Office of School Construction Grants & Review

450 Capitol Avenue, 2nd Floor Hartford, Connecticut 06106

General Improvements to Alliance Districts' School Buildings, 2020-2021 Program Proposal

017-Bristol	Timothy Callahan	860-584-7086	10/16/2020
Town/District Name	*Completed by*	*Phone*	*Date*

As the Superintendent of Schools, I do hereby certify and assure the following:

1. The application has been approved by the local board of education at its meeting of 10/21/2020.
2. If funded, there will not be a decrease in the local share of financial support for schools.
3. The application is coordinated with other on-going operations and improvement strategies in the school district.
4. If funded, the district agrees:
    - to expend the grant funds on activities in the approved proposal and according to the approved budget and, if necessary, to request amendments prior to any project or budget changes;
    - to use appropriate fiscal control and accounting procedures to ensure proper disbursement of all awards;
    - to manage the project in compliance with all applicable state and federal laws and with the regulations, other policies and administrative directives of the Connecticut State Board of Education;
    - to submit the minutes of the Board of Education's acceptance of the completed project within 60 days of the completion of the project; and
    - to submit an itemized final expenditure report, with all paid invoices, requisitions, or purchase orders supporting the itemized amounts.
5. The application and expenditure reports are subject to a DAS audit.

Further, I certify that in the performance of this proposal, the district will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, ancestry, sex, gender identity or expression, status as a veteran, intellectual disability, mental disability or physical disability, including, but not limited to, blindness, unless it is shown by such contractor that such disability prevents performance of the work involved, in any manner prohibited by the laws of the United States or of the state of Connecticut; and further agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission concerning the employment practices and procedures of the applicant as related to the provisions of this section. (Connecticut General Statutes Sections 4a-60 and 4a-60a, Article first, State Constitution)

Catherine M. Carbone, Ed.D.		10/21/2020
Superintendent's Name (print or type)	*Superintendent's Signature*	*Date*

Note: DAS reserves the right to use and/or publish any part or parts of any summary, abstract, reports, publications, records and materials resulting from this project and this grant.

Office of School Construction Grants & Review

General Improvements to Alliance Districts' School Buildings, 2020-2021 District Certification

School District: 017-Bristol Public Schools

Address: 129 Church Street, Bristol, CT 06010

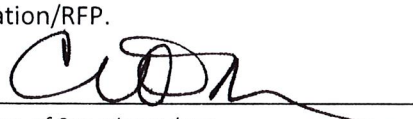
Superintendent of Schools: Catherine M. Carbone, Ed.D. Phone: 860-584-7002

Certification that a current Affirmative Action packet is on file

I the undersigned authorized official, hereby certify that the applying organization/agency has a current affirmative action packet on file with the Connecticut State Department of Education. The affirmative action packet is, by reference, part of this application.

Certification that a current Standard Statement of Assurances Grant Program is on file

I the undersigned authorized official, hereby certify that the applying organization/agency has a current Standard Statement of Assurances Grant Program on file with the Connecticut State Department of Education. The Standard Statement of Assurances Grant Program is, by reference, part of this application/RFP.



10/21/2020

Signature of Superintendent *Date*

Catherine M. Carbone, Ed.D.

Print Name

Office of School Construction Grants & Review

General Improvements to Alliance Districts' School Buildings

2020-2021 Project Description Form

General Instructions: Complete a separate Project Description Form for each facility. Do not report multiple activities at multiple schools on a single Project Description Form,

Project Name Bristol Public Schools, General Improvements

School Name Chippens Hill Middle School

Project Description: Be specific. Describe the area to be affected. Include square footages and quantities where applicable. Describe any special equipment to be installed or materials to be used. Example: Install new ceiling tiles in main wing classrooms, corridor and library (15,000 sq. ft.).

Replace Oil Fired Generator and (2) Transfer Switches $124,025

Cost Estimates:

Professional Fees and Services: $ 10,250

Materials and Labor: $113,775

Special Equipment:

Total: $124,025

Office of School Construction Grants & Review

General Improvements to Alliance Districts' School Buildings

2020-2021 Project Description Form

General Instructions: Complete a separate Project Description Form for each facility. Do not report multiple activities at multiple schools on a single Project Description Form,

Project Name Bristol Public Schools, General Improvements

School Name Bristol Eastern High School

Project Description: Be specific. Describe the area to be affected. Include square footages and quantities where applicable. Describe any special equipment to be installed or materials to be used. Example: Install new ceiling tiles in main wing classrooms, corridor and library (15,000 sq. ft.).

Replace 2 rooftop units in the auditorium and associated controls $251,680

Replace failed piping, pipe insulation, steam traps, boiler feed pumps,

condensate tanks and other heating devices $ 27,528

Cost Estimates:

Professional Fees and Services: $ 23,075

Materials and Labor: $256,133

Special Equipment:

Total: $279,208

Office of School Construction Grants & Review

General Improvements to Alliance Districts' School Buildings

2020-2021 Project Description Form

General Instructions: Complete a separate Project Description Form for each facility. Do not report multiple activities at multiple schools on a single Project Description Form,

Project Name Bristol Public Schools, general Improvements

School Name Bristol Central High School

Project Description: Be specific. Describe the area to be affected. Include square footages and quantities where applicable. Describe any special equipment to be installed or materials to be used. Example: Install new ceiling tiles in main wing classrooms, corridor and library (15,000 sq. ft.).

Replace the air handling unit in the administration area $240,790

Replace Natural Gas Generator and Automatic Transfer Switch $ 62,995

Replace failed piping, pipe insulation, steam traps, boiler feed pumps,

condensate tanks and other heating devices $ 27,528

Cost Estimates:

Professional Fees and Services: $ 27,382

Materials and Labor: $303,931

Special Equipment:

Total: $331,313

Office of School Construction Grants & Review

General Improvements to Alliance Districts' School Buildings

2020-2021 Project Description Form

General Instructions: Complete a separate Project Description Form for each facility. Do not report multiple activities at multiple schools on a single Project Description Form,

Project Name Bristol Public Schools, General Improvements

School Name Greene- Hills K-8

Project Description: Be specific. Describe the area to be affected. Include square footages and quantities where applicable. Describe any special equipment to be installed or materials to be used. Example: Install new ceiling tiles in main wing classrooms, corridor and library (15,000 sq. ft.).

Replace 4 Heat Pumps $194,810

Cost Estimates:

Professional Fees and Services: $ 16,100

Materials and Labor: $178,710

Special Equipment:

Total: $194,810

Office of School Construction Grants & Review

General Improvements to Alliance Districts' School Buildings

2020-2021 Project Description Form

General Instructions: Complete a separate Project Description Form for each facility. Do not report multiple activities at multiple schools on a single Project Description Form,

Project Name Bristol Public Schools, General Improvements

School Name Bristol Board of Education Central Office

Project Description: Be specific. Describe the area to be affected. Include square footages and quantities where applicable. Describe any special equipment to be installed or materials to be used. Example: Install new ceiling tiles in main wing classrooms, corridor and library (15,000 sq. ft.).

Replace Rooftop Unit	$133,100
Add Alternate for Gas Heat	$ 8,772
Add Alternate for Controls Update	$ 8,772

Cost Estimates:

Professional Fees and Services: $ 12,450

Materials and Labor: $138,194

Special Equipment:

Total: $150,644

BRISTOL BOARD OF EDUCATION
P.O. Box 450 • 129 Church Street
BRISTOL, CT 06011-0450
860-584-7000 • Fax (860) 584-7611

October 21, 2020

State of Connecticut, DAS
Office of School Construction Grants & Review
450 Capitol Avenue
MS# 520SC
Hartford, CT 06106

Attention: Director Kosta Diamantis

RE: Bristol Public Schools, General Improvements to Alliance Districts' School Building Grant

Dear Mr. Diamantis,

Please accept this letter as certification that the Bristol Public Schools will continue to operate the schools for at least 20 years.

If there are any questions, please do not hesitate to reach out to my office at 860-584-7002.

Regards,

Catherine M. Carbone, Ed.D.
Superintendent of Schools

Life Cycle Cost Analysis

Project Name: **Bristol Public Schools, Equipment Upgrades**
School Name: **Chippens Hill Middle School**
Superintendent of Schools: **Dr. Catherine Carbone**

Project Description: Be Specific. Describe the area to be affected. Include square footages and quantities where applicable. Describe any special equipment to be installed or materials to be used. Example: Install new ceiling tiles in main wing classrooms, corridor and library (15,000 sq. ft.)

Replace Existing Oil Fired Generator and two (2) Transfer Switches:

With operational reliability and repair component availability concerns, the generator and two automatic transfer switches are to be replaced with like capacities and features that will be compatible with existing load centers serving critical building electrical loads. To include all anticipated materials, labor, rigging, base pad modifications, any hazardous waste permitting, and disposal and expenses associated with the replacement and upgrade task.

Explanation: Oil-fired 250 kW emergency generator and two automatic transfer switches are currently almost 30-years old and should be considered to have exceeded the equipment expected useful life. This generator and transfer switches not only server critical building infrastructure, but also provides emergency power to the designated emergency shelter areas.

Life Cycle Cost Analysis

Project Name: **Bristol Public Schools, Equipment Upgrades**
School Name: **Bristol Eastern High School**
Superintendent of Schools: **Dr. Catherine Carbone**

Replace Auditorium RTU #1:

The rooftop unit will be replaced with a current generation similar capacity but higher efficiency cooling, ventilation and natural gas fired heat roof top unit. New rooftop unit with isolation dampers will be adapted to the existing steel support members, utilize existing electrical power source and be fully integrated into the existing Building Automation System (BAS). To include all anticipated materials, labor, rigging, structural modifications and expenses associated with the replacement and upgrade task.

Explanation: This McQuay side discharge rooftop unit with DX cooling and natural gas heating serving the Auditorium is >20-years old and has exceeded it's expected useful life. The Direct Expansion Cooling System currently utilizes the ozone-depleting refrigerant hydro-chlorofluorocarbon, or HCFC-22 that was originally slated for restrictions back in 2010 by the Environmental Protection Agency (EPA) Clean Air Act passed in 1990. As of January 1, 2020, HCFC-22 refrigerant can no longer be made in or imported into the United States.

Replace Auditorium RTU #2:

The rooftop unit will be replaced with a current generation similar capacity but higher efficiency cooling, ventilation and steam heat roof top unit. New unit will be adapted to the existing steel support members, utilize existing electrical power source and be fully integrated into the existing Building Automation System (BAS). To include all anticipated materials, labor, rigging, structural modifications and expenses associated with the replacement and upgrade task.

Explanation: This McQuay side discharge rooftop unit with DX cooling and natural gas heating serving the Auditorium is >20-years old and has exceeded it's expected useful life. The Direct Expansion Cooling System currently utilizes the ozone-depleting refrigerant hydro-chlorofluorocarbon, or HCFC-22 that was originally slated for restrictions back in 2010 by the Environmental Protection Agency (EPA) Clean Air Act passed in 1990. As of January 1, 2020, HCFC-22 refrigerant can no longer be made in or imported into the United States.

Project Name: **Bristol Public Schools, Equipment Upgrades**
School Name: **Bristol Eastern High School**
Superintendent of Schools: **Dr. Catherine Carbone**

Replace Failed Piping, Pipe Insulation, Steam Traps, Boiler Feed Pumps, Condensate Tanks and Other Heating Devices:

The steam and condensate piping along with insulation and other associated devices such as steam traps, boiler feed pumps, valves, and condensate tanks have all exceeded their 20-year lifespan. Many of these issues were not addressed during the 1999 renovation in the high school.

Explanation: The benefit of this work will result in better energy efficiency and reliability

Life Cycle Cost Analysis

Project Name: **Bristol Public Schools, Equipment Upgrades**
School Name: **Bristol Central High School**
Superintendent of Schools: **Dr. Catherine Carbone**

Replace Administration AHU:

The Office area AHU will be replaced with like capacity and coil configuration AHU incorporating high-efficiency VFD controlled fan motors, full economizer capability and Building Automation interface and control. The remote condensing unit and refrigerant piping will be replaced with like capacity higher efficiency unit utilizing refrigerant R-410A. To include all anticipated materials, labor, rigging, structural modifications and expenses associated with the replacement and upgrade task

Explanation: The Office area McQuay Air Handling Unit (AHU) with DX cooling and steam heating coil located in the lower-level mechanical room is >20-years old and has exceeded it's expected useful life. The associated 30-Ton McQuay remote condensing unit located on the roof is >20-years old and as well exceeded it's expected useful life. The Direct Expansion Cooling System currently utilizes the ozone-depleting refrigerant hydro-chlorofluorocarbon, or HCFC-22 that was originally slated for restrictions back in 2010 by the Environmental Protection Agency (EPA) Clean Air Act passed in 1990. As of January 1, 2020, HCFC-22 refrigerant can no longer be made in or imported into the United States

Replace Natural Gas Generator and Automatic Transfer Switch:

The generator and automatic transfer switch are to be replaced with like capacities and features that will be compatible with existing emergency powered loads. To include all anticipated materials, labor, rigging, base pad modifications, any hazardous waste permitting, and disposal and expenses associated with the replacement

Explanation: Natural gas-fired 45 kW emergency generator and automatic transfer switch is over 50-years old and should be considered to have exceeded the equipment expected useful life. This generator and transfer switch serve some selected critical building electrical loads.

Project Name: **Bristol Public Schools, Equipment Upgrades**
School Name: **Bristol Central High School**
Superintendent of Schools: **Dr. Catherine Carbone**

Replace Failed Piping, Pipe Insulation, Steam Traps, Boiler Feed Pumps, Condensate Tanks and Other Heating Devices:

The steam and condensate piping along with insulation and other associated devices such as steam traps, boiler feed pumps, valves, and condensate tanks have all exceeded their 20-year lifespan. Many of these issues were not addressed during the 1999 renovation in the high school.

Explanation: The benefit of this work will result in better energy efficiency and reliability

Life Cycle Cost Analysis

Project Name: **Bristol Public Schools, Equipment Upgrades**
School Name: **Greene-Hills School**
Superintendent of Schools: **Dr. Catherine Carbone**

Project Description: Be Specific. Describe the area to be affected. Include square footages and quantities where applicable. Describe any special equipment to be installed or materials to be used. Example: Install new ceiling tiles in main wing classrooms, corridor and library (15,000 sq. ft.)

Replace Four Heat Pumps:

The four existing water source heat pumps will be replaced with like style and capacity thereby providing warrantied operation and reliable operation. To include all anticipated materials, labor, rigging, filling, bleeding, water treatment and expenses associated with the replacement task.

Explanation: The four identical Climate Master water-source- heat pumps serving the elementary school's radiant floor panel zones even though just over 10-years old has experienced frequent costly repairs and downtime for providing space temperature control.

Life Cycle Cost Analysis

Project Name: **Bristol Public Schools, Equipment Upgrades**
School Name: **Board of Education Central Office**
Superintendent of Schools: **Dr. Catherine Carbone**

Project Description: Be Specific. Describe the area to be affected. Include square footages and quantities where applicable. Describe any special equipment to be installed or materials to be used. Example: Install new ceiling tiles in main wing classrooms, corridor and library (15,000 sq. ft.)

Replace Rooftop Unit:

The rooftop unit will be replaced with a current generation similar capacity but higher efficiency cooling and ventilation roof top unit, adapted to the existing support curb, utilize existing electrical power source and temperature control system. To include all anticipated materials, labor, rigging, structural modifications and expenses associated with the replacement and upgrade task.

Add Alternate for Gas Heat:

This add-alternate will include modulating natural gas heating capability connected to existing building gas meter and be integrated into the unit control system.

Add Alternate for Controls Update:

This add-alternate will replace the existing control system with a fully integrated Building Automation System (BAS) for the new rooftop unit and provide control and monitoring of the existing six-zone dampers with new damper actuators, zone controllers and space sensors. To include all anticipated labor, materials and expenses needed for the modifications and upgrade of the BAS control system.

Explanation: This Trane rooftop cooling only unit serving the second and third floors of the Bristol Board of Education offices only is >20-years old and has exceeded it's expected useful life. The Direct Expansion Cooling System currently utilizes the ozone-depleting refrigerant hydro-chlorofluorocarbon, or HCFC-22 that was originally slated for restrictions back in 2010 by the Environmental Protection Agency (EPA) Clean Air Act passed in 1990. As of January 1, 2020, HCFC-22 refrigerant can no longer be made in or imported into the United States.