



School Building Science Fridays™

Building Operators as School Building Scientists

December 10, 2021

Welcome!

We will start promptly at 2pm Eastern.

This session is being recorded.





Today's Webinar

- Welcome: Elisabeth Krautscheid, CHPS
- Introduction: Raffi Manjikian, Moderator
- Discussion with Panelists:
 - Ken Wertz, MA Facilities Administrators Association
 - Mike Wilson, Warren County Public Schools, KY
- Audience Questions



With Gratitude to Our Sponsors



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Housekeeping

- Post questions at any time in chat
- Please stay on mute
- Recording and slides will be available at <https://chps.net/school-building-science-fridays>
- Resources at end of deck



Today's Moderator

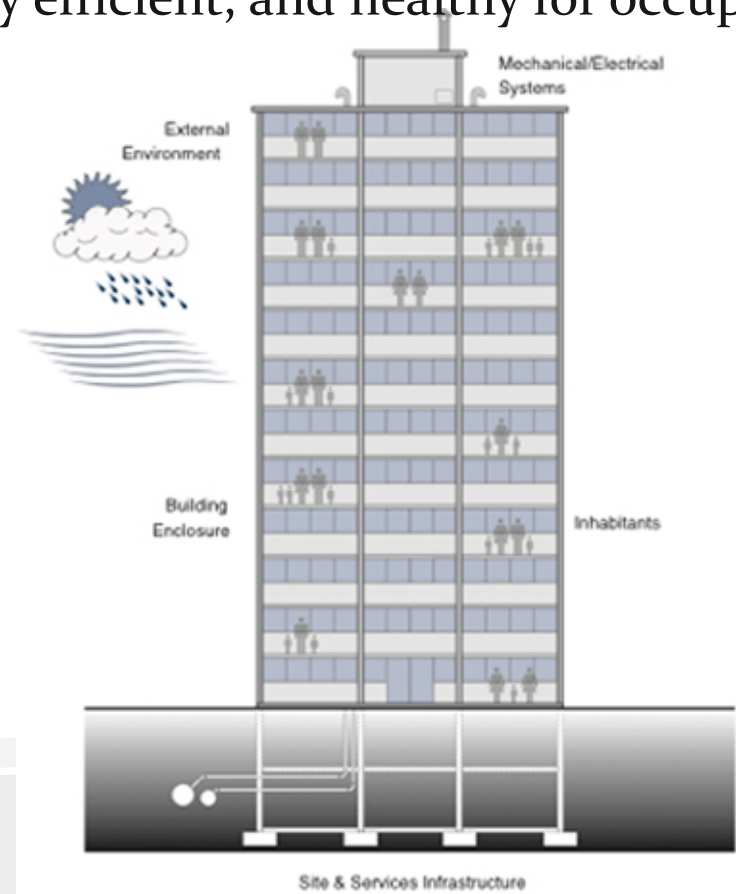
Raffi Manjikian, COO, Interval Data Systems,
rmmpesc@verizon.net





What is Building Science?

- A multi-disciplinary field of knowledge involving the physical sciences, engineering, architecture, and life sciences to understand how buildings function as a dynamic system. The goal of building science is to make buildings comfortable, energy efficient, and healthy for occupants - for the life of the building.
- Topics in focus:
 - comfort
 - energy efficiency
 - airflow & humidity
 - indoor air quality
 - lighting & sound
 - material use
 - fire protection and seismic design (NIBS)





What is **School** Building Science?

- The body of knowledge that informs the design, construction, operations, and occupancy of school buildings for the benefit of students, educators, staff, and the environment.
- The body of knowledge about the built environment that impacts how children learn and thrive.
- Includes day-to-day, on-the-job knowledge.



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Backdrop of Our Work

- $\geq 165,000$ schools serving 50MM students and as workplace for millions of teachers & staff (NCES, CAPE)
- **2nd largest sector** of public infrastructure spending after highways (NCSF)
- 2020 GAO report found that 41% of districts required HVAC system upgrades or replacements in at least half of their schools
- *Public schools operate in a world of thinning budgets and growing deferred maintenance requests*
- New technologies, codes, and standards are changing the work, setting the bar higher each year



Today's Panelists

Ken Wertz, Executive Director, Massachusetts
Facilities Administrators Association,
execdirector@massfacilities.com



Mike Wilson, Director of Facilities, Warren
County Public Schools,
mike.wilson@warren.kyschools.us





What Makes Facility Operators Building Scientists?

- Custodial/green cleaning
- Repairs & maintenance
- HVAC operation
- Lighting operation
- Other systems: theater, lab, tech, A/V
- Window & door operation
- Safety & security
- Grounds & fields upkeep
- Supplies & equipment storage
- IPM
- Community use (joint use)
- Customer service – human interaction with environment
- Energy management
- Water management
- IAQ
- Data/performance monitoring
- Design & construction
- Health & safety impacts
- Purchasing
- Transportation management



What Are The Challenges?

- How do we sustain achievement of high-performance goals?
- How do we tap into the next generation of building management professionals?



Where Are We Heading?

- What is changing the profession and the conversation?
- What lessons are we learning from the pandemic?



Audience Questions

Please type your questions in chat.





For More Information

National Council on School Facilities, reports & data: <https://www.facilitiescouncil.org/>

National Center for Education Statistics, reports & data: <https://nces.ed.gov/>

Building Operator Certification: <https://www.theboc.info/>

Association of School Business Officials International (ASBO), see also local affiliates:
<https://asbointl.org/>

Whole Building Design Guide: <https://www.wbdg.org/resources/building-science-concepts>

Mass Facilities Administrators Association (look for a similar org in your area): <https://massfacilities.com/>

National School Plant Manager Association: <https://nspma.org/>



Thank you to Raffi, Ken, and Mike.

Thank you for joining us!