KENTUCKY DEPARTMENT OF EDUCATION **BG-2**

702 KAR 4:160 **OUTLINE SPECIFICATIONS ENERGY DESIGN CRITERIA**

District Name: Henderson District Code: 251 Facility Name: Henderson County High School School Code: 60

Project Name: Henderson County High School CTE

PROJECT TYPE:	Yes	No	Gross Building Area (sf.)
New Building	☐	☑	
Addition	☑	☐	5492
Renovation	☑	☐	1030

Provisions for Future Expansion:

Proposed Alternates: (1) HVAC EQ Manufacture
(2) HVAC controls
(3)

Describe special conditions, phasing of project and alternates, attach a supplemental sheet, if needed.

BUILDING CONSTRUCTION CHARACTERISTICS:

Description of Building Structure:

Foundation: slab on grade

Exterior Walls: CMU w/spray foam insulation & brick finish

Roof Structure: flat roof w/insulation & new membrane

ENERGY EFFICIENT DESIGN (KRS 157.450 and KRS 157.455):

Energy Consumption "Existing" (kBtu/sf/yr)

Energy Consumption Target (kBtu/sf/yr)

YES	NO		
☐	☑	LEED Certified	Other:
☐	☑	Designed to meet Energy Star	
☑	☐	Exceeds ASHRAE 90.1(2007) by 10% (Minimum)	
☐	☑	Whole Building Life Cycle Cost Analysis Demonstrating Cost Effective Design	
		Life Cycle Cost Analysis Software Used:	

If not yes to one or more of the above, explain why.

☐	☑	Designed to be Net-Zero
☐	☑	Designed to be Net-Zero Ready

Energy Efficient Design Features: (See List Page 4, or Use Drop Down List)

East / West Building Orientation ☐ YES ☑ NO

Gross Exterior Wall Area (sf): 2960 Avg. Exterior Wall R-Value: R 9.5

Gross Window / Door Area (sf): 249 Avg. Window/Door R-Value: R 3.5

Gross Roof Area (sf): 21,792 Avg. Roof R-Value: R 25

Exterior Wall Type:	B - face brick, captured air space, sprayed insulation on CMU	Other:
Roofing Type:	B - EPDM over rigid insulation	Other:
HVAC System Type:	L - other	Other:
Classroom Lighting:	D - low voltage systems	Other:
Active Daylighting:	B - occupancy light control sensors	Other:
Passive Daylighting:	G - none	Other:
On Site Energy Generation:	G - none	Other:

Air Purification Systems : YES ☑ NO ☐

Gray Water System : YES ☐ NO ☑

Low Water Use Fixtures : YES ☑ NO ☐

Other: _____

PLUMBING:

Type of Sewage Disposal: _____

HEATING, VENTILATION AND AIR CONDITIONING:

Heating Only: _____ Heating & Mechanical: Ventilation Only _____ HVAC: ✓ A/C Only: _____

Fuel Source/Backup (if applicable): _____

ELECTRICAL:

Source of Electric Power: Kenergy

Voltage Serving Facility: 120/208

Number of Convenience Outlets:

Classrooms	6
Library/Media Center	
Business Ed	
Family & Consumer Science	

Camera System: existing

Lighting Intensity (fc.):

Std. Classrooms	50
Library/Media Ctr	
Science Lab	
Science Clrm	
Band/Music	
Business Ed	
Shops	50
Corridors	25
Stairways	
Cafeteria	
Pre-School Clrm	
Art Classroom	
Gymnasium	

SPECIAL EQUIPMENT:

System	Conduit Only	Conduit & Wiring	Complete with Equipment
Bell			✓
Clock			✓
Fire Alarm			✓
Intercom			✓
Telephone			✓
Television			
Computer			
Wireless Network		✓	
Interactive White bd			
Voice Amplification			

FIXED EQUIPMENT:

Teacher Cabinet		Custodial Room Shelves	
Student Lockers	✓	Science Laboratories	
Folding Bleachers		Family & Consumer Sci	
Library Furnishings		Other	
Dry Food Shelves		Other	

INTERIOR FINISH SCHEDULE:

AREA	FLOOR	WAINSCOT	WALLS	CEILING
General Office	carpet/lvt		paint	2x2
Corridors	lvt			
Custodial				
Kitchen				
Cafeteria				
Gym				
Showers/Locker				
Toilets	ceramic		ceramic/epoxy	2x4
Library/Media Cntr				
Classrooms	lvt		epoxy/paint	2x2
Music				
Art				
Science				
FMD				
OTHER AREAS				

Miscellaneous Project Specific Features: _____

Kentucky Registered Architect: _____ Signature Date: 2/15/2024

Kentucky Registered Engineer: _____ Signature Date: _____

Board Designee or Superintendent: _____ Signature Date: _____

Energy Efficient Design Features Lists

Exterior Wall Type
A - face brick, captured air space, board insulation and waterproof CMU
B - face brick, captured air space, sprayed insulation on CMU
C - face brick, captured air space, sheathing over metal insulated stud system, interior finish system
D - face brick, ICF poured concrete, interior finish system
E - other, describe

Roofing Type List
A - modified bitumen over rigid insulation
B - EPDM over rigid insulation
C - plastic single ply over rigid insulation
D - metal roofing over nailable deck with insulation
E - asphalt shingle roofing over nailable deck with insulation
F - other, describe

HVAC System Type List
A - two pipe unit ventilator system
B - water source heat pump system with air make up
C - ground source heat pump system with air make up
D - hybrid water source heat pump system with boiler/chiller and well field with air make up
E - variable refrigerant flow (VRF) with air make up
F - hybrid geothermal/variable refrigerant flow (VRF) with air make up
G - variable refrigerant volume (VRV) with air make up
H - hybrid geothermal/variable refrigerant volume (VRV) with air make up
I - chilled beam system
J - hybrid chilled beam/geothermal system
L - other

Classroom Lighting List
A - T8 fluorescent fixtures
B - T5 fluorescent fixtures
C - high energy gas fixtures
D - low voltage systems
E - other

Active Daylight System List
A - classroom fluorescent dimming including dimming switches, ballasts and sensors
B - occupancy light control sensors
C - remote sensor bi-level lighting with no fixtures dimming
D - manual bi-level lighting with no fixture dimming
E - other
F - none

Passive Daylight Systems List
A - upper classroom clerestory lighting with sloped ceiling plane
B - lower classroom clerestory lighting that does NOT require sloping the ceiling place
C - exterior light shelves
D - solar tubes without dimming
E - solar tubes with internal dimmers
F - other
G - none

On Site Energy Generation List
A - solar water heating
B - solar electric generation (small units for demonstration or for limited areas)
C - solar electric generation (to support the entire building's energy needs)
D - wind generation (small units for demonstration or for limited areas)
E - wind generation (to support the entire building's energy needs)
F - other
G - none