INVITATION FOR BID

INSULAR ABC'S INITIATIVE DEFERRED MAINTENANCE REDUCTION PROGRAM

IFB NO.

EMANUEL BENJAMIN OLIVER ELEMENTARY SCHOOL

ROOF REPAIR & RESURFACING, AIR CONDITION ROOF TOP UNIT REPLACEMENT, CEILING TILE REPLACEMENT, AND GENERAL REPAIRS

ST. THOMAS, UNITED STATES VIRGIN ISLANDS

SCOPE OF WORK AND BID SHEET

Invitation for Bid (IFB) Contents

1. Section 1 – Scope Overview:

This school consists of sixteen buildings, numbered one (01) through sixteen (16). The foremost and largest building, Building 01, includes administrative offices, kitchen and cafeteria, auditorium, library and the teacher's lounge. The other buildings are placed creating three separate central clusters within the formation. The clusters are composed of buildings (02, 03, 04, 05, 06, 07), (08, 09 &10), (11, 12, 13), and (14, 15, 16). See attached site map

The repair work to be performed at this school will be exclusively on building number one (01). The general scope of work shall include; dismantling and removal all inoperable roof equipment, power washing the entire roof & parapet, removal of selected areas of existing single ply roofing membrane and replacing in kind or approved equal, Removal & Disposal of specified damage A/C Roof Top Units, and Replacing/ installation of new air condition Roof Top Unit(s) in kind. And replace all damaged or stained acoustical ceiling tiles in kind: color, size, texture and listed manufacture or approved equal. Bid estimates to be submitted using the attached Bid Sheet.

This building's roof area is approximately Twenty One Thousand One Hundred Fifteen (21,115) square feet. See attached roof plan.

Note: The Contractor shall field verify all quantities, dimensions and conditions.

1.1. General Bidder's Instructions and Requirements:

1. The selected Contractor shall be responsible for thoroughly inspecting all relevant existing conditions associated with the roof. It is the Contractor's responsibility to establish exact quantities and existing circumstances based upon the documents and instructions issued herein and his site visits.
2. The Contractor shall be disqualified if any bid sheet is not legible or fully complete. The government shall not be responsible to interpret any omission or illegible entries.
3. The Contractor's prices submitted for work to be done shall include all possible costs, including overhead, taxes and profit.
4. Unit prices submitted on the itemized bid sheet shall be utilized by the Government of the Virgin Islands in its discretion and at its sole benefit to determine any credits and/or debits to the project, which, if necessary, shall be addressed only in the form of a formal Change Order to the Project.
5. All bidders are required to attend a mandatory Pre-Bid conference and Site Walkthrough. Failure on the part of a bidder to attend the scheduled site walkthrough shall be grounds to disqualify a bidder.
6. Bidders are encouraged to bring to the attention of the government any and all areas or issues of concerns during the period open for questions and clarifications. Failure on the part of a bidder to raise any questions regarding any unusual or known circumstances during the bid preparation period shall not relieve or give cause for a bidder to subsequently advance a claim or cause for changes to the scope of work.
7. When applicable, the Contractor shall be responsible to file for and secure any and all permits and /or inspections which may be required prior to, during or at the completion of the work installed.
8. All work to be performed on this project shall be furnished only during normal (regular) business hours, 7:00 AM to 5.00 PM, Monday through Friday. If the Contractor elects to perform work outside these days and times he/she shall be responsible to make all necessary arrangements with the school Administrators at their convenience.
9. Bidders shall furnish one original and four copies of its bid response which must include the bid sheet signed by the bidder.
10. A mandatory pre-bid conference and site walk-through will be conducted and must be attended by all prospective bidders as follows:
    - 10.1. Mandatory site visit at: **Emanuel Benjamin Oliver Elementary School**
    - 10.2. Date:
    - 10.3. Time:
11. Bid submittal date:
12. Bid submittal time:

PLEASE SUBMIT FIVE (5) COPIES OF YOUR PROPOSAL. PROPOSALS SHALL BE SUBMITTED IN A SEALED ENVELOPE ADDRESSED AS FOLLOWS:

Honorable Randolph Bennett
Commissioner of the Virgin Islands Government
Department of Property & Procurement
Building No. 1, Sub Base
St. Thomas, U.S. Virgin Islands 00802

1.2. Contractual Requirements:

All bid proposals and subsequent contract and supporting documents (if selected) must reflect the legal name of the entity. Supporting documents that must be submitted prior to contract execution and within the time established by the Government shall include, but not be limited to, the following:

1. Certificate of Resolution, as to the authorized negotiator and signer of a contract.
2. Current Virgin Islands Business License issued to the legal name of record of the entity by the Government of the Virgin Islands, Department of Licensing and Consumer Affairs.
3. Current original Certificate(s) of Good Standing/Existence, in legal name of the Contractor by the Virgin Islands Office of the Lt. Governor, Division of Corporations and Trademarks.
4. Certificate of Issuance or Renewal of Trade Name issued by the Virgin Islands Office of the Lt. Governor, Division of Corporations and Trademarks, if applicable.
5. Articles of Incorporation or Organization, as applicable; or documents governing operation.
6. Certificate of Liability Insurance indicating proof of coverage of Professional Liability Insurance and General Liability/Public Liability Insurance – no less than double the amount of the project cost. The Contractor must provide a Certificate of Liability Insurance and Declaration/Endorsement pages that indicate that the Government of the Virgin Islands, Department of Education is a "certificate holder" and an "additional insured" on the General Liability/Public Liability Insurance. The Professional Liability Insurance must cover the services to be provided under the contract.
7. Certificate of Government Insurance/Copy of Certificate providing firm/agents are covered by Workers' Compensation Employee's Liability.

Please note the above-referenced documents are subject to modification at the Government's discretion.

Any silence, absence, or omission from the contract specifications concerning any point shall be regarded as meaning that only the best commercial practices are to prevail.

All contractual documents including insurance certificates/policies must be kept updated and maintained throughout the term of the contract.

2. Section 2 – General Scope and Specifications for AC Unit and Equipment Replacement

2.1. General Scope for AC Replacement

1. Remove and install all AC units and systems identified in the IFB.
2. Contractor shall attach and secure all components of the HVAC equipment in a manner so as not to damage any other building systems or components; all HVAC equipment and components shall be attached in accordance with the Manufacturer's Specifications and comply with all applicable Virgin Islands Building Codes for hurricane and seismic considerations.
3. AC equipment should have minimum 4" high concrete equipment pad. The Contractor is to provide new or retrofit AC equipment pad as needed. If new or retrofitted pads are required, a change order may be issued to address related costs.
4. Prior to replacement of any units, the Contractor must recover refrigerant from units and Contractor must certify and record the removal of refrigerant from existing AC units. If the disturbance of other potentially hazardous material (e.g., asbestos containing materials (ACMs) or lead-based paint (LBP)) is required, the Contractor is responsible for testing and abatement or remediation as needed. ACM, LBP and/or air conditioning refrigerants will be handled and disposed/recycled in accordance with all applicable Federal, USVI, State and local laws, regulations, and guidance. Costs for refrigerant handling and disposal are to be included in the bid price. If ACM or LBP abatement or remediation is required, a change order may be issued to address related costs.
5. The Contractor shall work with the VI Department of Education (VIDE) Division of Maintenance personnel on the removal and transport of all replaced AC units to the central warehouse located at the Curriculum Center.
6. Contractor shall evaluate the electrical power supply for AC systems, and provide electrical works as needed including addition, replacement, load balancing and commissioning of electrical power supply. AC units replacement must include all electrical requirements from main panel box to disconnect switch and to the new AC units (i.e., junction boxes, conduits, panels and etc.) and work shall include remediation of any electrical deficiencies related to the operation of the AC units and equipment, and ensure adequate and balanced electrical loads to the buildings (AC units must be complete and ready for use). All electrical requirements shall meet the National Electrical Code (NEC) including Article 440 Air Conditioning and Refrigeration Equipment. If electrical system evaluation reveals repair cost that are beyond those reasonably required for unit and equipment installation, then a change order may be issued to address related costs.
7. The Contractor must provide a list on Excel worksheet and an electronic and paper copy to the VIDE District Director of Maintenance and the Territorial Facilities and Maintenance Director

where the units are installed and date, to include date, manufacturer's maintenance and schedule of service. Warranty begins only after Owner has signed-off and accepted the units.

8. Transition ducts must be included with all new AC unit installations. Ducting shall be constructed in accordance with SMACNA standards. Duct insulation shall meet ASHRAE 90.1 requirements. Flexible duct connectors shall be insulated with flexible elastomeric cellular thermal insulation. Exterior air conditioning ducting shall have watertight stainless steel jacketing. The Contractor must submit separate cost proposal on any request for replacement of supply and return ducts and other related works not covered on the original Scope of Work and VIDE reserves the right to solicit other price quotations/cost proposals from other vendors should VIDE deem that Contractor's proposal is excessive/high.
9. The Contractor shall provide for all newly installed AC units, a five (5) year warranty for compressors and a one (1) year warranty for parts and labor for any minor repairs, and associated maintenance for a five (5) year period. Copies of the warranty and pricing details shall be provided in the bid submittal.
10. Any AC units (Systems) purchased for installation and use at any VIDE facilities shall:
    a. Meet the comfort and air quality standards set forth for (AC equipment provided in Chapter 5 of the Federal GSA's facilities Standards for Public Buildings Services (Revised November 2000 or Later- PBS-100) and have repair and replacement parts readily available within five (5) days, excluding weekends and Government of Virgin Islands holidays.

2.2. General Technical Specifications for AC Unit and Equipment

2.2.1. General References:

The following standards are intended to be adhered to by the equipment manufacturer of the AC equipment. These standards are the basis for quality in the design, manufacturing, shipping, installation and future care of the equipment and are to be adhered to where applicable, by the prospective equipment manufactures:

- NFPA 90 A & B- Installation of air conditioning and ventilation systems
- ANSI/ASHRAE- 15- Safety Codes for mechanical refrigeration
- ARI 360- Commercial and industrial unitary air conditioning equipment testing and rating standard, above 135,000 BTU per hour
- ARI 340 -Commercial and industrial unitary heat pump (if applicable) equipment above 135,000 BTU per hour
- ANSI/ASHRAE 37 Testing of unitary air conditioning and heat pump equipment
- ANSI/ASHRAE/FESNA 90.1- 1999 and 90A- Energy standard of new buildings except low rise residential buildings
- ANSI/Z21.47/UL1995 - Unitary air conditioning standard for safety requirements

- ARI 210/240 - Unitary air conditioning equipment and air- source heat pump equipment all under 135,000 BTU per hour
- ARI 270- Sound rating of outdoor unitary equipment all below 135,000 BTU per hour
- ARI 370Sound rating of large outdoor refrigerating and air conditioning equipment all above 135,000 BTU per hour
- ANSI/NFPA 70-1995 (or current)- National Electric Code (NEC)
- ISO 9000/9001US based manufacturing standards for quality

2.2.2. General equipment description:

1 Bidders must state the following: Product manufacture name, equipment manufacturing company corporate HQ address, bidding vendor relationships if a partnership is being proposed with all addresses, contact names, contact number, and email addresses.

2 Casing and housings: Shall be at least 18 gauge, with a minimum of zinc-coated galvanized steel frame and panel with weather resistant, baked enamel finish. Units shall be tested a minimum of 500 hours in a salt spray test environment under test conditions. Mounted controls shall be located behind weatherproof housing panels that are removable to provide access doors with quick opening fasteners. Cabinet covers should be of one-piece construction and have a gasket sealed surface. Access panels in the housing should be air and water tight panels with handles to provide access to filters, return air fan section, coil sections and unit controls.

3 Compressors/refrigeration systems: Shall provide a direct-drive hermetic, reciprocating or scroll type compressor(s) with centrifugal oil pump providing positive lubrication to all moving parts and automotive type piston rings to prevent gas leakage, internal suction and discharge valves and crankcase heater if required. Motors shall be suction gas cooled with internal temperature and current sensitive motors loads for protection of these components. External high and low pressure cut out devices shall be provided as system and equipment protection. Scroll type compressors shall also have centrifugal oil pumps. These scroll compressors should also provide suction gas cooled motors with winding temperature limits and compressor overloads. External high and low pressure cutout devices should also be provided to protect the units from major failures.

4 Air Filters: Air side filters shall be installed and mounted integral within the units. Air filters shall mount in such a manner that they are accessible through easy to remove and reinstall access panels. Access panels must be located and oriented such that filters may be removed and reinstalled without bending the filters. Safe access for all personnel access must also be provided. One-inch thick fiber disposable media filters shall be provided of standard purchasable sizes, with the provision within the unit for 2-inch-thick filters to be field provided and installed at a later date if required.

5 Fan & Motors: Evaporator fan sections should be of a forward curved, double width, double inlet, centrifugal type fan design. This type of design is quieter and less prone to vibration once cleaned. Ball or sleeve bearings should be self-aligning, grease lubricated with permanent

fittings, unless sealed bearing are provided. Smaller units in the 5 ton or lower range may incorporate direct drive, multiple speed, dynamically balanced supply fans. Units in the general range of 6 tons capacity or greater may be equipped with belt driven supply fans and possibly have adjustable motor sheaves. Outdoor and indoor fan motors should be permanently lubricated and have internal thermal overload protection. Outdoor fan units should have direct drive, statically and dynamically balanced fan motor combination units. Fan shafts should be constructed of solid, hot rolled steel that is ground and polished, with key-way and protectively coated with lubricating oil or an advanced coating of the manufactures choice.

6 Refrigerant Types: With the phase out of R-22, all units shall be provided with the new standard R-410 or R134a refrigerants. All components that have been in direct contact with or association with the old R-22 refrigerant shall be removed and replaced with new. The Contractor is responsible for all removal of R-22 refrigerant, oil containing components and remnants of R-22, from the VIDE property.

7 SEER and EER ratings/D.C. Inverters: All equipment of 36,000BTU or less normally rated using SEER ratings. All SEER rating shall be 15 or greater. Most all equipment greater than 6 tons of cooling often times uses EER ratings. All equipment of this description shall have an EER rating of 10.5 or greater. SEER cooling capacity and equipment ratings shall be in compliance with ARI Standard 210.

8 Evaporator Coils: Shall be configured aluminum or copper finned surface mechanically bonded to seamless copper tubing coil. The coils should provide an independent expansion device for each refrigeration circuit. Coils shall be factory pressure tested at 450 PSIG and leak tested at 200 PSIG. Coil sections should provide a removable, reversible, cleanable double sloped drain pan for the base of the evaporator coils and can be constructed of PVC or a non-oxidizing material so that they do not become rusted and eventually block water flow away from the units. Provide secondary drain and condensate drain piping to evaporators, fan coil units and air handling units installed above suspended ceiling.

9 Condenser Sections/Coils: Condenser sections should be of a vertical discharge, direct fan with aluminum or non-oxidizing materials. Fans should be statically balanced. Motors shall be permanently lubricated, with integral thermal overload protection in a weather tight casing. Coils shall be configured with aluminum or copper finned surface mechanically bonded to seamless copper tubing coil. The coils should provide sub cooling circuit(s) for each refrigeration circuit. Coils shall be factory pressure tested at 450 PSIG and vacuum dehydrate tested. Coils should be factory sealed with holding charge of nitrogen or other suitable inert gas for protection during shipment.

10 Controls: Provide factory-wired condensing units with 24 volt or low voltage control circuit with internal fusing, control transformers, contactor pressure lugs and/or terminal block for power wiring. The Contractor to provide, "as is wiring" to each source and all wiring is presumed to be fully functioning since all units are in working order. The Contractor to provide all new wiring from the new field located electrical disconnect boxes to the AC electrical termination points. All

units shall have single point power connection as standard. All field wiring of zone controls shall be NEC Class II.

11 Coatings Evaporator and Condenser Coils: All evaporator and condenser coils are to be factory coated to increase the life of the aluminum fins and copper tubing. All coated surfaces must ensure that 100% of the exposed fin surface is coated via a dipped process. If factory dipped coating is not available, vendor is still required to coat all coils to the same factory type specifications and full emersion process to ensure 100% coverage of the coils tubing and fin surfaces. Various coatings are available in the market place however, VIDE requires a Phenolic Epoxy coating or equivalent. One specific coating that is acceptable is the Blygold PoluAL XT coating supplied by MJC/Biygold Atlanta in Marietta, Georgia 800-728-1004. A second acceptable coating is the Bronz-Giow which is a dip coating process also, details of the specific coatings be proposed and the application process shall be provided in the vendor proposals. Coating of both evaporator and condenser coils shall carry a 5-year replacement warranty, which will also cover all labor, refrigerants and miscellaneous materials and consumables. No prorating of this warrantee's value is allowed. If the coil(s) show any corrosion, the supplier shall replace the coil without any additional cost to the owner. A warranty certificate shall be part of the closeout documents. Coil coating material and process shall have passed a 5,000 hour salt spray test in accordance with ASTM Standard 9117.85. Coil film coating shall be effective in the pH range of 1-14. The selected coating product shall be complex, chain linked polyelastomer material with properties including 4,000 PSI tensile strength and 250% flexibility as provided from the supplier. Coating shall be a field repairable, and touch-up material must be available in an aerosol form. Twelve spray cans shall be provided at the end of the installation for the VIDE's personnel use. Field coating in general is not acceptable. Phenolic coating must be a resin based thermosetting coating that is applied by immersion dipping of the entire coal. Two coats at a minimum are to be applied. The coated coils must be baked or heat dried, after immersion. After the final immersion and prior to final baking, spray the entire coil with a particular emphasis given to building up the coating on the shear edges. Total dry film thickness shall be between 0.064 to 0.076 mm.

12 Copper Tubing Supply and Return Lines Replacement: Contractor is to remove all the old copper high-pressure supply lines, low pressure return lines and insulation. New seamless copper high-pressure supply lines with black flexible foam, pre-molded and preformed insulation is to be installed on the hot side supply lines. If seamless copper tubing cannot be used, then ridge copper piping will be soldered into place to replace the old lines. Insulation is to be installed on the copper piping also.

13 Insulation of Supply Lines: All new high pressure supply lines are to be fully insulated as recommended by the manufactures installation procedures in the case of chilled water air handlers and local ceiling mounted air coils, insulation should be installed back to the areas where the supply water and return water tie in coupling and fittings are located.

14 Condensate Drain Line Replacement: Condensate that is collected in the new catch or collection pans, will drain thru these new PVC drain pipes to the outside of the building to dry wells or

indirect drainage system to sanitary system. Condensate drain pipe shall be insulated with ½" thick flexible elastomeric cellular thermal insulation. This PVC piping is to be new and installed by the Contractor to ensure that the systems are new and in proper working order.

15 Compressor Mounting Surfaces: With the upgrade in SEER and EER to new higher more efficient sizes, the mounting surfaces or pads may be too small in many cases. The vendor will be required to add to these existing pads or supply new concrete pads. The condenser and housing is to be secured to the new pads so that they are Typhoon proof and neither will move during a storm.

16 Wiring Connection and Local Disconnect Boxes: The Contractor shall install new local disconnect boxes for each AC unit. New flexible wiring is to be installed at each unit from the newly installed disconnect boxes to the AC terminal connections. For all new AC units, installation must include all electrical requirements from main panel box to disconnect switch and to the new AC units i.e. junction boxes, conduits, panels and etc. (AC units must be complete and ready for use). All electrical requirements shall meet the National Electrical Code (NEC) including Article 440 Air Conditioning and Refrigeration Equipment.

17 Statement of Required Preventive Maintenance Activities for VIDE to follow: For each model and class of equipment VIDE requires that the specific task, and the factory recommended frequencies in months of operation, be included with the bid package.

18 Controls for each AC unit: New set back style thermostats are to be installed on each new AC system installed beginning from 5 TON up to 100 TON. The new energy saving set back thermostats should have a 7-day week calendar and easy to use with basic instructions on the thermostat cover or attached with a wall plaque. All set back thermostats should be of the same model and type for training purposes and ease of use throughout the VIDE. Training to the AC, electrical crews, and security department, on the new set back thermostats is to be provided by the Contractor.

19 Voltage Monitors: the Contractor must provide voltage monitors for all AC units.

20 Testing/ Adjusting/ Balancing and AC and Controls System Commissioning: All AC equipment shall be tested and startup by manufacturer qualified technician. All controls system shall be programmed and tested by qualified control technicians. Provide Testing / Adjusting / Balancing (TAB) to all ducting and hydronic piping systems in accordance with NEBB or AABC standards. Upon completion of equipment startup, controls system startup and TAB, provide AC and Controls System Commissioning to verify and record system performance and set points for all operation modes including but not limited to, automatic, manual, seasonal, night setback, and system interfacing such as duct smoke detector. Correct all deficiencies discovered during AC and Controls System Commissioning. Provide final TAB report, and AC and Controls System Commissioning report. Reports shall include record and result of tests, deficiencies and corrections log, final set points and sequence of operation of AC and Controls System.

21 Maintenance Manual and Operating Instructions:

a. Upon completion of the Work, the Contractor shall provide the VIDE Project Manager with three copies of the as-built drawings and maintenance manual for all equipment furnished

and installed under his Work. Manuals shall be in substantial 3-ring binders with project name and number inscribed on face and hinged back.

b. The manual shall include manufacturer's lubricating and operating instructions and parts list and serial numbers for all operating machinery, including drive information, and motor horsepower, amperage, and voltage readings on all phases, valve chart, sequence of operation, index following the order listed in the specifications, warranties in the name of the Installation, and a list of manufacturers, service firms and sub-contractors names and telephone numbers.

c. The Contractor must provide manufacturer's certification training to at a maximum of two VIDE Facilities and Maintenance personnel for all AC and Controls systems installed. Provide recorded training and demonstration on CD to VIDE Project Manager and VIDE Facilities and Maintenance Division.

3. Section 3 - General Scope and Specifications for Roofing Repair

3.1. General

1. Description of Work

   This Section includes single-ply membrane roofing systems, including totally adhered systems.

2. Quality Assurance

   a. Obtain primary flexible sheet roofing from a single manufacturer. Preferably, the existing single ply membrane to be repaired listed manufacturer.

   b. Installer must be acceptable to or licensed by manufacturer of primary roofing material.

   c. Installer certification shall be furnished prior to roofing contract award. Installer shall provide proof and written documentation that installer is manufacturer certified to install proposed roofing system or type.

3. Submittals

   Submit product data, installation instructions, and general recommendations from manufacturer of single-ply membrane system. Include data substantiating that materials comply with requirements.

4. Job Conditions

   a. Substrate: Do not begin installation until substrates have been inspected and are determined to be in satisfactory condition and as per Manufacturer's recommendations and specifications.

   b. Weather Conditions: Proceed with installation work only when weather conditions are in compliance with manufacturer's recommendations and when substrate is completely dry.

5. Warranty: Provide minimum ten-year manufacturer's warranty.

a. Contractor shall provide minimum two-year warranty covering work, including all components of roof system such as roofing membrane, base flashing, roofing membrane accessories, roof insulation, fasteners, cover boards, substrate boards, vapor retarders, roof pavers, and walkway products.
b. Warranty shall cover repairs or replacement of damages to the building and its finishes due to leaks.

3.2. Products

1. EPDM Membrane
    a. General: Ethylene propylene diene monomers formed into uniform, flexible sheets, complying with ASTM D 4637, Type 1.
        1. Class U, Unreinforced
        2. Thickness: 60 mils, nominal
        3. Exposed Face Color: White
    b. Fully Adhered EPDM Membrane: Manufacturer's standard installation.
    c. Single Ply Roofing Membrane: CSPE (Chlorosulfonated Polyethylene) Hypalon Synthetic rubber formed into uniform flexible sheets comply with the following:
        1. Tensile Strength: (ASTM D 412) 100 psi
        2. Ultimate Elongation (ASTM D 412) 350%
        3. Brittleness Temperature: (ASTM D 746) minus 40 degrees F
        4. Resistance to Heat Aging: (ASTM D 573) retains 100% of tensile strength after 14 days at 212 degrees F
        5. Thickness: 45-60 mils (Nominal)
        6. Color: White
2. Accessory Materials
    a. Fasteners: Caps, battens, accessory components, fastening devices and adhesives to suit substrate and as recommended by membrane manufacturer.
    b. Adhesive: As recommended by manufacturer for particular substrate and project condition.
    c. Flashing: Manufacturer's standard system compatible with sheet membrane.

3.3. Execution, Repair and Replacement

1. Preparation of Substrate
    a. Clean substrate of dust and debris. Remove all foreign or sharp projections from roof surface.
    b. Install flashings and accessory items as shown. The Contractor to verify field conditions prior to commencing any work. Protect adjoining areas of building from spillage and splashing of roofing compounds.

c. Seams: Clean both faces of splice areas, apply splicing cement, and firmly roll side and end laps of overlapping sheets according to manufacturer's written instructions to ensure a watertight seam installation. Apply lap sealant and seal exposed edges of sheet terminations. Apply a continuous bead of in-seam sealant before closing splice if required by roofing system manufacturer.

d. Seams: Clean and prime both faces of splice areas, apply splice tape, and firmly roll side and end laps of overlapping sheets according to manufacturer's written instructions to ensure a watertight seam installation. Apply lap sealant and seal exposed edges of sheet terminations.

1. Repair tears, voids, and lapped seams in roofing that does not meet requirements.

e. Install sheet flashings and preformed flashing accessories and adhere to substrates according to roofing system manufacturer's written instructions.

1. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing as recommended by manufacturer.
2. Clean splice areas, apply splicing cement, and firmly roll side and end laps of overlapping sheets according to manufacturer's written instructions to ensure a watertight seam installation. Apply lap sealant and seal exposed edges of sheet flashing terminations.
3. Terminate and seal top of sheet flashings.

f. Protect all existing down spouts or rain leaders used to directing water into cisterns, to prevent contaminating the water supply with compounds or toxic fluids.

g. Repair any damaged sections of existing Polystyrene Board Insulation: with ASTM C 578, Type II, 1.35-lb/cu. ft. (22-kg/cu. m) minimum density. Thickness of new Polystyrene Board Insulation shall match existing as required.

h. Replace damaged sections of Walkway Pads with: Factory-formed, nonporous, heavy-duty, solid-rubber, slip-resisting, surface-textured walkway pads, approximately 3/16 inch (5 mm) thick, and acceptable to roofing system manufacturer. Contractor shall match existing Walkway Pads if possible.

i. Install Cants, Relets, blocking and nailers and similar attachments as required.

2. Installation

a. Fully Adhered Membrane: Follow manufacturer's printed instructions for installation of roofing. Any section of the roofing membrane cut out for repair due to defects shall be repaired prior to end of each work day.

b. Repair all punctures, cuts or delaminated sections of the single ply membrane as per manufacturer's specifications prior to general cleaning of existing membrane surface.

c. Upon completion, protect roofing during remainder of construction period. Repair or replace deteriorated or defective work found at time of final inspection to a condition

free of damage at time Substantial Completion and in accordance with requirements of specified warranty.

3.4. List of Product Manufacturers or Suppliers

Or approved equal

1. Burke Industries
   2250 South Tenth Street
   San Jose, California 95122
   Phone: (800) 348- 3248
   Email: info@BurkeIndustrialCoatings.com
2. 2001 Company
   25 Thomas Avenue
   Waterbury, CT 06723
   Phone: (203) 575- 9200
   Fax: (203) 573-0781
3. Rooftops
   3025 Estate Friendenstahl
   Christiansted, St. Croix, VI 00820
   Phone: (340) 778-8550

Attachment 2

GOVERNMENT OF THE VIRGIN ISLANDS
DEPARTMENT OF EDUCATION
DEFERRED MAINTENANCE REDUCTION PROGRAM

FACILITY:	E. Benjamin Oliver E.S.	IFB NO.	DISTRICT	
			St. Thomas/St. John (STT/STJ)	
PROJECT I.D.	VI0101001		**St. Thomas (STT)**	

ITEMIZED BID SHEET

ITEM NO.	DESCRIPTION: All Work is at Building 01	QTY.	UNITS	UNIT PRICE	TOTAL PRICE
196504	1. Pressure wash and prep entire roof area				
	per Product Manufacture's Specifications:	21,115	SF		
	See CFS instructions form adhesion test.				
196584	2. Remove and Replace 20 ton A/C Roof Top Unit	1	LS		
196584	3. Remove and Replace Damaged Duct Work	1	LS		
196504	4. Provide adhesion test on various areas of the roof	1	LS		
	to determine product's adhesive qualities.				
196504	5. Removal of existing fluid applied membrane				
	and replace with single plymenbrane	833	SF		
196504	6. Repair sectionsof Single Ply membrane as per Manufacturer's	1	LS		
	specification and replace with new in kind or approved equal				
196504	*7. Clean all roof drains and repair or replace as required and*				
	Ensure that all seams & connections are properly sealed	*4*	*each*		
	Ensure that all seams are properly sealed and all piping				
	to prevent leaks				
196504	Remove existing tree or plant over hanging on roof top	1	LS		
	at existing opening				
196504	8. Raise Solar Hot water heater panel & components	1	LS		
196534	9. Replace damaged 2x2 & 2x4 acoustical ceiling tiles.	1	LS		
				Sub-Total	
	10. General Conditions and Requirements	1	LS	*20% of Sub-Total*	
	Including Deployment of Safety Barricades				
	Trucking and Disposal of Waste and mobilization.				
				TOTAL . . .	

The undersigned vendor, service provider, contractor hereby certifies that he/she has thoroughly examined the entire scope of work, visited the project site(s) and familiarized himself/herself with all conditions, and hereby proposes to furnish all labor, tools, materials, equipment, services and transportation associated therewith.

All work and services provided herein shall conform in all respects to all project plans, specifications, written Scopes of Work and applicable local, federal, construction trade, and/or Manufacturer's Product Specifications; equipment current applicable codes, standards and procedures.

The vendor, service provider, contractor, pledges to complete all work herein within _____ **calendar days.**
The total contracted cost of project:

x

Vendor's Signature **Date**

Company Name/Mailing Address

VIDE Engineer Approval of Estimate