

Bullitt County Public Schools

1040 Highway 44 East Shepherdsville, Kentucky 40165

502-869-8000 Fax 502-543-3608 www.bullittschools.org

MEMO

TO:

Keith Davis

FROM:

Mark Mitchel

DATE:

May 8, 2018

RE:

Board Agenda Item - Approval of the BG-2s for the Guaranteed

Energy Savings Contract – Harshaw Trane

Presented for the Board's approval and signatures are the BG-2s as presented by Ernie Tacogue with Harshaw Trane related to the Guaranteed Energy Savings Contract (GESC).

As per KDE, the BG-2s are required as they outline the specifications for energy design criteria for each location within the confines of the GESC. A licensed engineer in the Commonwealth of Kentucky must certify each site location along with the GESC qualified provider.

I recommend the Board's approval and signatures of the BG-2s as presented by Ernie Tacogue with Harshaw Trane related to the Guaranteed Energy Savings Contract.

Attachment: BG-2s for the Guaranteed Energy Savings Contract

oc May be

District Name: <u>Bullitt Cou</u>	ınty	District _Code:	071	Facility Name:	Board of Education Office	School Code:
Project Name:	Bullitt Cour	nty Schools G	uarantee E	nergy Savino	gs Contract	
PROJECT TYPE:	Yes	No		Gross Bi	uilding Area (sf.)	
New Building				O1000 D1	anding rice (on)	
Addition					· · · · · · · · · · · · · · · · · · ·	
Renovation				-	24,363	
Provisions for Future		_			24,000	
Proposed Alternates	: (1)		•	·	
, , , , , , , , , , , , , , , , , , , ,	(2	<u> </u>		•		
	(3					
Describe special con	ditions, phasi	ing of project	and altern	ates, attach a	a supplemental sheet, if needed.	
	 ,				·	
BUILDING CONSTR	UCTION CH.	ARACTERIS	TICS:	:	*	
Description of Buildin	g Structure:				,	
Foundation	<u>. </u>					
Exterior Walls	:					- · · · · · · · · · · · · · · · · · · ·
Roof Structure	:					
ENERGY EFFICIENT	T DESIGN (K	RS 157.450	and KRS 1	<u> 157.455)</u> :		
49.30						
	_Litelgy Col	nsumption "E:	xisting (KE	otu/Si/yt)		
43.7	_Energy Cor	nsumption Ta	rget (kBtu/	sf/yr)		
YES NO						
	LEED Certi	fied	Othe	r:		
	Designed to	meet Energ				
	Exceeds AS	SHRAE 90.1(2007) by 1	0% (Minimun	n)	
	Whole Build	ding Life Cycl	e Cost Ana	alysis Demon	strating Cost Effective Design	
			_	Software Used	d:	
If not yes to one or	more of the	above, expla	in why.			
	Danisanada	N-4 7				
	_	be Net-Zero				
	Designed to	be Net-Zero	Ready			
Energy Efficient Des	sign Feature	s: (See List	Page 4, c	r Use Drop I	Down List)	
East / West Building	Orientation	□ YES	□ N	0		
Gross Exterior Wall A	Area (sf):				Avg. Exterior Wall R-Value:	
Gross Window / Doo	r Area (sf):				Avg. Window/Door R-Value:	
Gross Roof Area (sf):					Avg. Roof R-Value:	
Exterior Wall Type:						Other:
Roofing Type:						Other:
HVAC System Type:		•		-		Other:
Classroom Lighting:						Other: LED
Active Daylighting:						Other:
Passive Daylighting:		· · · · · · · · · · · · · · · · · · ·				Other:
On Site Energy Gene	eration:					Other:
= -						

						_	•
Air Purification System	s: YES 🗆	NO	☑				
Gray Water System :	YES 🗆	NO	☑				·
Low Water Use Fixture Other:	es: YES ☑	NO					
							•
PLUMBING:							
Type of Sewage Dispo	sal:						
HEATING, VENTILATI	ON AND AIR CONDI	TIONIN	<u>G</u> :				•
Heating Only:	Heating & Mecha Ventilation Only	anical:	····		HVAC:	A/C OnI	y:
Fuel Source/Backup (if	applicable):						
ELECTRICAL:							
Source of Electric Pow	er:	_			Lighting Intensit		
Voltage Serving Facility	y:				Std. Classrooms Library/Media C Science Lab	tr	
Number of Convenience	e Outlets:				Science Clrm		
Classrooms Library/Media Center					Band/Music Business Ed		
Business Ed					Shops		
Family & Consumer So	enc <u>e</u>				Corridors Stairways		
Camera System:					Cafeteria		
					Pre-School Clrn Art Classroom		
					Gymnasium		
SPECIAL EQUIPMENT	<u>r</u> :						=
System	Conduit Only			Conduit &	Wiring	Complet	e with Equipment
Bell					-	·	1 1
Clock							
Fire Alarm Intercom				*** *			
Telephone			-	 .	•	-	
Television							
Computer Wireless Network							
Interactive White bd Voice Amplification							
FIXED EQUIPMENT:				_			
Teacher Cabinet				^ .	ustodial Room Sh	alvas	
Student Lockers			_		istodiai Room Sn cience Laboratorie		
Folding Bleachers					mily & Consumer		
Library Furnishings			_		her		
Dry Food Shelves			_	Of	her		

		<u> </u>								
INTERIOR FINISH SCHEDULE:										
AREA	FLOOR	WAINSCOT	N WALLS	CEILING						
General Office										
Corridors Custodial										
Kitchen										
Cafeteria Gym										
Showers/Locker										
Toilets Library/Media Cnt										
Classrooms				-						
Music Art										
Science				-						
FMD										
OTHER AREAS										
Miscellaneous Pro	ject Specific Featu	res:								
GESC Qualified P	rovider	Signal	C. Jacop	Date: 5-7-18						
		Signal	ure	5/7/2010						
Kentucky Register	red Engineer:	Signa	ture	Date: 777018						
Board Designee o	r Superintendent:			Date:						
		Signa	ure	-						



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

- 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

District		District		P 104			•		
District Name: Bullitt Cou	inty .	District Code:	071	Facility Name:	Bernheim Middle School	School Code:	005		
Project Name:		ty Schools Gu		_					
PROJECT TYPE:	Yes	No		Gross Ri	uilding Area (sf.)				
New Building				GIOSS DC	anding Alea (Si.)				
Addition									
Renovation	<u> </u>				66,108				
Provisions for Future	_	-							
Proposed Alternates:	: (1)	·							
. ropossa į marnatas.	(2))					·		
	(3)								
Describe special conditions, phasing of project and alternates, attach a supplemental sheet, if needed.									
BUILDING CONSTR	UCTION CHA	ARACTERIST	<u>ICS</u> :						
Description of Buildin	g Structure:								
Foundation	;		· ·				<u> </u>		
Exterior Walls						•			
Roof Structure	:								
ENERGY EFFICIENT	ENERGY EFFICIENT DESIGN (KRS 157.450 and KRS 157.455):								
34.41	_Energy Con	sumption "Exi	isting" (kB	tu/sf/yr)					
28.6	Energy Con	sumption Tar	get (kBtu/	sf/vr)					
YES NO			J (
	LEED Certif	ied	Othe	r-					
		meet Energy	Star						
	_	SHRAE 90.1(2		0% (Minimum	1)				
					strating Cost Effective Design				
	Life	e Cycle Cost /	Analysis S	oftware Used	<u>. </u>				
If not yes to one or i	more of the a	above, explai	n why.		:				
	Deeless								
	•	be Net-Zero	Db-						
	Designed to	be Net-Zero	Ready						
Energy Efficient Des	sign Features	s: (See List	Page 4, o	r Use Drop [Down List)				
East / West Building	Orientation	□ YES)					
Gross Exterior Wall A	rea (sf):				Avg. Exterior Wall R-Value:				
Gross Window / Door	r Area (sf):				Avg. Window/Door R-Value:				
Gross Roof Area (sf):					Avg. Roof R-Value:				
Exterior Wall Type:					<u>. </u>	Other:			
Roofing Type:									
HVAC System Type:	· · · · · · · · · · · · · · · · · · ·								
Classroom Lighting:	_					Other: LE	ED .		
Active Daylighting:						Other:			
Passive Daylighting:						Other:			
On Site Energy Generation: Other:									

Air Purification System	ns: `	YES 🗀	NO	v					
Gray Water System :	`	YES 🗆	NO	V					
Low Water Use Fixtu	res:	YES ☑	NO						
Other:									
							•		
PLUMBING:	*								
Type of Sewage Disp	osal:							·	
HEATING, VENTILA	•								
Heating Only:		& Mecha ion Only	anical;		·	HVAC:	A/C Only:		
Fuel Source/Backup (if applicable):								
ELECTRICAL:		-							
Source of Electric Pov	wer:					Lighting Intensity (fc.):		
Voltage Serving Facil	itv:					Std. Classrooms Library/Media Ctr			
_			_			Science Lab			
Number of Convenier Classrooms						Science Clrm Band/Music			
Library/Media Center						Business Ed			
Business Ed						Shops			
Family & Consumer S	science					Corridors Stairways			
Camera System:						Cafeteria			
						Pre-School Clrm			
						Art Classroom Gymnasium			
SPECIAL EQUIPMEN	<u>NT</u> :					•		<u>.</u>	
System	Conduit On	ly			Conduit &	Wiring	Complete	with Equipment	
Bell									
Clock Fire Alarm									
Intercom								· • • • • • • • • • • • • • • • • • • •	
Telephone									
Television Computer	w					<u>.</u>			
Wireless Network									
Interactive White bd									
Voice Amplification									
FIXED EQUIPMENT:						•			
Teacher Cabinet				_		ustodial Room Shelves	i		
Student Lockers Folding Bleachers				_		cience Laboratories amily & Consumer Sci			
Library Furnishings						ther			_
Dry Food Shelves					0	ther			

		INTERIOR FINISH SCHEDULE:										
AREA	FLOOR	WAINSCOT	WALLS	CEILING								
General Office Corridors												
Custodial												
Kitchen Cafeteria												
Gym Showers/Locker												
Toilets Library/Media Cntr												
Classrooms Music												
Art Science												
FMD												
OTHER AREAS												
Miscellaneous Pro	ject Specific Featu	ires:										
GESC Qualified Pr	rovider	Signature	Greog	Date: 5-67-18								
Kentucky Register	ed Engineer:	Signature	7	Date: 5/7/2018								
Board Designee or	r Superintendent:	Signature		Date:								
		ngung.	1111 ₁₇₇									



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- G none

District Name:	Bullitt Cou	nty	District _Code:	071	Facility Name:	Brooks Elementary School	School Code:	010
Proje	ect Name:	Bullitt Coun	ty Schools Gu	iarantee E	nergy Savin	gs Contract		
PROJEC	CT TYPE:	Yes	Νο		Gross B	uilding Area (sf.)		
New Bui	lding							
Addition	•							
Renovat	ion	☑				82,433		
Provision	ns for Future	Expansion:						
Propose	d Alternates:)					
		(2)						
Dan and ba		. ,						
Describe	special con	ditions, phasi	ng of project a	and altern	ates, attach a	a supplemental sheet, if needed.		
BUILDIN	BUILDING CONSTRUCTION CHARACTERISTICS:							
			uoto i citto i	<u>100</u> .				
Descripti	ion of Buildin	-						
	Foundation	·						
E	xterior Walls:							
RU	ooi Structure:		<u>. </u>			·		
ENERGY	Y EEEICIENI	DESIGN (K	RS 157.450 a	nd KDQ	167 ASS):			
	31.26	_Energy Con	sumption "Ex	isting" (kE	Btu/sf/yr)			
	24.2	_Energy Con	sumption Tar	get (kBtu/	sf/yr)			
YES	NO							
	Ø	LEED Certif	ied	Othe	r:			
	☑	Designed to	meet Energy					
Ø		Exceeds AS	SHRAE 90.1(2	007) by 1	0% (Minimur	n)		
	Ø.				-	strating Cost Effective Design		
			e Cycle Cost /		Software Use	d:		
If not ye	s to one or i	more of the a	above, explai	n why.				
		Designed to	be Net-Zero			,		17. 83
_	□	•	be Net-Zero	Readv				
F		_		•				
			s: (See List			Down List)		
	est Building		□ YES	□ N	U			
	kterior Wall A	. ,				Avg. Exterior Wall R-Value		
	indow / Dooi	r Area (st):				Avg. Window/Door R-Value		
						Avg. Roof R-Value		
	Wall Type:						Other:	
Roofing	• •					-·	Other:	· · · · · · · · · · · · · · · · · · ·
	ystem Type:				<u>. </u>		Other:	
	m Lighting:						Other:	LED
	aylighting:						Other:	
	Daylighting:				·			
On Site I	Energy Gene	ration;					Other:	

Air Purification Syster	ms: YES□ NO⊡		
Gray Water System :	YES NO E	1	
Low Water Use Fixtur Other:	res: YES ☑ NO □		
		<u> </u>	
PLUMBING:			
Type of Sewage Disp	osal:		
HEATING, VENTILAT	TION AND AIR CONDITIONING	:	
Heating Only:	Heating & Mechanical: Ventilation Only	HVAC:	A/C Only:
Fuel Source/Backup (if applicable):		
ELECTRICAL:			
Source of Electric Pov	ver:	Lighting Intensity (fc.):	:
Voltage Serving Facili	ty:	Std. Classrooms Library/Media Ctr Science Lab	
Number of Convenien Classrooms	ice Outlets:	Science Clrm	
Library/Media Center Business Ed		Business Ed	
	cience	Corridors	
Camera System:		Stairways Cafeteria	
•		Pre-School Clrm	
		Art Classroom Gymnasium	
SPECIAL EQUIPMEN	<u>IT</u> :		
System Bell	Conduit Only	Conduit & Wiring	Complete with Equipment
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 Library Furnishings		Family & Consumer Sci Other	
Dry Food Shelves		Other	·

INTERIOR FINISH SCHEDULE:										
AREA	FLOOR	WAINSCOT	B WALLS	CEILING						
General Office Corridors Custodial Kitchen Cafeteria Gym Showers/Locker Toilets Library/Media Cntt Classrooms Music Art Science FMD OTHER AREAS										
Miscellaneous Pro	ject Specific Feat	ıres:								
GESC Qualified P	rovider	Ent (tura)	Date: 8-7-18						
Kentucky Register	red Engineer:	Signa		Date: 5/7/2018						
Board Designee o	r Superintendent:	Signa	ture	Date:						



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- J hybrid chilled beam/geothermal system
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- F other
- G none

District Name:	Bullitt Cou	nty	District _Code:	071	Facility Name:	Bullitt Central High School	School Code:	015	
Proje	ct Name;	Bullitt Coun	ty Schools Gu	uarantee E	nergy Savings	s Contract			
PROJEC	T TYPE:	Yes	No		Gross Bui	ilding Area (sf.)			
New Buil	ding					• • • • • • • • • • • • • • • • • • • •			
Addition									
Renovati	on	Ż				82,433			
Provision	s for Future	Expansion:							
Proposed	d Alternates:)						
		(2)							
D		(0)	' 						
Describe	Describe special conditions, phasing of project and alternates, attach a supplemental sheet, if needed.								
BUILDIN	BUILDING CONSTRUCTION CHARACTERISTICS:								
Descripti	on of Building	_				:			
	roundalion.								
E	derior Walls:								
Po	of Ctruotura					· · ·			
Ru	oi Structure:		.,						
ENERGY EFFICIENT DESIGN (KRS 157.450 and KRS 157.455):									
4	3.20	Energy Con	sumption "Ex	isting" (kB	tu/sf/yr)				
;	37.3	Energy Con	sumption Tar	aet (kBtu/s	sf/vr)				
YES	NO			got (notan	2a.y.,				
	 ☑	LEED Certif	ied	Othe	r:				
			meet Energy		···				
3					0% (Minimum))			
	 ✓	Whole Build	ling Life Cycle	Cost Ana	ılysis Demonsi	trating Cost Effective Design			
					oftware Used:				
If not yes	s to one or n	nore of the a	above, explai	n why.					
	<u> </u>	Decigned to	be Net-Zero					. <u>.</u> .	
	☑	=	be Net-Zero	Ready					
		•		,					
					r Use Drop De	owπ List)			
	est Building (terior Wall A		□ YE\$		J	A F. 4-2-142-11 (5.17.1)			
	ndow / Door					Avg. Exterior Wall R-Value:			
					· · · · · · · · · · · · · · · · · · ·	Avg. Window/Door R-Value:			
	Gross Roof Area (sf): Avg. Roof R-Value: Other:								
Roofing 7							Other:		
	stem Type:					 	_ Other: Other:		
	n Lighting:						Other:	LED	
	Active Daylighting: Other: LED Other:								
Passive I	Passive Daylighting: Other:								
On Site E	On Site Energy Generation: Other:								

Air Purification Systems	s: YES 🗆	NO ₪	· - '; ·	
Gray Water System:	YES 🗆	NO 🗵		
Low Water Use Fixture Other:		NO 🗆		
PLUMBING:				
Type of Sewage Dispos	sal:			
HEATING, VENTILATI		•		
Heating Only:	Heating & Mecha Ventilation Only	nical:	HVAC:	A/C Only:
Fuel Source/Backup (if	applicable):			
ELECTRICAL:				
Source of Electric Power	er:		Lighting Intensity (fo	c.):
Voltage Serving Facility	<i>f</i> :		Std. Classrooms Library/Media Ctr Science Lab	
Number of Convenience Classrooms Library/Media Center Business Ed Family & Consumer Sc Camera System:			Science CIrm Band/Music Business Ed Shops	
			Art Classroom Gymnasium	
SPECIAL EQUIPMENT	<u>[</u> :			
System Bell Clock Fire Alarm Intercom Telephone Television Computer Wireless Network Interactive White bd Voice Amplification FIXED EQUIPMENT:	Conduit Only	C	onduit & Wiring	Complete with Equipment
Teacher Cabinet			Custodiał Room Shelve	ae
Student Lockers Folding Bleachers Library Furnishings Dry Food Shelves			Science Laboratories Family & Consumer Sc Other Other	

INTERIOR FINISH	SCHEDULE:			
AREA	FLOOR	WAINSCOT	B WALLS	CEILING
General Office				
Corridors Custodial				
Kitchen	-			
Cafeteria Gym				
Showers/Locker				
Toilets				
Library/Media Cnti Classrooms	ſ <u></u>			
Music				
Art Science				
FMD				
OTHER AREAS				
Miscellaneous Pro	ject Specific Feat	ures:		
GESC Qualified P	rovider	Signati	are Trees	Date: 5-7-18
Kentucky Register	red Engineer:	Signati	3/2	Date: 5-7-18 Date: 5/7/2018
Board Designee o	r Superintendent:	Signati	ure	Date:
		MAN WAS A STATE OF THE PARTY OF	LEONEL ARTINEZ-PEREZ *	

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- 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

- 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

District Name: Bullitt	County	District Code:	071	Facility Name:	Bullitt East High School	School Code: 016		
Project Nam	e: Bullitt Cou	inty Schools Gi	uarantee E	nergy Saving	s Contract			
PROJECT TYPE	≣: Yes	No		Gross Bui	ilding Area (sf.)			
New Building				•	3 ()			
Addition								
Renovation	Ø				138,569			
Provisions for Fu	uture Expansion		. <u> </u>					
Proposed Altern	ates:	(1)						
	,	2)	·					
Describe special conditions, phasing of project and alternates, attach a supplemental sheet, if needed.								
BUILDING CON	STRUCTION C	HARACTERIST	rics:	-				
			. <u></u> .					
Description of B	_							
·	ation:							
Exterior V	Valls:							
						, *		
1,001,011,01								
ENERGY EFFIC	IENT DESIGN (KRS 157.450 a	ınd KRS	<u>157,455</u>):				
47.80	Energy Co	onsumption "Ex	isting" (kE	Btu/sf/yr)				
40.7	Energy Co	onsumption Tar	get (kBtu/	sf/yr)	•			
YES NO								
	LEED Cer	tified	Othe	r:				
	Designed	to meet Energy	Star		· · · · · · · · · · · · · · · · · · ·			
	Exceeds A	ASHRAE 90.1(2	2007) by 1	0% (Minimum))			
	Whole Bu	ilding Life Cycle	Cost Ana	alysis Demons	trating Cost Effective Design			
		ife Cycle Cost	•	Software Used:				
If not yes to one	or more of the	above, explai	n why.			, <u>. </u>		
	Designed	to be Net-Zero						
	_	to be Net-Zero	Ready		·			
Energy Efficien			-	v Hoo Dree D	over Link			
East / West Build		U YES	rage 4, c		OWN LIST;	•		
Gross Exterior W		L 123	□ IV	o .	Ava Exterior Mall D Value			
Gross Window /	. ,				_ Avg. Exterior Wall R-Value:			
Gross Roof Area	` '				_ Avg. Window/Door R-Value: Avg. Roof R-Value:			
Exterior Wall Typ		·				Othor		
Roofing Type:						Other:		
HVAC System T						Other:		
Classroom Light			,		,	Other: LED		
Active Daylightin			-			Other:		
Passive Daylight	-					Other:		
On Site Energy 0						Other:		

Air Purification Systems	s: YES □ NO ☑		
Gray Water System :	YES □ NO ☑	·	
Low Water Use Fixtures Other:			
PLUMBING:			
Type of Sewage Dispos	eal:		
	ON AND AIR CONDITIONING:		
Heating Only:	Heating & Mechanical: Ventilation Only	HVAC:	A/C Only:
Fuel Source/Backup (if	applicable):		
ELECTRICAL:			
Source of Electric Powe	er:	Lighting Intensity (fc.)	· !
Voltage Serving Facility	:	Std. Classrooms Library/Media Ctr Science Lab	
Number of Convenience Classrooms		Science Clrm	
Library/Media Center		Dunings Ed	
Business Ed Family & Consumer Science	enc <u>e</u>	Shops Corridors	
Camera System:		Stairways Cafeteria	
oamera dystem,		Pre-School Clrm	
		Art Classroom Gymnasium	
SPECIAL EQUIPMENT)		
System	Conduit Only	Conduit & Wiring	Complete with Equipment
Bell			
Fire Alarm			
Intercom Telephone			
Television			
Computer Wireless Network			
Interactive White bd Voice Amplification			
FIXED EQUIPMENT:			
Teacher Cabinet		Custodial Room Shelves	
Student Lockers Folding Bleachers		Science Laboratories	
Library Furnishings		Family & Consumer Sci Other	
Dry Food Shelves		Other	

INTERIOR FINISH	I SCHEDULE:			
AREA	FLOOR	WAINSCOT	B WALLS	CEILING
General Office Corridors		_		
Custodial				
Kitchen Cafeteria				
Gym Showers/Locker				
Toilets				
Library/Media Cntr Classrooms				
Music Art		-		
Science FMD				
OTHER AREAS				
OTHER AREAS				
		•		
Miscellaneous Pro	ject Specific Featur	es:		
GESC Qualified P	rovider	Ent C (Signature	facop	Date: <u>S-7-18</u>
Kentucky Register	ed Engineer:	Signature		Date: \$\frac{5\7\2018}{}
Board Designee or	Superintendent:	Signature)	Date:



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
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- E wind generation (to support the entire building's energy needs)
- F other
- G none

District Name: <u>Bullitt Cou</u>	ınty	District _Code: _	071	Facility Name:	Cedar Grove Elementary Schoo	School Code:	20		
Project Name:	Bullitt Coun	ity Schools G	uarantee E	Energy Savin	gs Contract				
PROJECT TYPE:	Yes	No		Gross B	uilding Area (sf.)				
New Building									
Addition									
Renovation					67,676				
Provisions for Future	Expansion:	·							
Proposed Alternates:	: (1)					•		
	(2	<u> </u>							
(3)									
BUILDING CONSTRUCTION CHARACTERISTICS:									
-		AIGAO I LIGIO	<u>1103</u> .						
Description of Buildin	•								
Foundation	:								
Exterior Walls	:								
Roof Structure	·	******							
ENERGY EFFICIENT	T DECICAL /K	DC 457 450	and VDC ((E7 AEE).		-			
42.40	_Energy Cor	nsumption "E:	xisting" (kE	Btu/sf/yr)					
36.1	_Energy Cor	sumption Ta	rget (kBtu/	/sf/уг)					
YES NO									
	LEED Certi	fied	Othe	er:					
· •	Designed to	meet Energ			· · ·				
	Exceeds AS	SHRAE 90.1(2007) by 1	0% (Minimur	n)				
					strating Cost Effective Design				
				Software Use	d;				
If not yes to one or	more of the	above, expla	in why.						
	Designed to	be Net-Zero	•		· · · · · · · · · · · · · · · · · · ·				
	_	be Net-Zero be Net-Zero							
	-		•						
Energy Efficient Des	_	<u>.</u>	_	•	Down List)				
East / West Building		□ YES		0					
Gross Exterior Wall A	• •				Avg. Exterior Wall R-Value:				
Gross Window / Doo	, ,				Avg. Window/Door R-Value:				
Gross Roof Area (sf):					Avg. Roof R-Value:	-			
Exterior Wall Type:						Other:			
Roofing Type:	 -		<u> </u>			Other:			
HVAC System Type:	•••					Other:			
Classroom Lighting:						Other:	LED		
Active Daylighting:						_ Other:			
Passive Daylighting:						Other:			
On Site Energy Gene	eration:					_ Other:			

Air Purification Syster	ns: YES	□ NO	v				
Gray Water System :	YES	□ NO					
Low Water Use Fixtur Other:	res: YES						
	 .						
			_				
PLUMBING:							
Type of Sewage Disp	osal:					 :	
HEATING, VENTILAT	TION AND AIR CON	IDITIONII	NG:				
Heating Only:	Heating & Me Ventilation Or		_		HVAC:	A/C Only:	
Fuel Source/Backup (if applicable):					•	
ELECTRICAL:							
Source of Electric Pov	ver:				Lighting Intensity (•	
Voltage Serving Facili	ty:				Std. Classrooms Library/Media Ctr Science Lab		
Number of Convenier Classrooms					Science Clrm Band/Music		
Library/Media Center Business Ed	-				Business Ed Shops		
Family & Consumer S	cience		.		Corridors Stairways		
Camera System:					Cafeteria		
					Pre-School Clrm Art Classroom		
					Gymnasium		
SPECIAL EQUIPMEN	<u>lT</u> :						
System	Conduit Only			Conduit 8	Wiring	Complete v	vith Equipment
Bell Clock			_		· ·		
Fire Alarm							
Intercom Telephone							
Television Computer							
Wireless Network				-		· · · · · · · · · · · · · · · · · · ·	
Interactive White bd Voice Amplification							
FIXED EQUIPMENT:							
· · · · · · · · · · · · · · · · · · ·				_			
Teacher Cabinet Student Lockers		_			ustodial Room Shelv cience Laboratories	res -	
Folding Bleachers				Fa	amily & Consumer S	ci _	
Library Furnishings Dry Food Shelves					ther ther	-	
,				J	u 101	_	

INTERIOR FINISH SCHEDULE:										
AREA	FLOOR	WAINSCOT	B WALLS	CEILING						
General Office Corridors										
Custodial										
Kitchen										
Cafeteria Gym										
Showers/Locker										
Toilets Library/Media Cnti	<u> </u>		<u> </u>							
Classrooms										
Music Art		·								
Science										
FMD										
OTHER AREAS										
			· · · · · · · · · · · · · · · · · · ·							
										
Miscellaneous Pro	ject Specific Fea	tures:								
.,.		0 .	0 01							
GESC Qualified P	rovider	Signa	ture							
Kentucky Register	red Engineer:		6							
Doord Designed		Signa	ture	-						
Board Designee of	r Superintendent	: Signa	ture	Date:						
			NE KENZW							
			A CONTRACTOR							
		11. S. Y. S.	MARTINEZ-PEREZ *=							
		二 🛧	: <u>E</u>							

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
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- 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

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- 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
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Passive Daylight Systems List

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- C exterior light shelves
- D solar tubes without dimming
- E solar tubes with internal dimmers
- F other
- G none

- 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

District Name:	Bullitt Cou	inty	DistrictCode:	071	Facility _Name:	Crossroads Elementary School	School Code:	060
Proj	ect Name:	Bullitt Coun	ity Schools G	uarantee E	nergy Saving	s Contract		
PROJE	CT TYPE:	Yes	No		Gross Bu	ilding Area (sf.)		
New Bu	ilding					3 (***)		
Addition								
Renovat	tion	v				72,281		
Provisio	ns for Future	Expansion:						
Propose	d Alternates:)					
		(2 (3)	. <u>-</u>		124		
Describe	e special con	.,	·	and alterna	ates, attach a	supplemental sheet, if needed.	-	
BUILDIN	NG CONSTR	UCTION CH	ARACTERIS	TICS:			14	
Descript	ion of Buildin Foundation	•						
	r ouridation	·						
E	xterior Walls						· · · · · · · · · · · · · · · · · · ·	
D	nof Structuro					<u>-</u>		
IN	JOI GITUCIQIE							
ENERG'	Y EFFICIENT	T DESIGN (K	RS 157.450 a	and KRS 1	<u>57.455)</u> :			
·	31.50	_Energy Con	sumption "Ex	disting" (kB	tu/sf/yr)			
	24.0	Energy Con	sumption Tai	get (kBtu/s	sf/yr)	•		
YES	NO	-	·	•	• •			
	☑	LEED Certif	fied:	Other	-			
	. 🖸		meet Energy		•			
Ø		-	•		0% (Minimum))		
	v					rating Cost Effective Design		
						· · · · · · · · · · · · · · · · · · ·		
If not ye	s to one or I		above, expla					
	-	5						
	2 2	•	be Net-Zero	Dandy				
		-	be Net-Zero	,	•			
			s: (See List	Page 4, o	r Use Drop D	own List)		
	est Building		□ YES)			
	kterior Wall A					_ Avg. Exterior Wall R-Value:		
	/indow / Door				,_,	_ Avg. Window/Door R-Value:		
Gross Re	oof Area (sf):					_ Avg. Roof R-Value:		
	Wall Type:				, <u></u> •		Other:	
Roofing							Other:	
	ystem Type:						Other:	
	m Lighting:						Other: LI	ED
	aylighting:			·····	<u> </u>		Other: _	
	Daylighting:						Other:	
On Site I	Energy Gene	ration:					Other:	

Air Purification System	ns: YES 🗆	NO 🗵			
Gray Water System :	YES 🗆	NO 🗵			
Low Water Use Fixture Other:		NO □			
					
<u>PLUMBING</u> :					
Type of Sewage Dispo	osal:			<u></u>	
HEATING, VENTILAT	ON AND AIR CONDI	TIONING:			
Heating Only:	Heating & Mecha Ventilation Only	ınical:		HVAC:	_ A/C Only:
Fuel Source/Backup (i	f applicable):				
ELECTRICAL:					
Source of Electric Pow	/er:			Lighting Intensity (fo	p.):
Voltage Serving Facilit				Std. Classrooms Library/Media Ctr	
Number of Convenient				Science Lab Science Clrm Band/Music	
Library/Media Center Business Ed				Business Ed Shops	
Family & Consumer So	cience			Corridors Stairways	
Camera System:				Cafeteria	
				Pre-School Clrm Art Classroom	
				Gymnasium	
SPECIAL EQUIPMEN	<u>T</u> :				
System	Conduit Only		Conduit &	Wiring	Complete with Equipment
Bell _ Clock	,				
Fire Alarm					
Intercom Telephone					
Television					
Computer Wireless Network					
Interactive White bd					
FIXED EQUIPMENT:		-			
			_		
Teacher Cabinet _ Student Lockers				istodial Room Shelve cience Laboratories	<u> </u>
Folding Bleachers			Fa	mily & Consumer Sci	
Library Furnishings Dry Food Shelves				her her	
	· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·

INTERIOR FINISH SCHEDULE:									
AREA	FLOOR	WAINSCOT	C WALLS	CEILING					
General Office Corridors Custodial Kitchen Cafeteria Gym Showers/Locker Toilets Library/Media Cntr Classrooms Music Art Science									
FMD									
OTHER AREAS									
Miscellaneous Proj	ect Specific Feature	es:							
GESC Qualified Pr	ovider	End C Signature	Son	Date:					
Kentucky Registere	ed Engineer:		Date: 5/7/2018						
Board Designee or	Superintendent:	Signature	<u>,</u>	Date:					



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
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- F none

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- A upper classroom clerestory lighting with sloped ceiling plane
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- 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

District Name: <u>Bullitt Cou</u>	inty	District Code:	071	Facility Name:	Eastside Middle School	School Code:	009	
Project Name:	Bullitt Coun	ty Schools G	uarantee E	nergy Saving	s Contract			
PROJECT TYPE:	Yes	No		Gross Bu	ilding Area (sf.)			
New Building				0,000 54	ading 7 to a (oi.)			
Addition								
Renovation	2			-	99,554			
Provisions for Future	Expansion:							
Proposed Alternates	: (1	,						
)			-			
	(5)	·						
Describe special conditions, phasing of project and alternates, attach a supplemental sheet, if needed.								
								
BUILDING CONSTR	UCTION CH	ARACTERIS	<u>TICS</u> :					
Description of Buildir	ng Structure:							
Foundation	:			•		: 		
Exterior Walls								
in the state of th	·							
Roof Structure	:			·				
ENERGY EFFICIEN	T DESIGN (K	RS 157.450	and KRS	<u>157.455)</u> :				
43.92	_Energy Con	sumption "E	xisting" (kE	stu/sf/yr)				
25.5	Energy Con	sumption Ta	rget (kBtu/	sf/yr)				
YES NO	_		- '	•	•			
	LEED Certif	fied	Othe	r:				
	Designed to	meet Energ						
	Exceeds AS	SHRAE 90.1(2007) by 1	0% (Minimum).			
	Whole Build	ling Life Cycl	e Cost Ana	alysis Demons	strating Cost Effective Design			
			-	Software Used	:			
If not yes to one or	more of the	above, expla	in why.					
	=	be Net-Zero						
	Designed IC	be Net-Zero	Ready					
Energy Efficient Des	sign Feature	s: (See List	t Page 4, c	r Use Drop D	own List)			
East / West Building	Orientation	□ YES	□ N	0				
Gross Exterior Wall A	∖rea (sf):				Avg. Exterior Wall R-Value:			
Gross Window / Doo	r Area (sf):				_ Avg. Window/Door R-Value:			
Gross Roof Area (sf)	i				_ Avg. Roof R-Value:			
Exterior Wall Type:						Other:		
Roofing Type:						Other:		
HVAC System Type:						Other:		
Classroom Lighting:		· <u> </u>				Other: L	ED	
Active Daylighting:						Other:		
Passive Daylighting:				_		Other:		
On Site Energy Gene	eration:					Other:	.	

Air Purification Systems	: YES □ NO ☑		
Gray Water System :	YES □ NO ☑	÷	
PLUMBING:			
Type of Sewage Disposa	al:	·	·
	N AND AIR CONDITIONING:		
Heating Only:	Heating & Mechanical: Ventilation Only	HVAC:	A/C Only:
Fuel Source/Backup (if a	pplicable):		
ELECTRICAL:			· · · · · · · · · · · · · · · · · · ·
Source of Electric Power		Lighting Intensity (fc.)	:
Voltage Serving Facility:		Std. Classrooms	
Number of Convenience Classrooms Library/Media Center Business Ed Family & Consumer Scie Camera System:	Outlets:	Science CIrm Band/Music Business Ed Shops	
SPECIAL EQUIPMENT:		Gymnasium	
System (Cock Fire Alarm Intercom Telephone Television Computer Wireless Network	Conduit Only	Conduit & Wiring	Complete with Equipment
Interactive White bd Voice Amplification	·		
FIXED EQUIPMENT:			
Teacher Cabinet Student Lockers Folding Bleachers Library Furnishings Dry Food Shelves		Custodial Room Shelves Science Laboratories Family & Consumer Sci Other Other	

	·	***								
INTERIOR FINISH SCHEDULE:										
AREA	FLOOR	WAINSCOT	E WALLS	CEILING						
General Office										
Corridors Custodial										
Kitchen										
Cafeteria Gym										
Showers/Locker										
Toilets Library/Media Cntr	,									
Classrooms										
Music Art										
Science			· 							
FMD										
OTHER AREAS										
Miscellaneous Pro	ject Specific Feature	es:								
		<u> </u>	<u> </u>							
GESC Qualified Pr	rovider	Signature	Croop-	Date: 5-7-18						
Kentucky Register	ed Engineer:	Signature		Date: 5/7/2018						
Board Designee or	ouperintendent:	Signature	9	Date:						
		· ·								



Exterior Wall Type

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- J hybrid chilled beam/geothermal system
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- B lower classroom clerestory lighting that does NOT require sloping the ceiling place
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- G none

- 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

District Name: <u>Bullitt Cou</u>	ınty	District Code:	071	Facility Name:	Freedom Elementary School	School _Code:	006
Project Name:	Bullitt Coun	ty Schools Gu	ıarantee E	nergy Saving	s Contract		
PROJECT TYPE:	Yes	No		Gross Bu	illding Area (sf.)		
New Building					J. 222 (2.17)		
Addition							
Renovation					70,015		
Provisions for Future	Expansion:						
Proposed Alternates	• • • • • • • • • • • • • • • • • • • •)			· · · · · · · · · · · · · · · · · · ·		
•	(2))					
Describe special con	•				supplemental sheet, if needed.		
		g 0. project			supplemental shoet, if fleeded.		
BUILDING CONSTR	UCTION CH	ARACTERIST	<u> 1CS</u> :				
Description of Building	na Structure:						•
·	-						
Exterior Walls					775		
Roof Structure							
ENERGY EFFICIEN	T DESIGN (K	RS 157.450 a	nd KRS 1	<u>57.455)</u> :			
35.86	_Energy Con	sumption "Ex	isting" (kB	tu/sf/yr)			
28.2	Energy Con	sumption Tar	get (kBtu/s	sf/yr)			
YES NO				• /			
	LEED Certif	īed	Othe	·:			
	Designed to	meet Energy					
	Exceeds AS	SHRAE 90.1(2	007) by 1	0% (Minimum)		
					strating Cost Effective Design		
	Life	e Cycle Cost	Analysis S	oftware Used	•		
If not yes to one or	more of the a	above, explai	n why.				
	Designed to	be Net-Zero					· · · · ·
	=	be Net-Zero	Ready				
			•				
Energy Efficient De					Pown List)		
East / West Building		□ YES)			
Gross Exterior Wall A					Avg. Exterior Wall R-Value:	<u> </u>	
Gross Window / Doo					_ Avg. Window/Door R-Value:		
Gross Roof Area (sf)	·				_ Avg. Roof R-Value:		
Exterior Wall Type:						Other:	
Roofing Type:						Other:	
HVAC System Type:						Other:	
Classroom Lighting:						Other: LED	
Active Daylighting:						Other:	
Passive Daylighting:						Other:	
On Site Energy Gene	eration:					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 A	AIR CONDITIONING:		
Heating Only: Heating Ventil	ng & Mechanical: _ ation Only	HVAC:	A/C Only:
Fuel Source/Backup (if applicable	·):		
ELECTRICAL:			
Source of Electric Power:	·	Lighting Intensity (fc.)):
Voltage Serving Facility:			
Number of Convenience Outlets:		Science Lab Science Clrm	
Classrooms Library/Media Center			
Business Ed		Shops	
Family & Consumer Science		Corridors	
Camera System:		Stairways Cafeteria	
		Pre-School Cirm	
		Art Classroom Gymnasium	
SPECIAL EQUIPMENT:		- Symmasiani	
System Conduit () như	Conduit 9 Wising	Compalate with Provinces
System Conduit C	Jilly	Conduit & Wiring	Complete with Equipment
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 Dry Food Shelves		Other Other	
		Guier	

INTERIOR FINISH	SCHEDULE:			
AREA	FLOOR	WAINSCOT	F WALLS	CEILING
General Office				
Corridors Custodial				
Kitchen				
Cafeteria Gym				
Showers/Locker				
Toilets				
Library/Media Cntr Classrooms				
Music				
Art Science				
FMD				
OTHER AREAS				
Miscellaneous Proj	ject Specific Featu	ures:		
GESC Qualified Pr	ovider	Ent Signa	C. Sucop	Date: 5-7-18
Kentucky Registere	ed Engineer:	Signa	6/2	
Board Designee or	Superintendent:	Signa	ature .	Date:



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

- 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)
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- E wind generation (to support the entire building's energy needs)
- F other
- G none

District Name:	Bullitt Cou	nty	District _Code:	071	Facility Name:	Hebron Middle School	School Code:	025
Proje	ct Name:	Bullitt Coun	ty Schools Gu	uarantee E	nergy Savings	Contract		
PROJEC	T TYPE:	Yes	No		Gross Buil	ding Area (sf.)		
New Buil	ding							
Addition	ŭ							
Renovati	on	 ☑				68,276		
Provision	s for Future	Expansion:						
Proposed	d Alternates:	(1)	•					
		(2)	PL-					
D		. (0)	·					
Describe	special cond	ditions, phasi	ng of project a	and altern	ates, attach a s	supplemental sheet, if needed.		
BUILDIN	G CONSTRI	UCTION CHA	ARACTERIST	ICS:				
Descripti	on of Building Foundation:	_						
	r ouridation.							
E	derior Walls:							, ,
Ro	of Structure:					:		
110	or orradianc.			_				
ENERGY	EFFICIENT	DESIGN (KI	RS 157.450 a	nd KRS 1	<u>57.455)</u> :			
4	0.90	Energy Con:	sumption "Ex	istina" (kE	tu/sf/vr)			
	34.3	_						
YES	NO	Energy Cons	sumption Tar	gei (Kbiu/	snyr)			
	14C	LEED O-46	:	0.11-				
	⊙	LEED Certifi	neet Energy	Othe Star	r:			
_ _	_				0% (Minimum)			
	=					rating Cost Effective Design		
					oftware Used:	_		
If not yes	to one or n	nore of the a	bove, explai	n why.				
	☑	-	be Net-Zero	Б.				
	☑	Designed to	be Net-Zero	Ready				
Energy E	fficient Des	ign Features	s: (See List	Page 4, o	r Use Drop Do	own List)		
	est Building (□ YES)			
	terior Wall A					Avg. Exterior Wall R-Value:		
	ndow / Door					Avg. Window/Door R-Value:		
Gross Ro	of Area (sf):					Avg. Roof R-Value:		
Exterior V	Vall Type:			,			Other:	
Roofing T							Other:	
HVAC Sy	stem Type:						Other:	
	n Lighting:		-				Other: <u>LE</u>)
Active Da							Other:	
	Daylighting:						Other:	
On Site E	nergy Gener	ration:					Other:	

Air Purification Systems	: YES 🗆 1	NO 🗹			
Gray Water System :	YES 🗆 1	NO 🗵			
Low Water Use Fixtures Other:		NO 🗆			
<u>PLUMBING</u> :					•
Type of Sewage Disposa	al:				
HEATING, VENTILATION	N AND AIR CONDITIO	NING:			
Heating Only:	_ Heating & Mechanic Ventilation Only	cal:	H	IVAC:	A/C Only:
Fuel Source/Backup (if a	applicable):	- 100			
ELECTRICAL:					
Source of Electric Power	r:			ting Intensity (fc.):
Voltage Serving Facility:			Libra	Classrooms ary/Media Ctr	
Number of Convenience Classrooms Library/Media Center	Outlets:		Scie Ban Bus	nce Lab nce Clrm d/Music ness Ed	
Business Ed Family & Consumer Scie	ence		Co.	os idors	
Camera System:			Stai	ways eteria	
•			Pre-	School Cirm Classroom	
				nasium	
SPECIAL EQUIPMENT:					
	Conduit Only		Conduit & Wirin	g	Complete with Equipment
Bell Clock					
Fire Alarm Intercom			·		
Telephone Television					
Computer					
Wireless Network Interactive White bd					
Voice Amplification		_			
FIXED EQUIPMENT:					
Teacher Cabinet Student Lockers				al Room Shelves	
Folding Bleachers	·		· ·	Laboratories Consumer Sci	 _
Library Furnishings Dry Food Shelves			Other Other		:

	7			
INTERIOR FINISH	I SCHEDULE:			
AREA	FLOOR	WAINSCOT	H WALLS	CEILING
General Office Corridors				
Custodial Kitchen				
Cafeteria Gym				
Showers/Locker Toilets				
Library/Media Cntr Classrooms				
Music Art			· · · · · · · · · · · · · · · · · · ·	
Science FMD				
OTHER AREAS				
OTTEN TIME TO				
Miscellaneous Pro	ect Specific Feature	es:		
GESC Qualified Pr	ovider	E T C Signature	Sug	Date: 5-7-18 5/7/2018
Kentucky Registere	ed Engineer:	Signature	<u> </u>	Date: 5/7/2018
Board Designee or	Superintendent:	Signature	<u></u>	Date:
		LEON		
		E . MARTINE	Z-PEREZ : +=	

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
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- 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
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- 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

- 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

District Name:	Bullitt Cou	nty	District Code:	071	Facility Name:	Lebanon Junction Elementary	School Code:	030
Proje	ct Name:	Bullitt Coun	ty Schools G	uarantee E	Energy Savings	s Contract		
PROJEC	T TYPE:	Yes	No		Gross Bui	lding Area (sf.)		
New Bui	ding					()		
Addition	-							
Renovati	ion	2				49,413		
Provision	ns for Future	Expansion:						
Propose	d Alternates:		1					
		(2)						
Describe	special con	ditions, phasi	ng of project	and altern	ates, attach a	supplemental sheet, if needed.		
BUILDIN	G CONSTR	UCTION CHA	ARACTERIS	TICS:				
Descripti	on of Buildin	a Structure:						
Descripti		-				,		
E	terior Walls:							
Ro	of Structure:							
ENERGY	EFFICIENT	DESIGN (K	RS 157.450	and KRS	157.45 <u>5)</u> :			
4	7.10	Energy Con	sumption "E:	xisting" (kE	Stu/sf/yr)			
:	39.2	_Energy Con	sumption Ta	rget (kBtu/	sf/yr)			
YES	NO	_	-					
	2	LEED Certif	ied .	Othe	:Г :			
	2	Designed to	meet Energ					
Ø		Exceeds AS	HRAE 90.1(2007) by 1	0% (Minimum)			
	Ø					trating Cost Effective Design		
					Software Used:			
If not yes	s to one or r	more of the a	ıbove, expla	in why.				
	[2]	Designed to	be Net-Zero	1	,			
	Ø	Designed to						
Energy F	fficient Des	ian Fosturos	e (Sooliel	Pana 4	or Use Drop D	own Liet)		
	est Building		yES	rage 4, t □ N	•	own List)		
	terior Wall A		L (E3	_ N	O	A 5.4.4		
	indow / Door			-		_ Avg. Exterior Walf R-Value:		
		Alea (SI).				_ Avg. Window/Door R-Value: Avg. Roof R-Value:		
					<u></u>	Avg. Nooi K-value.		
Roofing	Vall Type:						Other:	
	rstem Type:						Other: Other:	
	m Lighting:						Other:	LED
Active Da	- •						Other:	
	Daylighting:					<u></u> .	Other:	
	nergy Gene	ration:					Other:	
	~•							

Air Purification System	ns: YES 🗆	NO ☑			
Gray Water System :	YES 🗆	NO ☑			
PLUMBING:					
Type of Sewage Dispe	osal:				
HEATING, VENTILAT					
Heating Only:	Heating & Mech Ventilation Only			HVAC:	_ A/C Only:
Fuel Source/Backup (if applicable):				···
ELECTRICAL:	<u>-</u> .				
Source of Electric Pov	ver:			Lighting Intensity (fc	.):
Voltage Serving Facili	h	<u></u>		Std. Classrooms Library/Media Ctr	
Number of Convenien Classrooms				Science Lab Science Clrm Band/Music	
Library/Media Center Business Ed				Business Ed Shops	
Family & Consumer S	cience			Corridors Stairways	
Camera System:				Cafeteria Pre-School Cirm	
				Art Classroom	
				Gymnasium	
SPECIAL EQUIPMEN	<u>IT</u> :				
System Bell	Conduit Only		Conduit &	Wiring	Complete with Equipment
Clock Fire Alarm		_			
Intercom		_			
Telephone Television					
Computer					
Wireless Network Interactive White bd Voice Amplification					
FIXED EQUIPMENT:					
Teacher Cabinet Student Lockers Folding Bleachers Library Furnishings			So Fa	ustodial Room Shelve cience Laboratories amily & Consumer Sci ther	S
Dry Food Shelves			Ot	ther	

AREA FLO	OOR 1	WAINSCOT	L WALLS	CEILING
		WAINSCOT	L WALLS	CEILING
General Office				
Corridors				
Custodial				
Kitchen	 ,			
Cafeteria				
Gym Showers/Locker				
Toilets				
_ibrary/Media Cntr				
Classrooms	·			
Music				
Art				
Science				
FMD				
OTUPO 10510				
OTHER AREAS				
<u> </u>				
Miscellaneous Project S	Specific Features	S		
			. 1	
GESC Qualified Provide	er	ETC	Carr	Date: 5-7-18
	-	Signatur	e) /	
			/ '	d=17010
Kentucky Registered E	ngineer:			Date: 3//2018
		Signatur	e /	
Poord Donieson or Cun				5 .
Board Designee or Sup	erintendent: _	Signatur		Date:
		Signatui	е	
		UNEK	ENTITY	
		LEO MARTINE	Chill	
		ES! LEO	NEL DET LE	
		EO: MARTINE	Z-PERCE : * =	
		Ξ★:	773	
		E 24	#11 /#I	
		78 . 1/n	- CO 185	

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

- 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

District Name: Bullitt Cou	infv	District Code:	071	Facility Name:	Mount Washington Middle	School Code:	055
Project Name:		_		 Energy Saving		code	
PROJECT TYPE:	Yes	No			ilding Area (sf.)		
New Building				01000 20	iding Arca (Si.)		
Addition							
Renovation	□ □				90.402		
Provisions for Future	_				89,403		
Proposed Alternates:	(1)						
r ropossa / mestrates.				 -	,		
	(3)						
Describe special con-	ditions, phasi	ng of project	and altern	ates, attach a	supplemental sheet, if needed.		
-			-				
BUILDING CONSTR	UCTION CHA	ARACTERIS'	TICS:				
Description of Buildin	g Structure:						
•	•						
Exterior Walls:							
Roof Structure:							
ENERGY EFFICIENT	r Design (K	RS 157.450 a	and KRS	157.455):			
	₹						
38.00	_Energy Con	sumption "Ex	kisting" (kE	Stu/sf/yr)			
30.0	_Energy Con	sumption Ta	rget (kBtu/	sf/yr)			
YES NO							
	LEED Certif	ied	Othe	r:			
	Designed to	meet Energy	y Star				
	Exceeds AS	HRAE 90.1(2	2007) by 1	0% (Minimum)		
	Whole Build	ing Life Cycle	e Cost An	alysis Demons	trating Cost Effective Design		
	Life	Cycle Cost	Analysis 9	Software Used			
If not yes to one or a	more of the a	ıbove, expla	in why.		100 - 1		
	D-vi-	I NI **			:		
		be Net-Zero					
	Designed to	be Net-Zero	Ready				
Energy Efficient Des	sign Feature:	s: (See List	Page 4, c	r Use Drop D	own List)	•	
East / West Building	Orientation	□ YES	□ N	0			
Gross Exterior Wall A	rea (sf):				_ Avg. Exterior Wall R-Value	:	
Gross Window / Door	Area (sf):				Avg. Window/Door R-Value		
Gross Roof Area (sf):					Avg. Roof R-Value	·	
Exterior Wall Type:						Other:	
Roofing Type:						Other:	
HVAC System Type:						Other:	
Classroom Lighting:						Other: L	_ED
Active Daylighting:					-	Other:	
Passive Daylighting:						Other: _	
On Site Energy Gene	ration:					Other:	

Air Purification System	ns: YES □	NO 🗵				
Gray Water System :	YES 🗆	NO ☑				4
Low Water Use Fixture Other:						
	-					
PLUMBING:						
Type of Sewage Dispo	osal:		<u></u>		· .	
HEATING, VENTILAT	TON AND AIR COND	ITIONING:				
Heating Only:	Heating & Mech Ventilation Only			HVAC:	A/C Only:	
Fuel Source/Backup (i						
ELECTRICAL:						
Source of Electric Pov	ver:			ighting Intensity (fc.):	
Voltage Serving Facili		·	S 	td. Classrooms ibrary/Media Ctr cience Lab		
Number of Convenien Classrooms			 	cience Clrm and/Music		
Library/Media Center Business Ed				usiness Ed hops		
Family & Consumer S	cience		C	orridors tairways		
Camera System:				afeteria		
			-	re-School Clrm .rt Classroom		
				ymnasium		
SPECIAL EQUIPMEN	<u>IT</u> :					
System	Conduit Only		Conduit & W	iring	Complete with Equipmen	nt
Bell _ Clock		_				
Fire Alarm		_				
Intercom _ Telephone				<u></u>		
Television		_				
Computer Wireless Network						
Interactive White bd Voice Amplification		_				
FIXED EQUIPMENT:						
			2 .	adlat Danie Ct. 1		
Teacher Cabinet _ Student Lockers		·		odial Room Shelves nce Laboratories		
Folding Bleachers			Fami	ly & Consumer Sci		
Library Furnishings Dry Food Shelves			Othe Othe			
_			- L 101	• .		

INTERIOR FINISH	I SCHEDULE:			
AREA	FLOOR	WAINSCOT	N WALLS	CEILING
General Office Corridors Custodial Kitchen Cafeteria Gym Showers/Locker Toilets Library/Media Cntt Classrooms Music Art Science FMD OTHER AREAS				
Miscellaneous Pro	ject Specific Featu	res:		
GESC Qualified P	rovider	Signa	C. face	Date: 5-7-/8 Date: 5/7/2018
Kentucky Register	ed Engineer:	- Signa	ture	_ Date: <u>\$\frac{7}2018</u>
Board Designee or	r Superintendent:	Signa	ture	Date:
		W. W	OF KEN	

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
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- E wind generation (to support the entire building's energy needs)
- F other
- G none

District Name: <u>Bu</u>	llitt County	District Code:C	Facility 071 Name:	Nichols Elementary School	School Code:	070
Project Na	ime: Bullitt Cou	ınty Schools Guara	ntee Energy Sav	ings Contract		. : : : : : : : : : : : : : : : : : : :
PROJECT TY	'PE: Yes	No	Gross	Building Area (sf.)		
New Building						
Addition						
Renovation	2			30,200		
Provisions for	Future Expansion	•				
Proposed Alte	ernates:	(1)				
	((2)				
Describe spec	cial conditions, pha	sing of project and	alternates, attacl	n a supplemental sheet, if needed		
BUILDING CO	ONSTRUCTION C	HARACTERISTICS	i•			
	•		•			
	Building Structure					
Foui	ndalion:					
Exterio	r Walls:					
n	· <u></u>					
Roof St	ructure:					
ENERGY EFF	ICIENT DESIGN	KRS 157.450 and	KRS 157.455):	·		
45.85	Energy Co	onsumption "Existin	g" (kBtu/sf/yr)			
39.5	Energy Co	onsumption Target	(kBtu/sf/yr)			
YES NO	1					
	LEED Cei	tified	Other:			
	Designed	to meet Energy Sta				
0	Exceeds A	ASHRAE 90.1(2007	') by 10% (Minim	um)		
	Whole Bu	ilding Life Cycle Co	st Analysis Dem	onstrating Cost Effective Design		
	I	_ife Cycle Cost Ana	lysis Software Us	sed:		
If not yes to	one or more of the	e above, explain w	'hy			
	D! /	4- 6- Not 7				
		to be Net-Zero	l			
	Designed	to be Net-Zero Rea	ady			
Energy Effici	ent Design Featu	res: (See List Pag	je 4, or Use Dro	p Down List)		
East / West B	uilding Orientation	□ YES	□ NO			
Gross Exterio	r Wall Area (sf):			Avg. Exterior Wall R-Valu	ıe:	
	v / Door Area (sf):			Avg. Window/Door R-Valu	ie:	
Gross Roof A	rea (sf):			Avg. Roof R-Valu	ıe:	===
Exterior Wall	Туре:		-11	, , , , , , , , , , , , , , , , , , , ,	Other:	
Roofing Type:		 -			Other:	
HVAC System	· · · · · · · · · · · · · · · · · · ·				Other:	
Classroom Lig					Other:	LED
Active Dayligh					Other:	
Passive Dayli					Other:	
On Site Energ	y Generation:				Other:	

Air Purification System	ns: YES 🗆	NO ☑	·		
Gray Water System :	YES 🗆	NO 🗵			
Low Water Use Fixtur Other:		NO 🗆	· .		
PLUMBING:					
Type of Sewage Dispo	osal:				
HEATING, VENTILAT	TON AND AIR CONDI	TIONING:			
Heating Only:	Heating & Mecha Ventilation Only	anical:	HVAC:	A/C Only	:
Fuel Source/Backup (if applicable):				<u> </u>
ELECTRICAL:					
Source of Electric Pov	ver:			tensity (fc.):	
Voltage Serving Facili	ty:		Std. Classi Library/Me Science La	dia Ctr	· · · · · · · · · · · · · · · · · · ·
Number of Convenien Classrooms Library/Media Center			Science Cl Band/Musi	rm c	
Business Ed Family & Consumer S			Shops		
Camera System:			Stairways Cafeteria		
Camera Cyclem.			Pre-Schoo		
			Art Classro Gymnasiur		·
SPECIAL EQUIPMEN	<u>IT</u> :				,
System	Conduit Only		Conduit & Wiring	Complete	with Equipment
Bell Clock					
Fire Alarm Intercom					
Telephone Television					
Computer					
Wireless Network _ Interactive White bd _		<u></u>			
Voice Amplification					
FIXED EQUIPMENT:					
Teacher Cabinet Student Lockers			Custodial Roo		
Folding Bleachers			Science Labor Family & Cons		
Library Furnishings Dry Food Shelves			Other Other		
-			··-·		

INTERIOR FINISH	SCHEDULE:	-		
AREA	FLOOR	WAINSCOT	N WALLS	CEILING
General Office Corridors				
Custodial Kitchen				
Cafeteria Gym				
Showers/Locker Toilets				
Library/Media Cntr Classrooms				
Music Art				
Science FMD				
OTHER AREAS				
-				
- -				
Miscellaneous Proje	ect Specific Fea	tures:		
GESC Qualified Pro	ovider	E.T. C. Signa	turo Tren	Date: 5-7-18 Date: 5/7/2018
Kentucky Registere	ed Engineer:	Signa		
Board Designee or	Superintendent:	Signa	ature	Date:
		willing.	F KENTIN	
		50	LEONEL	
		MAR	TINEZ-PEREZ	

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

- 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

District Name: <u>Bullitt Cou</u>	inty	District Code:	Facili 071 Name	•	ligh School	School _Code: _	075
Project Name:	Bullitt Coun	ty Schools Guara	ntee Energy S	avings Contract			
PROJECT TYPE:	Yes	No	Gro	ss Building Area (sf.)	1		
New Building				oo ballanig r li ou (or.)			
Addition							
Renovation	☑			148,821			•
Provisions for Future	Expansion:						
Proposed Alternates:					.:		•
	(2) (3)		·				
Describe special con	• • •				· · ·		
	·			, 			
BUILDING CONSTR	UCTION CHA	ARACTERISTICS	} :				
Description of Buildin	g Structure:						
Foundation	: <u></u>			, , <u></u>	·		
Exterior Malle	 -						
exterior vvalis.							
Roof Structure:							
ENERGY EFFICIENT	r design (Ki	RS 157.450 and	KRS 157.455)	.			•
44.30	_Energy Con	sumption "Existir	g" (kBtu/sf/yr)				
38.2		sumption Target					
YES NO		ouniphon ranget	(KDtaron yr)				
	LEED Certif	ied	Other:				
		meet Energy Sta					
	_	HRAE 90.1(2007		imum)			
				monstrating Cost Eff	fective Design		
		e Cycle Cost Ana					
If not yes to one or r							
	Designant	L- N-4 7			,,		
		be Net-Zero be Net-Zero Rea	, du				
	_		,				
Energy Efficient Des	sign Features	s: (See List Pag	je 4, or Use D	rop Down List)			
East / West Building (Orientation	□ YES	□ NO				
Gross Exterior Wall A	• •			Avg. Exter	ior Wall R-Value:		
Gross Window / Door	Area (sf):			Avg. Windo	ow/Door R-Value:		
Gross Roof Area (sf):			·	A	vg. Roof R-Value:		
Exterior Wall Type:						Other:	
Roofing Type:							
HVAC System Type:						Other:	
Classroom Lighting:						Other: L	.ED
Active Daylighting:						Other:	_
Passive Daylighting:						Other:	
On Site Energy Gene	ration:	<u></u>				Other:	

Air Durification Costs	\/E		^			
Air Purification Syste			O ☑			
Gray Water System :	-	G I NO	∑ C			
Low Water Use Fixtu Other:	res: YES		C			
			· .			
PLUMBING:						
Type of Sewage Disp	osal:	· · · · · ·				
HEATING, VENTILA						
Heating Only:	Heating & N		l:		HVAC:	_A/C Only:
Fuel Source/Backup (if applicable):		_			
ELECTRICAL:			_			
Source of Electric Pov	wer:			<u> </u>	Lighting Intensity (fo	s.):
Voltage Serving Facili	ty:				Std. Classrooms Library/Media Ctr	
Number of Convenier Classrooms		•			Science Lab Science Clrm Band/Music	
Library/Media Center					Business Ed	
Business Ed					Shops	
Family & Consumer S	cience				Corridors	
Camera System:					Stairways Cafeteria	
	 			·	Pre-School Clrm	
					Art Classroom Gymnasium	
SPECIAL EQUIPMEN	IT.				Gymnasium	
SPECIAL EQUIPMEN						
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				Cu	stodial Room Shelves	S
Student Lockers				Sc	ience Laboratories	
Folding Bleachers					mily & Consumer Sci	
Library Furnishings Dry Food Shelves					her her	
.,				O(1101	<u> </u>

INTERIOR FINISI	H SCHEDULE:			
AREA	FLOOR	WAINSCOT	N WALLS	CEILING
General Office Corridors				
Custodial				
Kitchen Cafeteria				
Gym Showers/Locker				
Toilets				
Library/Media Cnt				
Music Art				
Science				
FMD				
OTHER AREAS				
R.C II				
Miscellaneous Pro	ject Specific Featu	res:		
GESC Qualitied P	rovider	E T C. Signatu	facoz-	Date: 5-7-18
Kentucky Register	ed Engineer:	Signatur	re	Date: 517/2018
Board Designee o	r Superintendent:	Signatu	re	Date:
		, Light	OF KENY	



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

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- 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

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- G variable refrigerant volume (VRV) with air make up
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- J hybrid chilled beam/geothermal system
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- E wind generation (to support the entire building's energy needs)
- F other
- G none

District Name: <u>Bullitt</u>	County	District Code:	071	Facility Name:	Old Mill Elementary	School Code:	078
Project Name	e: Bullitt Cou	unty Schools Gu	uarantee E	Energy Saving	gs Contract		
PROJECT TYPE	: Yes	No		Gross Bu	uilding Area (sf.)		
New Building							
Addition							
Renovation	3				57,896		
Provisions for Fu	ture Expansion	·					
Proposed Alterna	ates:	(1)					
		(2)					
Describe special	conditions, pha	sing of project a	and altern	ates, attach a	supplemental sheet, if needed.		
BUILDING CON	STRUCTION O	HADACTEDICT	100.				
BUILDING CON			<u>ICS</u> :				
Description of Bu	=						
Founda	tion:			 .	 		
Exterior W							
Roof Struc	ture:		-				
		<u>.</u>					
ENERGY EFFICE	ENT DESIGN (KRS 157.450 a	ind KRS 1	<u>57.455)</u> :			
39.87	Energy Co	onsumption "Ex	isting" (kB	tu/sf/yr)	•		
35.3	Energy Co	onsumption Tar	get (kBtu/	sf/yr)			
YES NO							
	LEED Cer	tified	Othe	г:			•
	Designed	to meet Energy					
	Exceeds /	ASHRAE 90.1(2	007) by 1	0% (Minimum	1)		
0 🗆	Whole Bu	ilding Life Cycle	Cost Ana	alysis Demon	strating Cost Effective Design		
	L	ife Cycle Cost	Analysis S	oftware Used	f: Trane Trace 700		
If not yes to one	or more of the	above, explai	n why.				<u></u>
	•	to be Net-Zero					
	Designed	to be Net-Zero	Ready		,		
Energy Efficient	Design Featur	es: (See List	Page 4, o	r Use Drop I	Down List)		
East / West Build	ing Orientation	□ YES		О			
Gross Exterior W	all Area (sf):				Avg. Exterior Wall R-Value:		
Gross Window / I	Door Area (sf):				Avg. Window/Door R-Value:		
Gross Roof Area	(sf):	_			Avg. Roof R-Value:		
Exterior Wall Typ	e: _	,				Other:	
Roofing Type:						Other:	
HVAC System Ty	pe: L-other			"		Other:	
Classroom Lightin	ng:					Other:	LED
Active Daylighting						Other:	
Passive Daylighti	ng:					Other:	
On Site Energy G						Other:	, ,,,,
						-	

Air Purification Systems :	YES □ NO	· · · · · · · · · · · · · · · · · · ·			
Gray Water System :	YE\$ NO				
Low Water Use Fixtures : Other:	YES ☑ NO				
				_	
PLUMBING:				***************************************	·
Type of Sewage Disposal:					
HEATING, VENTILATION					
Heating Only:	Heating & Mechanical: Ventilation Only		HVAC:	X A/C Only	/:
Fuel Source/Backup (if app	olicable):				
ELECTRICAL:					
Source of Electric Power:			Lighting Intens		
Voltage Serving Facility:			Std. Classroor Library/Media	Ctr	
Number of Convenience O Classrooms Library/Media Center Business Ed Family & Consumer Science Camera System:			Science Lab Science Clrm Band/Music Business Ed Shops Corridors Stairways Cafeteria Pre-School Clr Art Classroom Gymnasium	m	
SPECIAL EQUIPMENT:			·		
System Co Bell Clock Fire Alarm Intercom Telephone Television Computer Wireless Network Interactive White bd Voice Amplification FIXED EQUIPMENT:	onduit Only	Conduit &	Wiring	Complete	e with Equipment
Teacher Cabinet		~	natadiel De O	.	
Student Lockers Folding Bleachers Library Furnishings Dry Food Shelves			ustodial Room Sicience Laborator mily & Consume ther her	ies	

				
INTERIOR FINIS	H SCHEDULE:			
AREA	FLOOR	WAINSCOT	WALLS	CEILING
General Office				
Corridors Custodial				
Kitchen Cafeteria				
Gym Showers/Locker				
Toilets Library/Media Cnt	r			
Classrooms Music				
Art Science				
FMD				
OTHER AREAS				
Miscellaneous Pro	oject Specific Fea	tures:		
GESC Qualified F	rovider	£ 5 Signatu	o Secont	Date: 5-7-18
Kentucky Registe	red Engineer;	Signation		Date: 5/7/2018
		O. O		



Exterior Wall Type

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- C solar electric generation (to support the entire building's energy needs)
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- E wind generation (to support the entire building's energy needs)
- F other
- G none

Name: Bullitt Cou	nty	District Code:	071	Facility Name:	Overdale Elementary School	School _Code:	080
Project Name:	Bullitt Count	y Schools G	uarantee E	nergy Saving	is Contract		
PROJECT TYPE:	Yes	No		Gross Bu	uilding Area (sf.)		
New Building							
Addition	_ ·						
Renovation	2			<u> </u>	70,480		
Provisions for Future	Expansion:						
Proposed Alternates:	(1)						
	(2)						
Describe special cond	fitions, phasir	ng of project	and alterna	ates, attach a	supplemental sheet, if needed.		
BUILDING CONSTRI	LICTION CHA	PACTÉRIS	TICE:	·			
		IKACTEMA	<u>1100</u> .				
Description of Building	_			•			
Foundation:							
Exterior Walls:							,_,,,
			,				
Roof Structure:					<u> </u>		
ENERGY EFFICIENT	DESIGN (KF	RS 157.450 a	and KRS 1	<u>57.455)</u> :			
32.88	Energy Cons	sumption "Ex	dsting" (kBi	tu/sf/yr)			
27.7	Energy Cons	sumption Tar	rget (kBtu/s	sf/vr)			
YES NO	•		• .	• •			
	LEED Certifi	ed	Other	:			
	Designed to	meet Energy		·			
			•				
☑ □		HRAE 90.1(2	2007) by 10)% (Minimum	1)		
	Exceeds ASI			-			
	Exceeds ASI Whole Buildi	ing Life Cycle	e Cost Ana	lysis Demon	strating Cost Effective Design		
	Exceeds ASI Whole Buildi Life	ing Life Cycle Cycle Cost	e Cost Ana Analysis S	lysis Demon		-	
☐ ☑ If not yes to one or n	Exceeds ASI Whole Buildi Life	ing Life Cycle Cycle Cost bove, explai	e Cost Ana Analysis Sin why.	lysis Demon	strating Cost Effective Design		
If not yes to one or n	Exceeds ASI Whole Buildi Life nore of the a Designed to	ing Life Cycle Cycle Cost bove, explai be Net-Zero	e Cost Ana Analysis S in why.	lysis Demon	strating Cost Effective Design	-	
☐ ☑ If not yes to one or n	Exceeds ASI Whole Buildi Life	ing Life Cycle Cycle Cost bove, explai be Net-Zero	e Cost Ana Analysis S in why.	lysis Demon	strating Cost Effective Design		
If not yes to one or n	Exceeds ASI Whole Buildi Life nore of the a Designed to	ing Life Cycle cycle Cost bove, explai be Net-Zero be Net-Zero	e Cost Ana Analysis S in why. Ready	lysis Demons	strating Cost Effective Design		
If not yes to one or n	Exceeds ASI Whole Buildi Life nore of the a Designed to Designed to ign Features	ing Life Cycle cycle Cost bove, explai be Net-Zero be Net-Zero	e Cost Ana Analysis S in why. Ready	oftware Used	strating Cost Effective Design		
If not yes to one or n	Exceeds ASI Whole Buildi Life nore of the a Designed to Designed to ign Features Orientation	ing Life Cycle Cycle Cost bove, explai be Net-Zero be Net-Zero :: (See List	e Cost Ana Analysis S in why. Ready Page 4, or	oftware Used	strating Cost Effective Design		
If not yes to one or n	Exceeds ASI Whole Buildi Life nore of the a Designed to Designed to ign Features Drientation rea (sf):	ing Life Cycle Cycle Cost bove, explai be Net-Zero be Net-Zero :: (See List YES	e Cost Ana Analysis S in why. Ready Page 4, or	oftware Used	Down List) Avg. Exterior Wall R-Value:		
If not yes to one or not be a set / West Building C Gross Exterior Wall A Gross Window / Door	Exceeds ASI Whole Buildi Life nore of the a Designed to Designed to ign Features Drientation rea (sf): Area (sf):	ing Life Cycle Cycle Cost bove, explai be Net-Zero be Net-Zero i: (See List YES	e Cost Ana Analysis Sin why. Ready Page 4, or	oftware Used	etrating Cost Effective Design I: Down List)		
If not yes to one or n	Exceeds ASI Whole Buildi Life nore of the a Designed to Designed to ign Features Drientation rea (sf): Area (sf):	ing Life Cycle Cycle Cost bove, explai be Net-Zero be Net-Zero :: (See List YES	e Cost Ana Analysis S in why. Ready Page 4, or	oftware Used Use Drop [Down List) Avg. Exterior Wall R-Value: Avg. Window/Door R-Value: Avg. Roof R-Value:		
If not yes to one or not be a series of the	Exceeds ASI Whole Buildi Life nore of the a Designed to Designed to ign Features Drientation rea (sf): Area (sf):	ing Life Cycle Cycle Cost bove, explai be Net-Zero be Net-Zero :: (See List YES	e Cost Ana Analysis S in why. Ready Page 4, or	oftware Used	Down List) Avg. Exterior Wall R-Value: Avg. Window/Door R-Value: Avg. Roof R-Value:	Other:	
If not yes to one or not be seen and the see	Exceeds ASI Whole Buildi Life nore of the a Designed to Designed to ign Features Drientation rea (sf): Area (sf):	ing Life Cycle Cycle Cost bove, explai be Net-Zero be Net-Zero :: (See List YES	e Cost Ana Analysis S in why. Ready Page 4, or	oftware Used Use Drop [Down List) Avg. Exterior Wall R-Value: Avg. Window/Door R-Value: Avg. Roof R-Value:	Other:	
If not yes to one or not be a series of the	Exceeds ASI Whole Buildi Life nore of the a Designed to Designed to ign Features Drientation rea (sf): Area (sf):	ing Life Cycle Cycle Cost bove, explai be Net-Zero be Net-Zero :: (See List YES	e Cost Ana Analysis S in why. Ready Page 4, or	oftware Used Use Drop [Down List) Avg. Exterior Wall R-Value: Avg. Window/Door R-Value: Avg. Roof R-Value:	Other: Other:	
If not yes to one or not be seen to one or not one or not be seen to one or not be seen	Exceeds ASI Whole Buildi Life nore of the a Designed to Designed to ign Features Drientation rea (sf): Area (sf):	ing Life Cycle Cycle Cost bove, explai be Net-Zero be Net-Zero :: (See List YES	e Cost Ana Analysis S in why. Ready Page 4, or	oftware Used Use Drop [Down List) Avg. Exterior Wall R-Value: Avg. Window/Door R-Value: Avg. Roof R-Value:	Other: Other: Other:	LED
If not yes to one or not be a series of the control	Exceeds ASI Whole Buildi Life nore of the a Designed to Designed to ign Features Drientation rea (sf): Area (sf):	ing Life Cycle Cycle Cost bove, explai be Net-Zero be Net-Zero :: (See List YES	e Cost Ana Analysis S in why. Ready Page 4, or	oftware Used Use Drop [Down List) Avg. Exterior Wall R-Value: Avg. Window/Door R-Value: Avg. Roof R-Value:	Other: Other:	

Air Purification Syster	ns: YES□ NO	☑	
Gray Water System :	YES 🗆 NO	☑	
Low Water Use Fixtur	•		
Ott			
	· · · · · · · · · · · · · · · · · · ·		
PLUMBING:			
Type of Sewage Disp	osal:		
	TION AND AIR CONDITIONIN		
Heating Only:	Heating & Mechanical: Ventilation Only	HVAC:	A/C Only:
Fuel Source/Backup (if applicable):		
ELECTRICAL:			
Source of Electric Pov	ver:	Lighting Intensity (f	c.):
Voltage Serving Facili	ty:		
Number of Convenien	ce Outlets:	Science Lab Science Clrm	
Classrooms Library/Media Center		5	
Business Ed		Shops	
Family & Consumer S	cience	Corridors Stairways	
Camera System:			
	 	Pre-School Clrm	
		Art Classroom Gymnasium	
SPECIAL EQUIPMEN	<u>ΙΤ</u> :	•	
System	Conduit Only	Conduit & Wiring	Complete with Equipment
Bell	•		oshipioto War Equipmon
Clock			
Fire Alarm Intercom			
Telephone			
Television			
Computer Wireless Network			
Interactive White bd			
Voice Amplification			
FIXED EQUIPMENT:			
Teacher Cabinet		Custodial Room Shelve	es
Student Lockers		Science Laboratories	
Folding Bleachers Library Furnishings		Family & Consumer Sc Other	<u> </u>
Dry Food Shelves		Other	

INTERIOR FINIS	H SCHEDULE:			
AREA	FLOOR	WAINSCOT	N WALLS	CEILING
General Office				
Corridors Custodial	·		-	
Kitchen Cafeteria				
Gym				
Showers/Locker Toilets		·		
Library/Media Cnt Classrooms	tr			
Music				
Art Science				
FMD				
OTHER AREAS	·			
Miscellaneous Pro	oject Specific Fea	atures:		
GESC Qualified F	Provider	Et (ture	Date: 5-7-18 Date: 5/7/2019
Kentucky Registe	red Engineer:	Signa	ture	
Board Designee o	or Superintenden			Date:
		SO MAR	LEONEL STINEZ-PEREZ	

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

- 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

702 KAR 4:160 OUTLINE SPECIFICATIONS ENERGY DESIGN CRITERIA

District Name:	Bullitt Cou	nty	District Code:	071	Facility Name:	Pleasant Grove Elementary	School Code:	080
Proj	ect Name:	Bullitt Cou	nty Schools G	uarantee l	— Energy Saving			
PROJE	CT TYPE:	Yes	No		Gross Bi	uilding Area (sf.)		
New Bu								
Addition	•							
Renova		o o				75,848		
Provisio	ns for Future	Expansion:						
Propose	ed Alternates:	(*	1)					'
		(2	2)					
Describe	e enecial con	`	· —	and allow				
Describe	- special con	ultions, prias	sing or project	anu akem	ates, attach a	supplemental sheet, if needed.		-
BUILDI	NG CONSTR	UCTION CH	IARACTERIS	rics:				
Descript	ion of Buildin	g Structure:						
•								
_					- <u>-</u>			
E	xterior Walls							
R	oof Structure							
ENERG	Y EFFICIEN	<u>r design (F</u>	KRS 157.450 a	and KRS	<u>157.455)</u> :			
	42.90	_Energy Co	nsumption "Ex	disting" (kE	Stu/sf/yr)			
	35.2	_Energy Co	nsumption Tai	get (kBtu/	/sf/yr)			
YES	NO	_						
		LEED Cert	ified :	Othe	er:			
	Ū	Designed t	o meet Energy			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
☑		Exceeds A	SHRAE 90.1(2	2007) by 1	0% (Minimum	1)		
□	Ø		and the second s			strating Cost Effective Design		
		Li	ife Cycle Cost	Analysis S	Software Used	l:		
If not ye	s to one or i	more of the	above, expla	in why.				
	···	Designed t	o be Net-Zero					
	Ø	-	o be Net-Zero	Ready				
Eneray	Efficient Des	sion Feature	es: (See List	Page 4	r lise Dron i	Nown Lieth		
	est Building		□ YES	. 9 5 -, €		John Elsty		
	xterior Wall A		L 1L3	L 14	O	Ava Exterior Wall D Volum		
	/indow / Dooi	• /				Avg. Exterior Wall R-Value: Avg. Window/Door R-Value:		
	oof Area (sf):	, ,	•			Avg. vviildow/boor R-value:		
	Wall Type:		_					, ,,
Roofing			***************************************				_ Other: Other:	
•	ystem Type:						_ Other:	
	om Lighting:						Other:)
	aylighting:						Other:	<u> </u>
	Daylighting:		, <u>, , , , , , , , , , , , , , , , , , </u>				Other:	
	Energy Gene	ration:				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Other:	
						······································		

Air Purification Syster	ms: YES 🗆 NO 🗹		
Gray Water System :	YES 🗆 NO 🗹		
	· ·		
			-
PLUMBING:			
Type of Sewage Disp	osal:		
	FION AND AIR CONDITIONING:		
Heating Only:	Heating & Mechanical: Ventilation Only	HVAC:	A/C Only:
Fuel Source/Backup ((if applicable):		
ELECTRICAL:			
Source of Electric Pov	wer:	Lighting Intensity (fc.)	:
Voltage Serving Facili	ity:	Std. Classrooms Library/Media Ctr Science Lab	
Number of Convenier Classrooms		Science Clrm	
Library/Media Center Business Ed		Business Ed	
	cience	Corridors	
Camera System:		Stairways Cafeteria	
		Pre-School Clrm Art Classroom	
		Gymnasium	
SPECIAL EQUIPMEN	NT:		
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 Library Furnishings	·	Family & Consumer Sci Other	
Dry Food Shelves		Other	

H SCHEDULE:	WAINSCOT		
FLOOR	WAINSCOT		
		N WALLS	CEILING
ect Specific Featu	res:		
ovider	EJ	Sweet	Date: 5-7-18
d Engineer:	_6	/_ '	Date: 5/7/2018
Superintendent:		re	Date:
	ovider ed Engineer:	ect Specific Features: ovider Signatures: Signatures:	ect Specific Features: ovider Signature Signature



Exterior Wall Type

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- B face brick, captured air space, sprayed insulation on CMU
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- D face brick, ICF poured concrete, interior finish system.
- E other, describe

Roofing Type List

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- 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
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- J hybrid chilled beam/geothermal system
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- 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

KENTUCKY DEPARTMENT OF EDUCATION 702 KAR 4:160 District District Facility School Name: **Bullitt County** Code: 071 Name: Riverview Opportunity Center Code: 065 Project Name: Bullitt County Schools Guarantee Energy Savings Contract **PROJECT TYPE:** No Gross Building Area (sf.) **New Building** Addition П Renovation 4 31,000 Provisions for Future Expansion: Proposed Alternates: Describe special conditions, phasing of project and alternates, attach a supplemental sheet, if needed. **BUILDING CONSTRUCTION CHARACTERISTICS:** Description of Building Structure: Foundation: Exterior Walls: Roof Structure: ENERGY EFFICIENT DESIGN (KRS 157.450 and KRS 157.455): Energy Consumption "Existing" (kBtu/sf/yr) 53.00 46.6 Energy Consumption Target (kBtu/sf/yr) YES NO Ø LEED Certified Ø Designed to meet Energy Star \Box 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 Ø Designed to be Net-Zero Ready Energy Efficient Design Features: (See List Page 4, or Use Drop Down List) East / West Building Orientation □ YES

Gross Exterior Wall Area (sf):

Gross Window / Door Area (sf):

Gross Roof Area (sf): _

Avg. Exterior Wall R-Value: Avg. Window/Door R-Value:

Avg. Roof R-Value:

Other:

Other:

Other:

Other:

Other:

Other:

Other: LED

Exterior Wall Type:

Roofing Type:

HVAC System Type:

Classroom Lighting: Active Daylighting:

Passive Daylighting:

On Site Energy Generation:

Air Purification Systems	YES	□ N	O 🗹				
Gray Water System :	YES	- N	O 🗵				
Low Water Use Fixtures Other:	s: YES		0 🗆				
PLUMBING:						•	
Type of Sewage Dispos	al:						
HEATING, VENTILATION	ON AND AIR CON	DITIO	<u>ling</u> :				
Heating Only:	_ Heating & Me Ventilation Or		al:		HVAC:	A/C Only:	
Fuel Source/Backup (if	applicable):						
ELECTRICAL:	- · · · · · · · · · · · · · · · · · · ·						
Source of Electric Powe	r:				Lighting Intensity		
Voltage Serving Facility:					Std. Classrooms Library/Media Cti Science Lab	r	
Number of Convenience Classrooms Library/Media Center Business Ed Family & Consumer Scie Camera System:					Science Lab Science Clrm Band/Music Business Ed Shops Corridors Stairways Cafeteria Pre-School Clrm		
					Art Classroom Gymnasium		
SPECIAL EQUIPMENT	:						
System Bell Clock Fire Alarm Intercom Telephone Television Computer Wireless Network Interactive White bd Voice Amplification FIXED EQUIPMENT:	Conduit Only			Conduit 8	Wiring	Complete wi	th Equipment
Teacher Cabinet Student Lockers Folding Bleachers Library Furnishings Dry Food Shelves				Se Fa O	ustodial Room She cience Laboratories amily & Consumer ther ther	<u></u>	

	 			
INTERIOR FINIS	H SCHEDULE:			
AREA	FLOOR	WAINSCOT	N WALLS	CEILING
General Office				
Corridors Custodial				
Kitchen Cafeteria				
Gym				
Showers/Locker Toilets				
Library/Media Cnt Classrooms	r			
Music				
Art Science				
FMD				
OTHER AREAS				
		<u> </u>		
Miscellaneous Pro	oject Specific Fea	atures:		
GESC Qualified P	rovider	Et C	Som	Date: 5-7-18
		Signa	ture	etalaina
Kentucky Register	red Engineer:	Signa	ture	
Board Designee o	r Suporintandani			•
Doding Designee 0	- oupermendem	Signa	ture	Date:
			OF KENY	
		,1111	OF KENY	



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- E wind generation (to support the entire building's energy needs)
- F other
- G none

District		District	•	Facility		School	
Name: <u>Bullitt Cou</u>	inty	_Code:	071	_Name:	Roby Elementary School	_Code:	090
Project Name:	Bullitt Count	ty Schools Gu	arantee E	nergy Savings	Contract		
PROJECT TYPE:	Yes	No		Gross Build	ding Area (sf.)		
New Building					·		
Addition							
Renovation	Ø				70,480		
Provisions for Future	Expansion:						_
Proposed Alternates:							
	(2)						
Describe special cond	ditions, phasir	ng of project a	nd alterna	ites, attach a s	upplemental sheet, if needed.		
BUILDING CONSTR	LICTION CHA	PACTERIST	ice.			··	
		INACTERIST	<u></u>				
Description of Building	•						
Foundation:							-
Exterior Walls:		·					
Roof Structure:		740					
							,
ENERGY EFFICIENT	DESIGN (KI	RS 157.450 aı	nd KRS 1	<u>57.455)</u> :			
38.80	_Energy Cons	sumption "Exis	sting" (kB1	u/sf/yr)			
29.2	Energy Cons	sumption Targ	jet (kBtu/s	f/yr)			
YES NO	_						
	LEED Certifi	ed	Other	:			
	Designed to	meet Energy	Star				
	Exceeds AS	HRAE 90.1(20	007) by 10	% (Minimum)			
					ating Cost Effective Design		
							÷
If not yes to one or n							
	Designed to						
	Designed to	be Net-Zero F	Ready				
Energy Efficient Des	ign Features	: (See List F	age 4, or	Use Drop Do	wn List)		
East / West Building 0	Orientation	□ YES					
Gross Exterior Wall A	rea (sf):				Avg. Exterior Wall R-Value:		
Gross Window / Door	Area (sf):				Avg. Window/Door R-Value:		
Gross Roof Area (sf):		.			Avg. Roof R-Value:		
Exterior Wall Type:						Other:	
Roofing Type:						Other:	
HVAC System Type:			-			Other:	
Classroom Lighting:						Other: LED	
Active Daylighting:						Other:	·
Passive Daylighting:						Other:	
On Site Energy Gener						Other:	

	*.			
Air Purification Syster	ms: YES 🗆 NO	 ✓		
Gray Water System:	YES NO	☑		
Low Water Use Fixtur Other:	res: YES 🗹 NO		·	
PLUMBING:				
Type of Sewage Disp	osal:			
	TION AND AIR CONDITIONING			· · · · · · · · · · · · · · · · · · ·
Heating Only:	Heating & Mechanical: Ventilation Only		HVAC:	A/C Only:
Fuel Source/Backup (if applicable):	 		·
ELECTRICAL:		····		
Source of Electric Pov	ver:		Lighting Intensity (fc):
Voltage Serving Facili			Std. Classrooms Library/Media Ctr	
Number of Convenier Classrooms	ce Outlets:		Science Lab Science CIrm Band/Music	
Library/Media Center Business Ed			Business Ed Shops	
	cience		Corridors	
Camera System:			Stairways Cafeteria	
			Pre-School Clrm	
			Art Classroom Gymnasium	
SDECIAL EQUIDMEN	IT.		Cynniasiani	
SPECIAL EQUIPMEN	<u>u</u> .			
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:	 -		·· <u> </u>	
Teacher Cabinet		C.	ustodial Room Shelves	
Student Lockers			istodiai Room Snetves cience Laboratories	····
Folding Bleachers			mily & Consumer Sci	·
Library Furnishings		_ Ot	her	
Dry Food Shelves		_ Ot	her	

		<u> </u>			4
INTERIOR FINISI					_
AREA	FLOOR	WAINSCOT	N WALLS	CEILING	
General Office					
Corridors Custodial					_
Kitchen					
Cafeteria Gym					
Showers/Locker					_
Toilets					_
Library/Media Cntr					-
Music					<u>-</u>
Art Science					- -
FMD					-
OTHER AREAS					-
_					
_					-
					<u>-</u>
Miscellaneous Proje	ct Specific Featu	res:			•
GESC Qualified Pro	vider	Ext	· Cur	Date: (5-7-1)	•
		Signatu	ire	Date: 5-7-17	
Centucky Registered	l Engineer:	Signatu	re	Date: 5/7/2018	
oard Designee or S	uperintendent:			.	
		Signatu	re	Date:	
		MIII	Bo.		
		WE'S K	ENTUL		
		LEON	IEL 7		
		MARTINEZ	-PEREZ		

Exterior Wall Type

- A face brick, captured air space, board insulation and waterproof CMU
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- 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

District District Facility School **Bullitt County** Name: Code: Name: Shepherdsville Elementary Code: 090 Project Name: Bullitt County Schools Guarantee Energy Savings Contract PROJECT TYPE: Yes No Gross Building Area (sf.) **New Building** Addition Renovation П Ø 70,015 Provisions for Future Expansion: Proposed Alternates: (3)Describe special conditions, phasing of project and alternates, attach a supplemental sheet, if needed. **BUILDING CONSTRUCTION CHARACTERISTICS:** Description of Building Structure: Foundation: Exterior Walls: Roof Structure: ENERGY EFFICIENT DESIGN (KRS 157.450 and KRS 157.455): 39.30 Energy Consumption "Existing" (kBtu/sf/yr) 30.3 Energy Consumption Target (kBtu/sf/yr) YES NO 4 LEED Certified Other: ☑ Designed to meet Energy Star Ø Exceeds ASHRAE 90.1(2007) by 10% (Minimum) Ø 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. Ø 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): Avg. Exterior Wall R-Value: Gross Window / Door Area (sf): Avg. Window/Door R-Value: Gross Roof Area (sf): _ Avg. Roof R-Value: Exterior Wall Type: Other: Roofing Type: Other: HVAC System Type: Other: Classroom Lighting: Other: LED Active Daylighting: Other: Passive Daylighting: Other:

On Site Energy Generation:

Other:

at the left of the con-				-		
Air Purification System	ns: YES) 🗵			
Gray Water System :	YES) 🗹			
Low Water Use Fixture Other:	es: YES) 🗆			
PLUMBING:						
Type of Sewage Dispo	osal:					
HEATING, VENTILAT						
Heating Only:	Heating & Me Ventilation Or		: _		HVAC:	A/C Only:
Fuel Source/Backup (i	f applicable):					
ELECTRICAL:						
Source of Electric Pow	ver:			 -	Lighting Intensity (f	c.):
Voltage Serving Facilit	ty:				Std. Classrooms Library/Media Ctr Science Lab	
Number of Conveniend Classrooms					Science Clrm Band/Music	
Library/Media Center		<u> </u>			Business Ed	
Business Ed Family & Consumer So	rience.				Shops	
Taning a consumer of	sienice				Corridors Stairways	
Camera System:					Cafeteria	
	·				Pre-School Cirm Art Classroom	
					Gymnasium	
SPECIAL EQUIPMEN	<u>T</u> :				·	
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				Ċı	ustodial Room Shelve	5c
Student Lockers					cience Laboratories	
Folding Bleachers	-				mily & Consumer Sc	
Library Furnishings Dry Food Shelves					ther ther	
				U	i ici	

INTERIOR FINIS	H SCHEDULE:			
AREA	FLOOR	WAINSCOT	N WALLS	CEILING
General Office				
Corridors Custodial				
Kitchen Cafeteria				
Gym				
Showers/Locker Toilets				
Library/Media Cnt Classrooms	r			
Music				
Art Science				
FMD				
OTHER AREAS				
Miccollanoous Pro	oject Specific Feat			
viiscellarieous Fic	Ject Specific real	nes		
GESC Qualitied P	rovider er	E J (C. Starp	Date: 5-7-18
Kentucky Register	red Engineer:			Date: \$\f7\z00
restricting register	rea Engineer.	Signati	ire	Date
Board Designee o	r Superintendent:			Date:
		Signatu	ire	
			WILLIAM .	
			NEN YUM	



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- A face brick, captured air space, board insulation and waterproof CMU
- B face brick, captured air space, sprayed insulation on CMU
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- 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
- 1 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

- 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

OUTLINE SPECIFICATIONS ENERGY DESIGN CRITERIA

702 KAR 4:160

District Name: Bullitt Cou	ınty	District Code:	071	Facility Name:	_Transportation Complex	School Code:			
Project Name:	Bullitt Coun	ty Schools G	uarantee E	nergy Saving					
PROJECT TYPE:	Yes	No		Gross Bu	uilding Area (sf.)				
New Building				01000 01	anding Fried (St.)				
Addition					 -				
Renovation	Ø				15,081				
Provisions for Future	Expansion:								
Proposed Alternates:	: (1)	_		•		<u> </u>			
	(2)								
Describe special conditions, phasing of project and alternates, attach a supplemental sheet, if needed.									
BUILDING CONSTR	UCTION CHA	RACTERIST	rics:						
Description of Buildin	a Structure	_							
	;								
Roof Structure:			 -						
ENERGY EFFICIENT	DESIGN (KI	RS 157.450 a	ınd KRS 1	<u>57.455)</u> :	-	<u> </u>			
65.40	_Energy Cons	sumption "Ex	isting" (kB	tu/sf/yr)		•			
47.3	Energy Cons	sumption Tar	aet (kBtu/s	sf/vr)					
YES NO	_		9-1 (11-1011	,					
	LEED Certifi	ed	Other	••					
		meet Energy		·		<u> ,</u>			
	Exceeds AS	HRAE 90.1(2	007) by 10	0% (Minimum))				
					strating Cost Effective Design				
		Cycle Cost	-	oftware Used	·				
If not yes to one or r	nore of the a	bove, explai	n why.		, <u></u>				
	Designed to	he Net-Zero	,,,	·					
	=	be Net-Zero	Ready						
Energy Efficient Des			-	Llee Dren D	torre Lind				
East / West Building (□ YES	uge 4, oi		own List)				
Gross Exterior Wall A		L 153	□ IVC	,	Ave. Educated M. B. 77.				
Gross Window / Door	٠,,				_ Avg. Exterior Wall R-Value;				
Gross Roof Area (sf):					_ Avg. Window/Door R-Value: _ Avg. Roof R-Value:				
Exterior Wall Type:						Other			
Roofing Type:						Other:			
HVAC System Type:					·-··	Other:			
Classroom Lighting:						Other: LED			
Active Daylighting:						Other:			
Passive Daylighting:						Other:			
On Site Energy Gener	ration:	<u>:</u>		_		Other:			

					·		
Air Purification Syster	ns: YES	□ NC				•	
Gray Water System:	YES	□ NC) [J				
Low Water Use Fixtur Other:				·			
	·				<u> </u>		
PLUMBING:							
Type of Sewage Disp	osal:						
HEATING, VENTILAT					:		
Heating Only:	Heating & Me Ventilation O				HVAC:	A/C Only:	·
Fuel Source/Backup (if applicable):					-	
ELECTRICAL:				<u> </u>			
Source of Electric Pov	ver:	.			Lighting Intensity (fc.):	
Voltage Serving Facili	ty:				Std. Classrooms Library/Media Ctr		
Number of Convenien Classrooms					Science Lab Science Clrm Band/Music		
Library/Media Center Business Ed	<u> </u>				Business Ed Shops		
Family & Consumer S	cience				Corridors		
Camera System:					Stairways Cafeteria		
•					Pre-School Clrm		
					Art Classroom Gymnasium		
SPECIAL EQUIPMEN	<u>IT</u> :						
System	Conduit Only			Conduit 8	Wirina	Complete wit	h Fauinment
Bell						00111p1010 1111	Equipment
Clock Fire Alarm			_				
Intercom						•	- ··
Telephone							
Television Computer			_				
Wireless Network			_	· · · · · · · · · · · · · · · · · · ·			
Interactive White bd Voice Amplification			_		····		
-	<u></u>		_		· · · · · · · · · · · · · · · · · · ·		
FIXED EQUIPMENT:							
Teacher Cabinet					ustodial Room Shelv	es	
Student Lockers Folding Bleachers					cience Laboratories amily & Consumer So	<u> </u>	
Library Furnishings					ther		
Dry Food Shelves				Of	ther		

INTERIOR FINISH SCHEDULE:									
AREA	FLOOR	WAINSCOT	N WALLS	CEILING					
General Office Corridors Custodial Kitchen Cafeteria Gym Showers/Locker Toilets Library/Media Cntt Classrooms Music Art Science FMD OTHER AREAS									
Miscellaneous Pro	ject Specific Featu	res:							
GESC Qualified P	rovider	2 J. C. Signature	Sercos	Date: 5-7-18					
Kentucky Register	ed Engineer:	Signature		Date: 5/7/2018					
Board Designee of	Superintendent:	Signature	· · · · · · · · · · · · · · · · · · ·	Date:					
		MAR.	LEONEL FINEZ-PEREZ * = 24773						

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
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702 KAR 4:160

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Other:

	•								
Air Purification System	ms: YES	3 🗆	NO	V					
Gray Water System :	YE	3 🗆	NO	Ø					
Low Water Use Fixtu Other:	res: YES	S 🗵	NO						
PLUMBING:									
Type of Sewage Disp	oosal:					·			
HEATING, VENTILA									
Heating Only:	Heating & I Ventilation		anical:			HVAC:		_A/C Only: _	
Fuel Source/Backup	(if applicable):								
ELECTRICAL:									 :
Source of Electric Por	wer:					Lighting Inte	ensity (fc.) :	
Voltage Serving Facil	ity:					Std. Classro Library/Medi Science Lab	ia Ctr		
Number of Convenier Classrooms						Science Clrr Band/Music	n		
Library/Media Center Business Ed						Business Ed Shops	i		
Family & Consumer S	Science					Corridors			and the second s
Camera System:						Stairways Cafeteria			
						Pre-School			
						Art Classroo Gymnasium			
SPECIAL EQUIPMEN	NT:					o y masiam			
					•				
System	Conduit Only				Conduit &	Wiring		Complete wi	th Equipment
Bell Clock		-							
Fire Alarm		-		_					
Intercom Telephone		_		_					
Television		-			· · · · · · · · · · · · · · · · · · ·				
Computer		-							
Wireless Network Interactive White bd		_							
Voice Amplification		-		_				 .	
FIXED EQUIPMENT:					<u> </u>				
Teacher Cabinet					C.	etodial Dasses	Chalia-		
Student Lockers				_		istodial Room ience Laborat		_	
Folding Bleachers						mily & Consu			
Library Furnishings				_	Ot	her			
Dry Food Shelves					Ot	her			



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