

Facility Infrastructure Safety & Repairs

Lakeview Junior
High School

Prairieview
Elementary School

Google

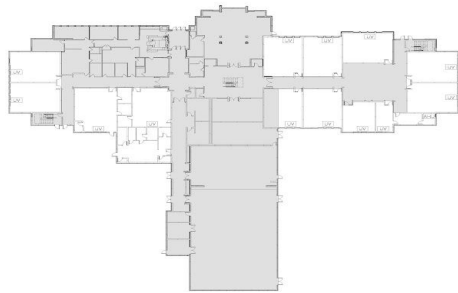
Lakeview Jr. High School-1975

- 6-8 grade
- Approximately 360 students currently enrolled.
- Science wing/Gym 2 added in the early 2000's.
- Since the addition, the building systems and envelope are largely unchanged with the exception of the 2018-19 reconfiguration of the main entrance/office & fine arts space.
- Approximately 71,900 square feet.

Prairieview Elementary School- 2000

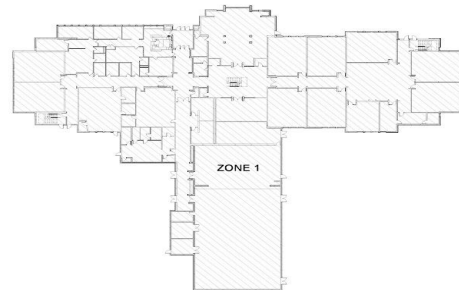
- 3-5 grade
- Approximately 360 students currently enrolled.
- Opened in 2000, replacing the closed Center Cass School located on the corner of 83rd Street and Lemont Rd.
- Approximately 64,400 square feet.

IL



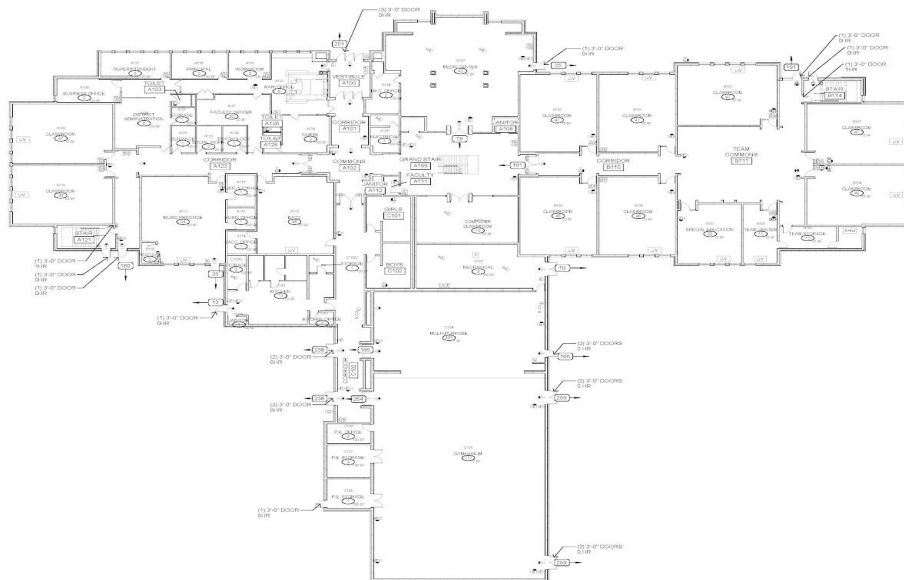
AIR HANDLING PLAN PRAIRIEVIEW - MAIN LEVEL

1/32" = 1'-0"



PRAIRIEVIEW - MAIN LEVEL FLOOR PLAN SPRINKLER ZONES

1/32" = 1'-0"



- ALL DISCIPLINES SYMBOL KEY**
- ☐ SURVEILLANCE CAMERA
 - ☐ FIRE ALARM CONTROL PANEL
 - ☐ FIRE ALARM STATION
 - ☐ FIRE ALARM MANUAL PULL STATION
 - ☐ MOTION DETECTOR
 - ☐ EXT LIGHT CEILING MOUNTED
 - ☐ EXT LIGHT WALL MOUNTED
 - ☐ EMERGENCY LIGHTING UNIT
 - ☐ MAGNETIC DOOR HOLD OPEN
 - ☐ CEILING MOUNTED SMOKE DETECTOR
 - ☐ FIRE ALARM CONTROL PANEL
 - ☐ CARBON MONOXIDE DETECTOR
 - ☐ FUEL SHUT-OFF EQUIPMENT
 - ☐ FANCOIL UNIT
 - ☐ ROOFTOP UNIT
 - ☐ UNIT VENTILATOR
 - ☐ AIR HANDLING UNIT
 - ☐ SPRINKLER ZONE 1
 - ☐ SPRINKLER ZONE 2
 - ☐ EXISTING QUANTITY

SAFETY REFERENCE PLAN - MAIN LEVEL PRAIRIEVIEW

1/16" = 1'-0"

HEALTH/ LIFE
SAFETYCenter Cass SD 66
605 Rainfield Road
Downers Grove, IL 60516WOLD ARCHITECTS
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ARCHITECT

Under the direction of the Architect

DATE: 08/10/2021

PROJECT: 213865

SHEET: 10/10

DRAWN BY: [Name]

CHECKED BY: [Name]

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PROJECT: 213865

SHEET: 10/10

DRAWN

Elizabeth Ide Elementary School-1970/2019 (additions)

- PK-2 grade
- Approximately 400 students currently enrolled.
- Underwent a remodeling & addition between 2017 and 2019.
- Approximately 52,000 square feet.

IL

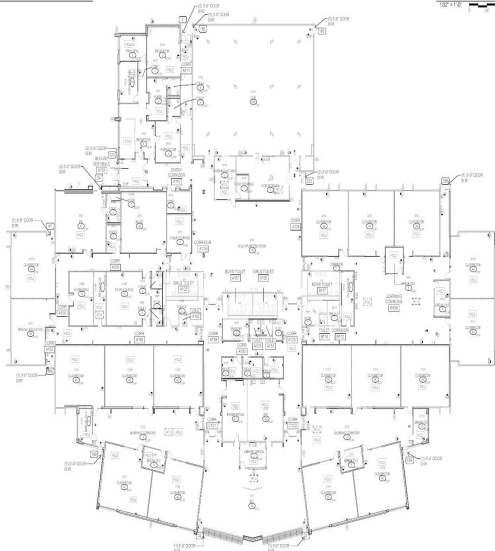


FIRE EQUIPMENT PLAN Elizabeth IDE First Floor

IL



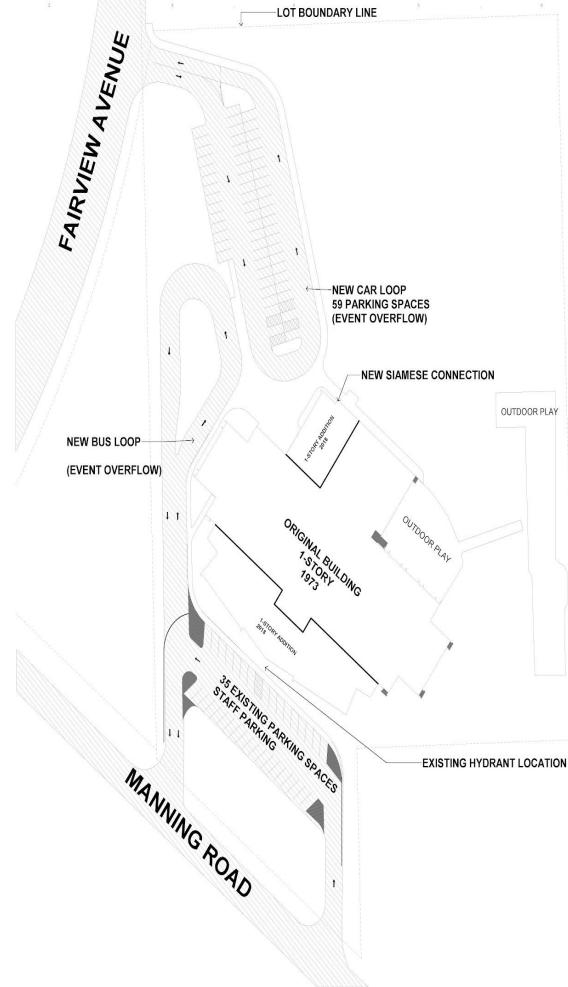
SPRINKLER ZONE PLAN Elizabeth IDE First Floor



SAFETY REFERENCE PLAN - FIRST FLOOR ELIZABETH IDE

A

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HEALTHY LIFE
SAFETY

Center Cass SD 66
610 North Cass Road
Dover, SD 57002



WOLD ARCHITECTS
AND ENGINEERS

201 North Cass Road, Suite 100
Dover, SD 57002

PROJECT INFORMATION	
PROJECT NAME	ARCHITECT
PROJECT ADDRESS	ARCHITECT'S ADDRESS
PROJECT CITY	ARCHITECT'S CITY
PROJECT STATE	ARCHITECT'S STATE
PROJECT ZIP	ARCHITECT'S ZIP
PROJECT PHONE	ARCHITECT'S PHONE
PROJECT FAX	ARCHITECT'S FAX
PROJECT EMAIL	ARCHITECT'S EMAIL
PROJECT WEBSITE	ARCHITECT'S WEBSITE

DATE: 10/27/19
DRAWN: 10/27/19
CHECKED: 10/27/19
APPROVED: 10/27/19

SITE PLAN
ELIZABETH IDE

SCALE: 1"=20'-0"

SR1.01

Big Ticket Items in the 10 year HLS Survey or Through Other Means

Item	Cost Aug 21	Cost w / Con	Arch Rec Cost
Failing Roof Sections 1, 2, and 3 at LV	\$1,600,000	\$480,000	\$2,080,000
Failing HVAC at LV	\$1,300,000	\$390,000	\$1,690,000
Failing HVAC Controls at PV and LV	\$700,000	\$210,000	\$910,000
Failing Sidewalks at PV and LV	\$125,000	\$37,500	\$162,500
Failing Parking Lots at PV and LV	\$500,000	\$150,000	\$650,000
Failing Floor Tile in PV Multi-Purpose Room and Gym	\$218,000	\$65,400	\$283,400
Failing Floor Tile in IDE Gymnasium	\$128,000	\$38,400	\$166,400
Failing Intercom Systems at PV and LV	\$125,000	\$37,500	\$162,500
Structurally Compromised Exterior Metal Wall at LV	\$640,000	\$192,000	\$832,000
Insufficient Camera Coverage for Safety PV & LV	\$50,000	\$15,000	\$65,000
Failing Fire and Intruder Alarm Systems IDE, PV, & LV	\$200,000	\$60,000	\$260,000
Failing Water Heater and Associated Plumbing LV	\$80,000	\$24,000	\$104,000
Lighting	\$793,000	\$237,900	\$1,030,900
Other Concerns >\$50,000 (doors, windows, plumb, walls)	\$299,438	\$89,831	\$389,269
Grand Total of HLS Work	\$6,758,438	\$2,027,531	\$8,785,969
Non Code Violations But Identified as Needing Done	\$1,606,384	\$481,915	\$2,088,299
Total of HLS and Non HLS Identified from HLS Walk Through	\$8,364,822	\$2,509,447	\$10,874,269

Lakeview- Roofing

- Roof on the left side of the photo- approximately 22 years old. Roof Sections 1-3
- Roof on the right side of the photo- newly replaced in the summer 2021. Roof Sections 4 & 5
- Has been on Master facility plan reports since 2014 (LEGAT architects)
- Undergoes semi annual maintenance.

***Beyond useful life & warranty and has repeatedly been repaired. In significant danger of insulation saturation and leaks, leading to structural integrity compromise and mold*-HLS**





On the Left-
see patches that
have been made-
varying shades of
silver/gray.

On the Right-
see the darker
sections where the
silver/gray color is
wearing thin- this
shows the bare
rubber of the roof
membrane.





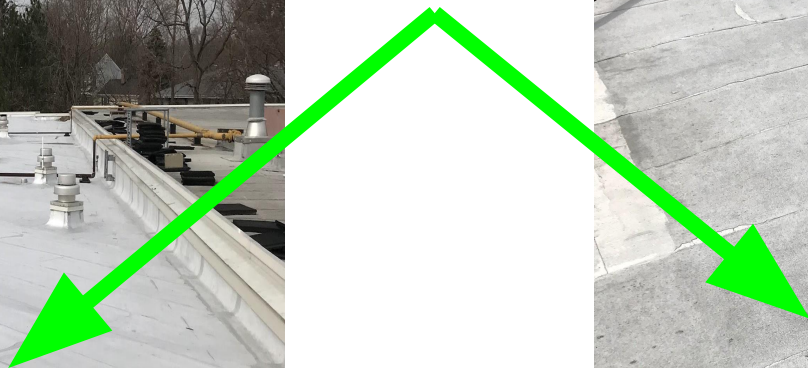
On the Left-
some larger
patch areas and
a roof drain.

On the Right-
heavily degraded
section of surface
coating.





Newly
replaced
section 4 & 5.
Summer 2021



HVAC

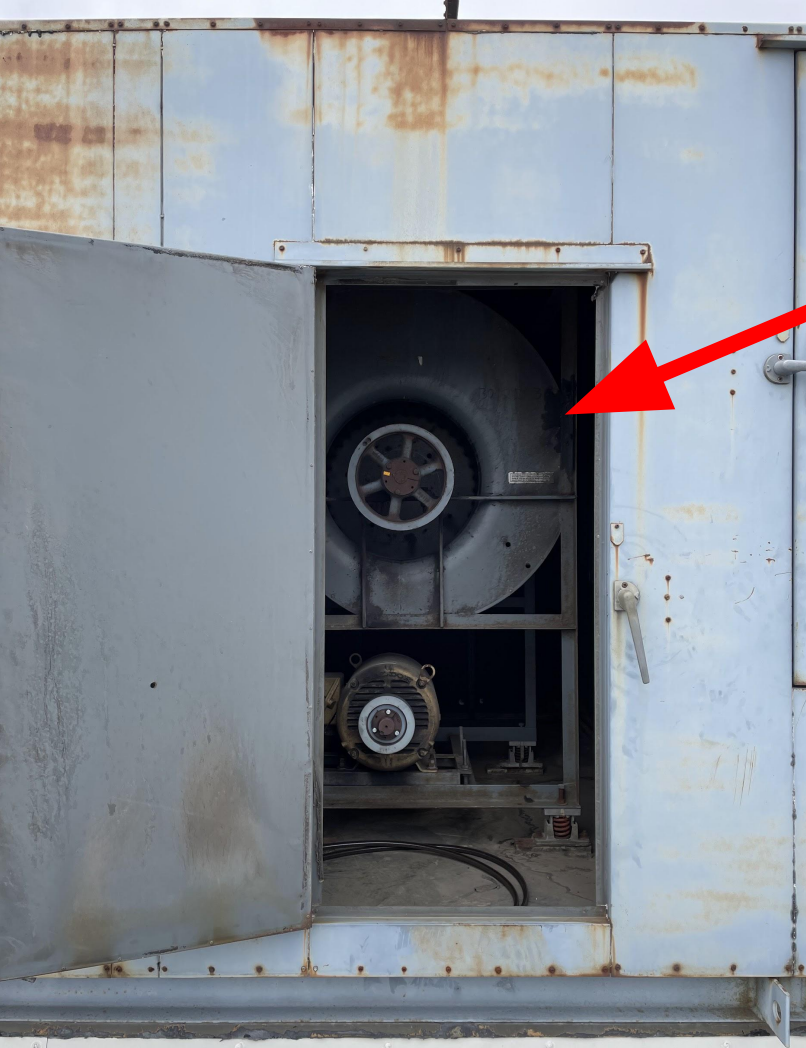
- 7 total RTU's (Roof Top Units)
- Multi Zoned air handler
- Units heat & cool (not simultaneously)
- All 7 units have been on Master facility plan reports since 2014 (LEGAT architects)
- Units undergo quarterly filter changes and semi annual coil cleaning.

***Units have outlived their useful life according to ASHRAE standards.*-HLS**



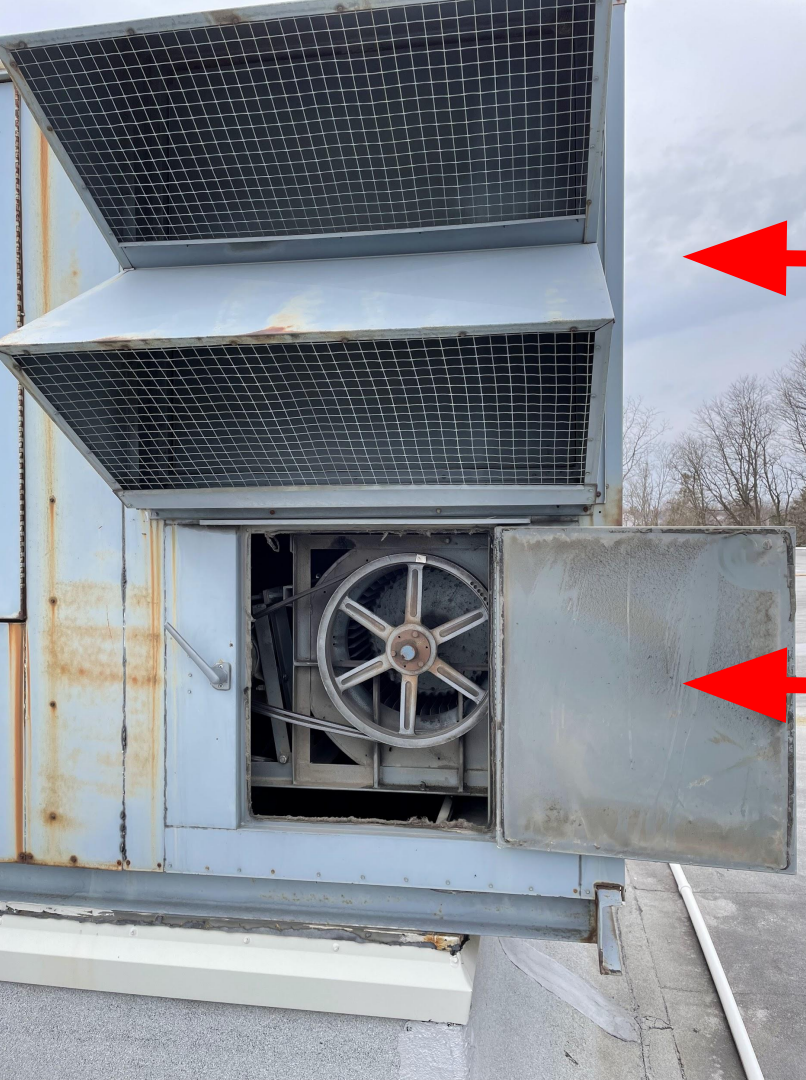






Fan Cage Assembly

- Rusting structures of blower fan cages.
- All repairs of any structural part is no longer available- requiring welding/fabrication.
- Quarterly belt changes

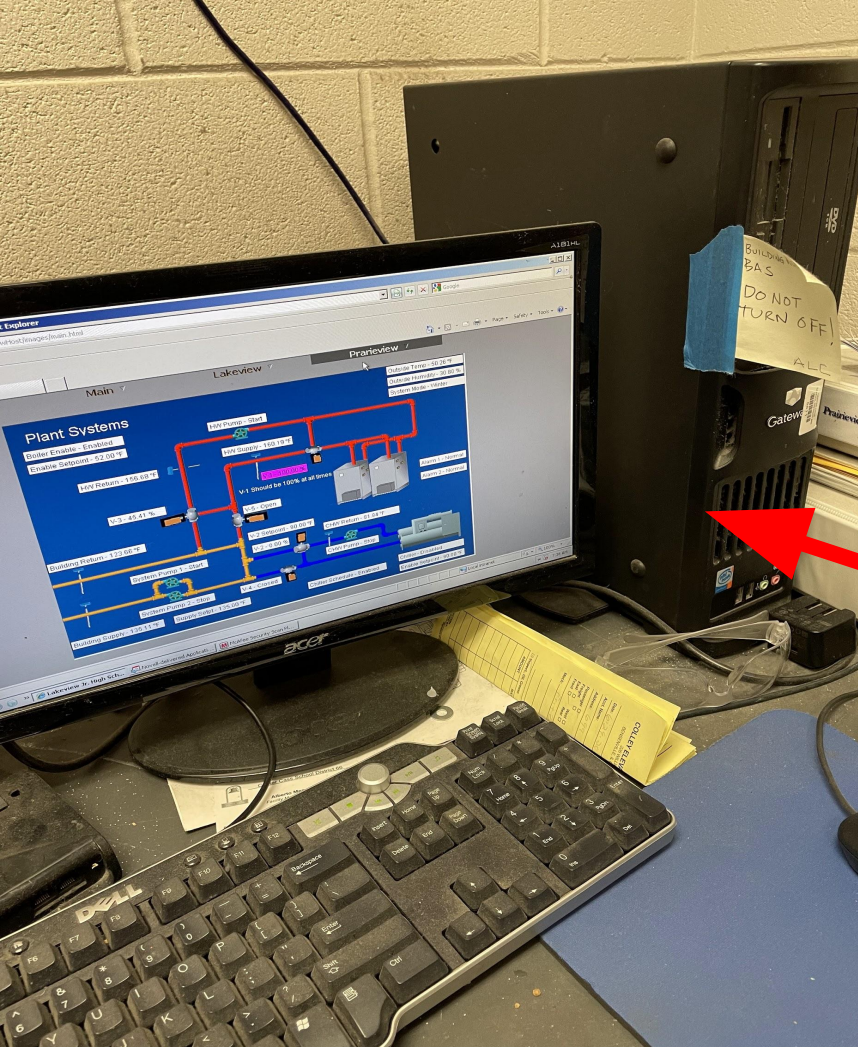


Top Left-

- Heating air intake and damper control section
- Inability to control dampers via BAS system. (manual set by season)

Bottom Left-

- Fan cage assembly parts require fabrication if failure
- Doors/hatches operation affects efficiency of units
- Quarterly belt changes



Prairieview & Lakeview-BAS- Building Automation System

- Controls each RTU (LV) & air handler (PV) from one system, web based Intranet.
- Ability to adjust temperature via outside air damper controls, metered cold/hot air or water.
- Classrooms and older offices do not have controllable thermostat devices- all individual space manipulation is done through the BAS.

***BAS system is obsolete, unable to properly control ventilation, heating or cooling. Impact to indoor air quality*-HLS**

Why do we need a new BAS?

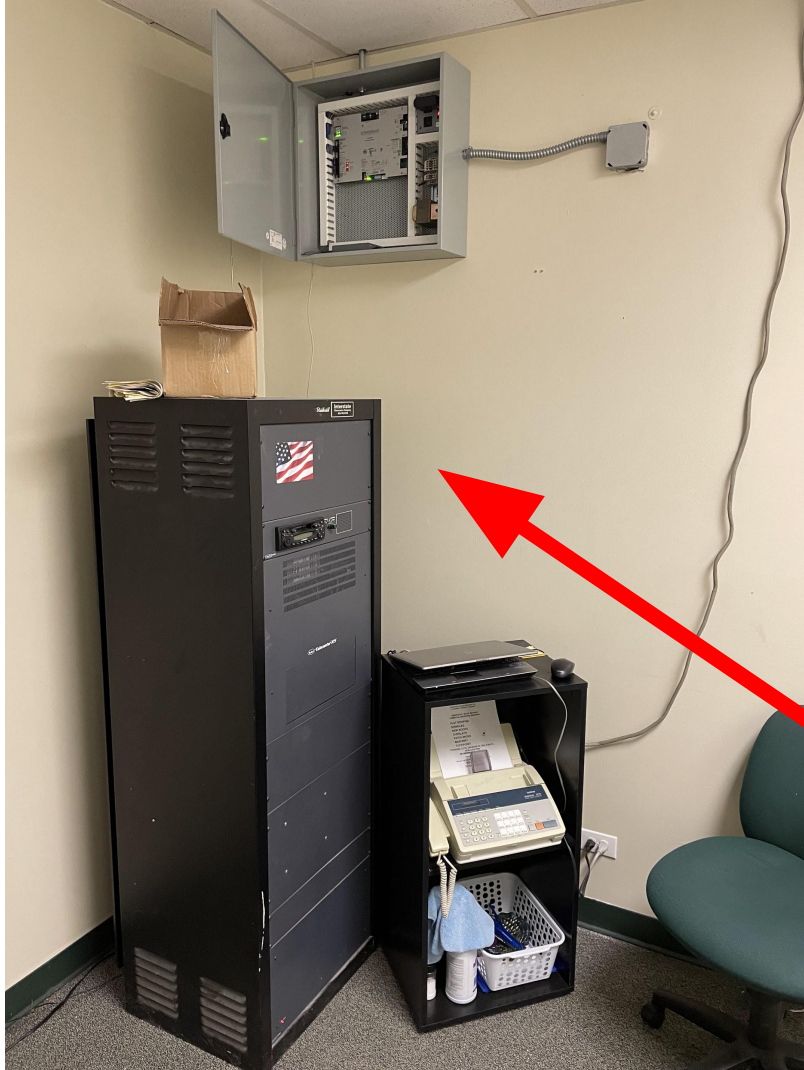
- The system used at both LV & PV is no longer supported from the system designer (Automated Logic Co.) without upgrade.
- Computer based system. Current system runs on Windows XP which was last serviceable in 2014.
 - If the computer system fails- so does the BAS
 - Security threat from a firewall and tech perspective
 - There is no remote access possible for adjustments or check ins.
- Inability to troubleshoot directly with RTU's
- Does not communicate with newly added controls
 - Example- New Fan and damper control unit added to RTU1 supporting Gym1. Upon installation, the new controller was not able to speak with the aged BAS. Money had to be spent to run wires and a thermostat to the Gym1 just to be able to operate the RTU, bypassing the majority of what the BAS is supposed to do.
- Ability to better control unit schedules and energy efficiencies



Lakeview- Hot Water Boiler

- Estimated last replaced in 1995
- Tank & pipe insulation contains the last known asbestos in the building. (current asbestos plan is up to date and monitored by PSI-Intertek.)
- \$50,000 maintenance grant has been awarded for replacement during 2022.

***Water heater & storage tank are showing signs of failure* -HLS**



Lakeview-Intercom System

Why is it important?

- Emergency messaging from the office- (Lockdown, Fire drill, bad weather etc.)
- Direct messaging to students from front office
- Controls bell schedule

Why do we need a new system?

- 22 Years old
- Analog System
- Also controls clocks-does not properly update ALL clocks
- All Call Function does not consistently reach each room
- Inability to update or receive new support

***Existing system is obsolete with difficult continued maintenance resulting in extended down time*-HLS**

Lakeview, Prairieview & Elizabeth Ide- Fire Alarm System

- IDE system age- approximately 25 yrs
- LV system age- approximately 22 yrs
- PV system age- approximately 22 yrs.
- Replacement components for each panel are no longer supported from manufacturer (Edwards & Simplex) without upgrading panel.

***Fire alarm system is aged with frequent failure. Failures are unpredictable and pose safety risk in the event of emergency*-HLS**



Lakeview- Lighting

The Majority of Lakeview interior lighting with exception of Gym1/Gym2 and the stage are ballasted T8 halogen tube lights.



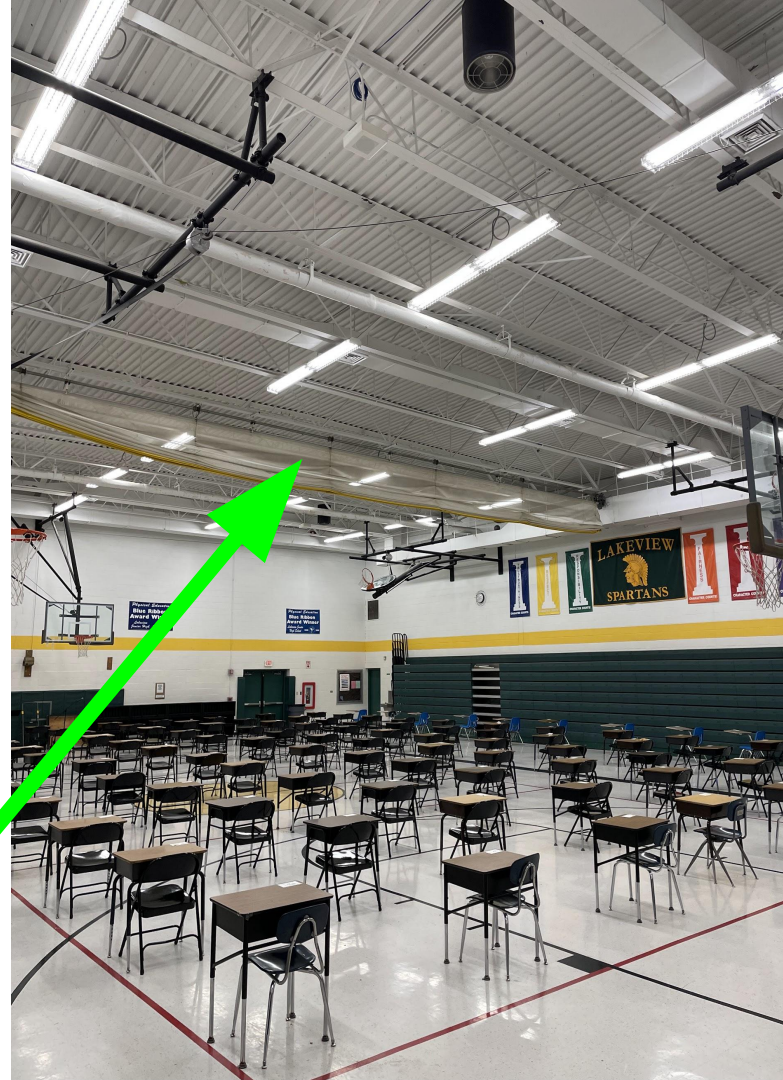
- Upgraded lighting to LED will save on repair frequency cost of both parts & labor.
- Upgrading to LED lighting will improve the buildings energy efficiency.
- Upgraded LED lighting would provide consistency in lighting brightness & color temperature throughout.

***incomplete lighting coverage for exterior emergency lighting. Mixture of lighting types resulting in uneven lighting conditions and coverage*-HLS**



On the Left-
Halogen T5
lighting.
(majority of
Lakeview).

**On The
Right-**
LED
upgraded
lighting.(done
in house)





Lakeview- Doors & Windows

The majority of the exterior doors are approximately 22-25 years old with a certain number of original doors remaining.

- Many of the exterior doors are suffering from rusting sections, rotting & broken sills & unlevel/unsealed sections based on exterior concrete settling or cracking
- Door hardware and functionality is inconsistent throughout the building.



On the Left-
an original exterior
door.



On the Right-
signs of rotting of the
door frame.



On the Left-
example of
repurposed older
doors. Removed
glass, welded
steel plate to use
as Gym exit
doors.(Done in
house)

On the Right- many
original windows &
frames are also in
need of attention.



Lakeview & Prairieview Asphalt & Concrete

Only maintenance (sealcoating/crack filling) and failed section replacements (concrete) of both concrete and asphalt have been performed of parking lots and sidewalks since 2001.





On the Left-
example of a self
patched hazard and
raised water service
access trip hazard.



On the Right-
example of the pitting
& popping that
occurs over time and
degrades concrete.



On the Left-
example of potholes
patched. (patched in
house as needed)

On the Right-
example of fatigue
cracking of the
asphalt.





On the Left-
cracking sidewalk
ramp. Also missing
current ADA pad &
current specs.

On the Right-
example of an
insufficient sized
access ramp W/out
current ADA pad.





On the Left-
example of height
differences at
Prairieview.

On the Right-
example of height
differences at
Prairieview.



NON-Code Violation/HLS Notables



Lakeview Carpeting



**Lakeview
Metal
Wall
Paneling**

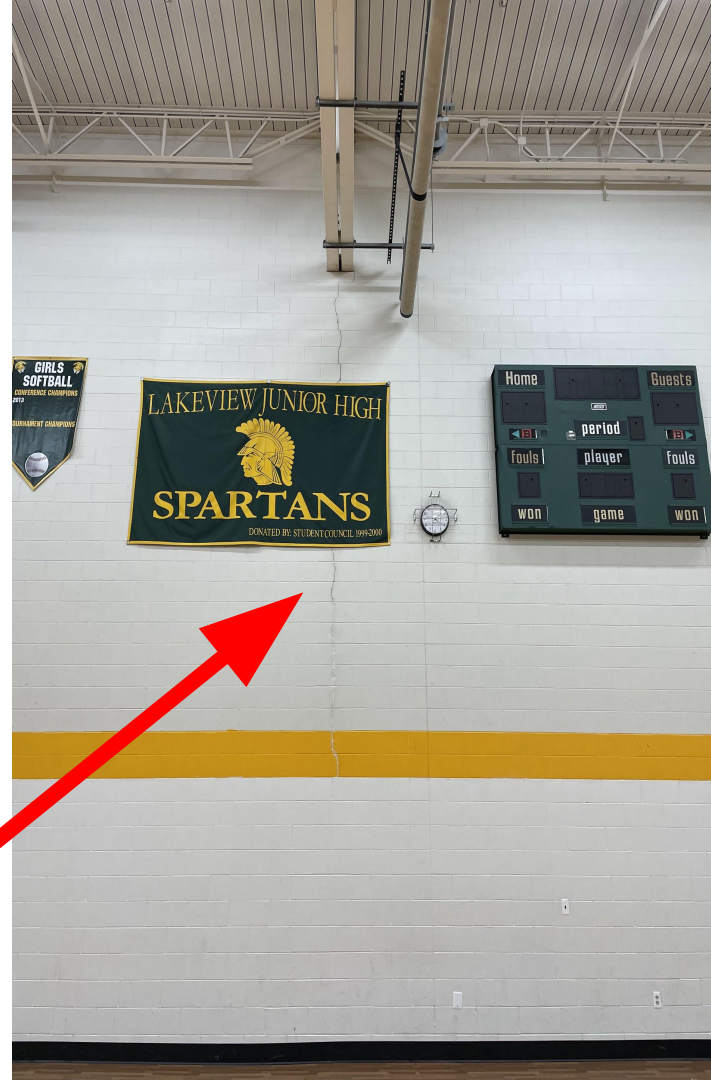


Prairieview
cracked floor tiles.





On the Left-
Prairieview example of
replaced tile pieces
(by color brightness).



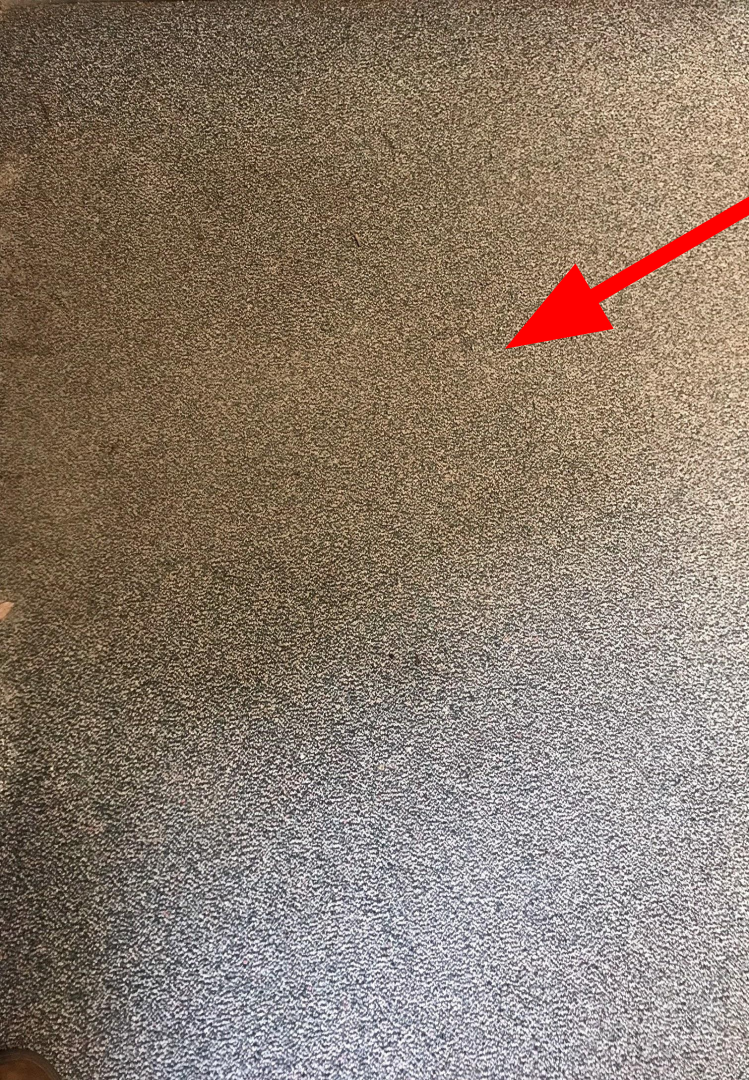
On the Right-
vertical crack in wall
block-Gym 2 at Lakeview.



On the Left-
Prairieview carpeting
example.
Original- 22 years.



On the Right-
Prairieview Carpeting
example.
Original- 22 years.



On the Left-
Prairieview carpeting



On the Right-
Prairieview window
example-failed
thermal window seal.





Rusting base

Parking Lot
lighting
examples

Missing head



Questions?

Tom Tiede

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630-783-5155