water / Power
- Maintenance Team Investigates
- Estimated Fix Time Determined

## 2. Assessment Begins →

- Is the temperature affecting learning or safety?
- Can instruction continue effectively?

## 3. Coordination →

- Area Sup, Chief of Schools, Principal, Maintenance, Transportation, Communications

## 4. Key Questions Answered →

- Can buses be rerouted?
- Can lunch be served?
- Can families be notified early enough?

## 5. Time Check →

- Is it before 11:30 (secondary) / noon (elementary)?

## 6. Decision Made 🚌

- Early Dismissal or Remain in Session





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# Supply Chain Issues

There have been **no significant changes or new disruptions** to material availability or vendor lead times. Our supply partners remain stable, and essential inventory levels are being maintained.

We remain proactive in:

- **Forecasting needs** based on project cycles
- **Maintaining contingency reserves** for critical parts and materials
- **Staying in contact with vendors** to flag any early signs of potential delays

# Age of School Facilities

A significant portion of Wake County's school buildings were constructed between 1995 and 2005. As these facilities now approach or exceed 20 to 30 years of age, many are entering a critical phase where infrastructure systems, such as HVAC, roofing, plumbing, and technology infrastructure, require major repairs or replacement.



**Download the data:**

[wcpss.net/schoolages](https://wcpss.net/schoolages)



## 90+ Years Old

	Age	Last Renovation
Partnership Elementary	108	1999
Wake Forest Elementary	102	2004
Wiley Elementary	101	2020
Underwood Elementary	100	2003
Washington Elementary	100	2001
Hunter Elementary	98	2002
Project Enlightenment	98	2004
Olds Elementary	97	2002
Broughton High	95	2005



## 50+ Years Old

	Age	Last Renovation
Apex Elementary	72	2003
Ligon Middle	71	2006
Longview School	71	2007
Joyner Elementary	69	2003
Mount Vernon School	69	2003
North Garner Middle	69	2005
Oberlin Middle	69	2006
Poe Elementary	69	2010
Root Elementary (B)	66	2009

	Age	Last Renovation
Wake Forest High	66	2011
Martin Middle	65	2006
Combs Elementary	64	2000
Lincoln Heights Elementary	63	2017
Enloe High (west)	62	2009
Bugg Elementary	60	2010
Powell Elementary	60	2002
Smith Elementary	60	2009

## 50+ Years Old

	Age	Last Renovation
Carnage Middle	59	2000
Carroll Middle	59	2007
Enloe High (east)	59	2009
West Cary Middle	59	1996
Zebulon Middle	59	1998
Wilburn Elementary	58	2010
Briarcliff Elementary	57	1997
Garner High	57	2018
Millbrook High	57	2006

	Age	Last Renovation
Northwoods Elementary	57	2005
Adams Elementary	56	1999
Brentwood Elementary	56	1998
Douglas Elementary	56	2005
Sanderson High	56	2003

# 23%

**90 School Buildings**  
*are over 50 years old*



## 40-49 Years Old

	Age	Last Renovation
Lynn Road Elementary	48	2008
East Wake High	47	2009
Athens Drive High	46	2002
Farmington Woods ES	46	2003
Knightdale Elementary	43	1998
Apex Middle	41	2004
Zebulon Elementary	41	1997

# 8%

**29 School Buildings**

*are between 40 - 49 years old*



## 30-39 Years Old

	Age	Last Renovation
Wendell Elementary	39	
Fuquay Varina ES	37	In progress
Wake Forest Middle	36	
Brassfield Elementary	35	
Fox Road Elementary	35	
Penny Road Elementary	35	
Vance Elementary	35	1999
Lead Mine Elementary	34	
Rand Road Elementary	34	
Root Elementary	34	2009
Durant Road Elementary	33	
Leesville Road Middle	33	
Morrisville Elementary	33	

	Age	Last Renovation
Rolesville Elementary	33	2017
West Lake Elementary	33	
Willow Springs ES	33	
Creech Road Elementary	32	
East Garner Middle	32	2002
Leesville Road ES	32	
Pleasant Union ES	32	
West Lake Middle	32	
Leesville Road High	31	2002
Davis Drive Elementary	30	
Fuquay Varina High	30	2021

# 16%

**60 School Buildings**  
*are between 30 - 39 years old*



## 20-29 Years Old

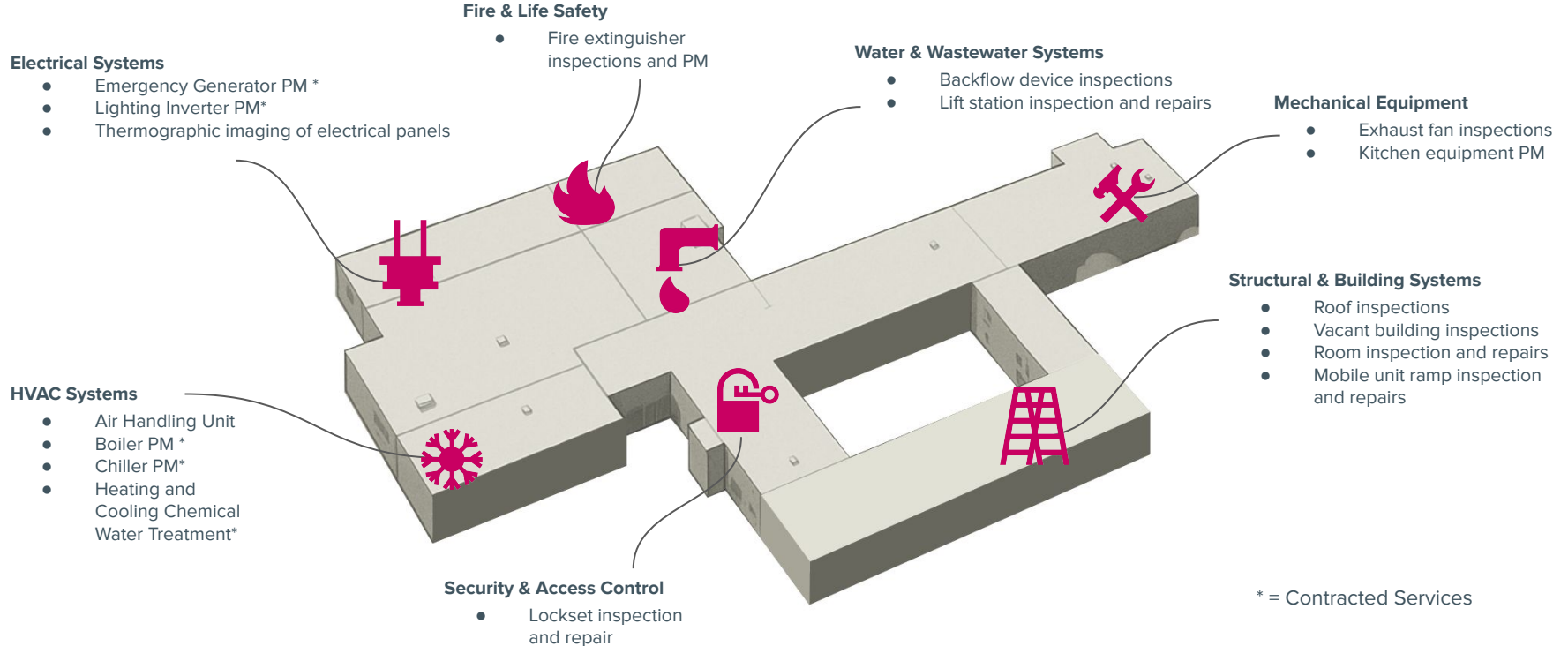
	Age	Last Renovation
Davis Drive Middle	29	
Durant Road Middle	29	
Hilburn Elementary	29	
Hodge Road Elementary	29	
Jeffreys Grove Elementary	29	
Oak Grove Elementary	29	
Weatherstone Elementary	29	
Baileywick Elementary	28	
Jones Dairy Elementary	28	
Holly Springs Elementary	27	
Olive Chapel Elementary	27	
Southeast Raleigh High	27	
Timber Drive Elementary	27	
Carver Elementary	26	
Dillard Drive Elementary	26	

	Age	Last Renovation
Dillard Drive Middle	26	
Lockhart Elementary	26	2009
Brooks Elementary	25	2017
Green Hope High	25	
Lufkin Road Middle	25	
Reedy Creek Elementary	25	
Wakefield Elementary	25	
East Millbrook Elementary	25	
Wakefield High	25	
Wakefield Middle	25	
Wildwood Forest ES	25	

# 22%

**86 School Buildings**  
*are between 20 - 29 years old*

# Preventative Maintenance



# Preventative Maintenance vs Emergency Repairs

Data from FY 2023-2024

<b>HVAC</b>	<b>#</b>	<b>%</b>
Preventive Maintenance	2,907	48.46%
Emergency Work Orders	756	12.60%
Urgent Work Orders	2,336	38.94%

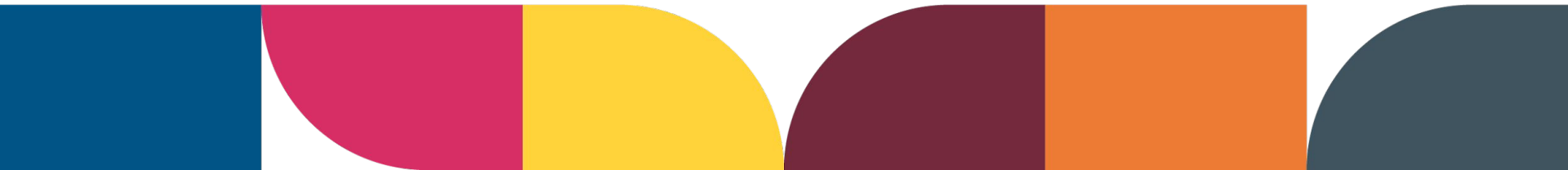
<b>TOTAL</b>	<b>#</b>	<b>%</b>
Preventive Maintenance	90,736	79.87%
Emergency Work Orders	7,015	6.18%
Urgent Work Orders	15,852	13.95%

# Work Orders 2024

	Service Requests	Work Orders	WO Complete	WO Cancelled	Labor Hours	Material Cost	Labor Cost	Contract Cost	Total Cost
Elementary	220	1,103	829	35	688	\$10,205	\$42,396	\$36,810	\$89,411
Middle	338	1,630	1,238	56	1,004	\$16,489	\$64,202	\$52,678	\$133,368
High	384	2,137	1,545	64	1,271	\$21,908	\$81,428	\$74,427	\$177,762

## Average Days to Complete

	Priority 5		Priority 4		Priority 3		Priority 2		Priority 1	
	Avg Days	# of WO	Avg Days	# of WO	Avg Days	# of WO	Avg Days	# of WO	Avg Days	# of WO
Elementary	< 1	28	12	66	37	627	63	22	35	96
Middle	< 1	48	13	95	38	939	53	24	38	131
High	1	49	13	99	44	1,176	43	43	30	135



## Work Orders by Type

	#	%
HVAC (AC Units, Boiler, Chiller, AHU)	32,650	15%
Plumbing (Tanks, Pumps, Water Heaters, Toilets)	16,888	8%
Electrical (Distribution Panels, Inverters, General Electrical Repairs)	5,260	2%
Grounds (Landscape, Playgrounds and Surfaces, Irrigations, Stormwater BMPs)	5,329	2%
Mobile (Single and Complex)	9,263	4%
Safety (Security, Fire Alarm, Access Control, Locks, Intercom, MOE, General Safety)	11,810	5%
Kitchen Equipment	1,792	1%
Energy Management	3,541	2%
Custodial Services	5,258	2%
Pest	7,573	3%
Schedule Requests (HVAC for off hours usage)	5,521	2%
Routine Maintenance	39,231	18%
Other Maintenance	78,399	35%



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# Addressing Concerns Our Plan of Action

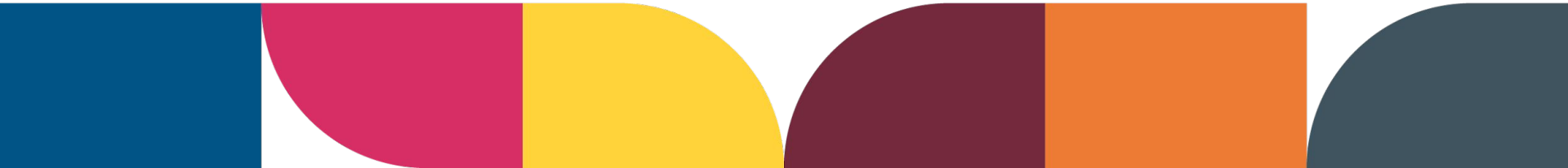


*Addressing Concerns | Our Plan of Action*

## Deferred Maintenance and Funding Needs

- Addressing maintenance needs—both current and future—requires funding.
- Our existing financial resources are limited.

**The Core Question:** How can we improve our facilities without new revenue?



## Reevaluate Current M&O Budget

- Identify opportunities to reallocate existing funds
- Ensure all maintenance areas receive at least minimal investment
  - *Example: Allocate painting funds—even if only for 5 schools per year*



*Addressing Concerns | Our Plan of Action*

## Local Current Expense Strategy

- Eliminate duplicated services to streamline operations
- Reevaluate programs for possible reallocation
- Embrace strategic abandonment when necessary



## Redirecting CIP Funding

- Identify completed or paused CIP areas  
→ *Example: Real estate acquisition not needed in next 3–4 years*
- Reallocate CIP resources
- Reassess technology investments and align with evolving student needs



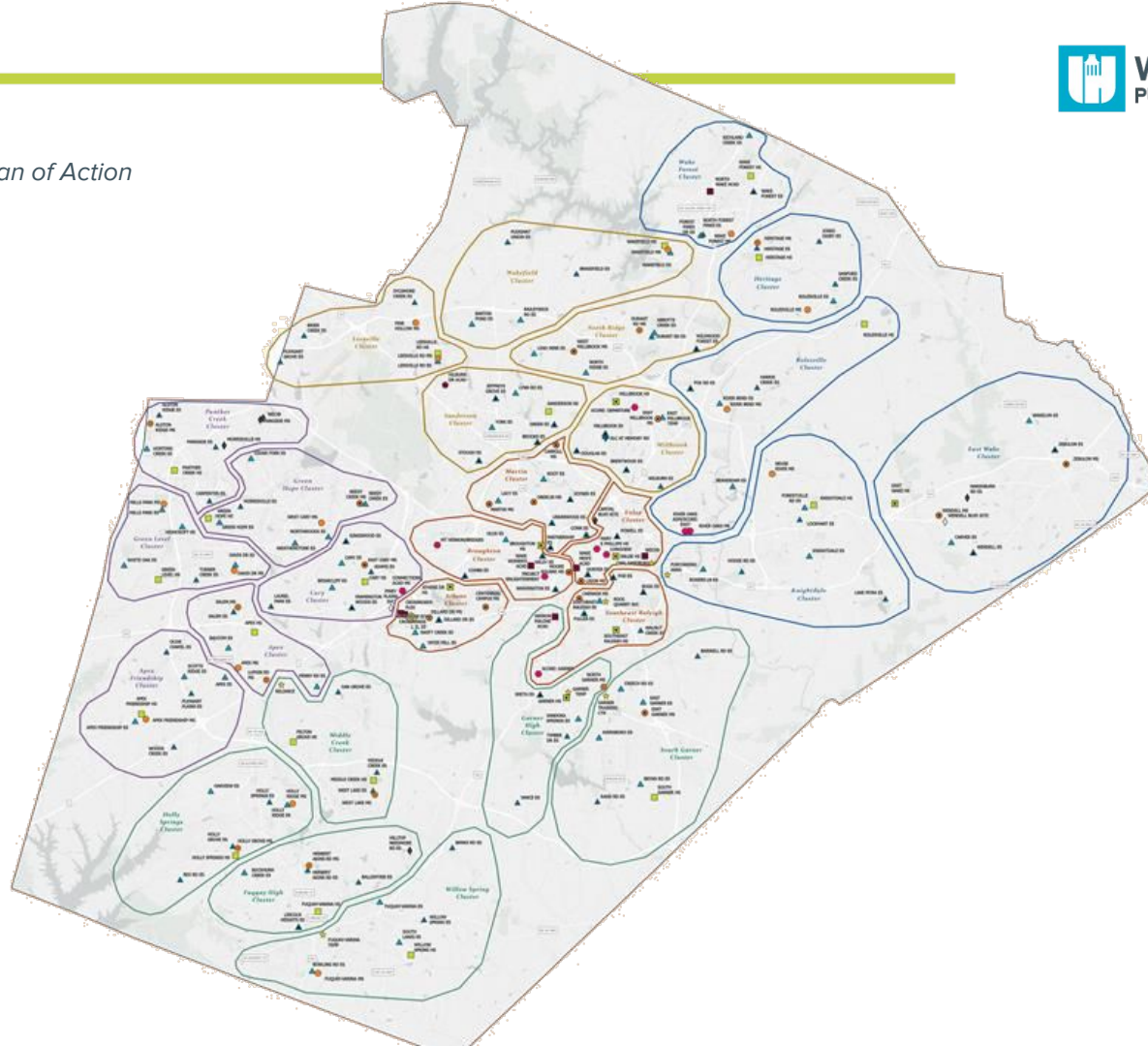
*Addressing Concerns | Our Plan of Action*

## Personnel Strategy

- Reclassify positions to align with competitive market rates
- Continue leveraging staff recruiter position and alternative platforms to attract talent
- Expand months of employment in response to increasing district square footage



## Regional Model



## Enhancing Personnel Performance

- Improve regional data tracking and reporting
- Monitor work order volume and system/school age
- Ensure proper staffing across regional and cross-regional maintenance teams
- Evaluate performance by region—both individually and system-wide
- Identify preventative tasks school personnel can complete
  - *Example: Custodians replacing filters, dusting fire alarm systems*



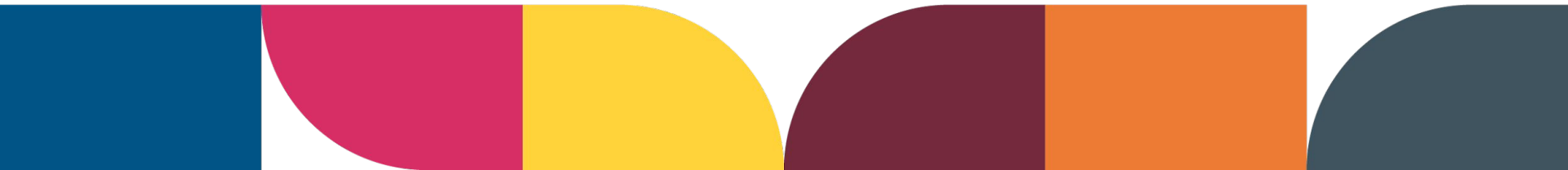
## Upgrades to Work Order System

- Reevaluate how we use our current system
- Provide staff training on system use
- Encourage consistent input and feedback from schools
- Ensure timely completion of tasks by staff
- Notify schools of status: completed, delayed, or not needed
- Offer summer professional development and ongoing training throughout the year



## Contracts and Contract Personnel

- Use contract support in areas with staffing gaps
- M&O leaders conduct contractor performance reviews
- Increase on-site supervision of contract work
- Work must be actively supervised
- Final payment issued only after approval by M&O and school staff







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# Final thoughts on Life Cycle for Maintenance

