



**REQUEST FOR PROPOSAL**  
**DUST COLLECTOR DEMO, PURCHASE, AND INSTALLATION**  
**MIDLAND HIGH SCHOOL**

**Closing Time for Accepting Proposals**  
**Wednesday June 5, 2024, 2:00 PM**

All bids must be submitted on the attached bid form and signed by the bidder. Two (2) copies of the bid form should be addressed to the attention of:

**Midland Public Schools Board of Education**  
**Dust Collector Proposal**  
**600 E. Carpenter St.**  
**Midland, MI 48640**

Bids will be opened and read aloud for presentation to the Board of Education at their next regularly scheduled meeting. No oral, telephonic, or facsimile proposals will be considered. NO proposals will be considered after the time of closing of bids.

**Bidders Qualifications:**

1. Successful Bidder's firm shall have five years' experience in the type of work being performed. All work under the contact shall be performed by skilled workers in accordance with applicable Federal, State and local governing codes. The Successful Bidder shall be responsible at all times for the work and actions of its employees.

SCOPE OF WORK:

1. Demo existing dust collector and indicated components on supplied drawings.
2. Setup and installation of new dust collector to include all electrical and mechanical in location specified in included drawings.
3. Demo and installation of additional ductwork for future use as specified on included drawings.
4. The drawings provided are for reference, any location changes must be cleared by the district.
5. Contractor is responsible for all measurements.
6. This is a turnkey installation; equipment must be operational and approved by the district before final payment is issued.
7. One set of extra filters will be provided to the district.
8. Training will be provided to the district at no charge after completion of the project.
9. All manufacturers installation requirements must be followed and included in this RFP.

Specifications:

DUST COLLECTOR

**DONALDSON COMPANY**

INTERMITTANT DUTY MODULAR PULSE JET CARTRIDGE TYPE

**"DFE 3-12 Dust Collector"**

1.0 General Information

1.1 Minimum requirements

This specification, along with sketches, prints, and supporting material, covers the minimum performance requirements to be met for the design, fabrication, and delivery of a dust collector.

1.2 References

The dust collector shall be designed, manufactured, and tested in accordance with the following latest editions of applicable codes, standards, and regulations.

1.2.1 American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE)

1.2.2 Underwriters Laboratories, Inc. (UL)

1.2.3 American Society of Testing & Materials (ASTM)

1.2.4 Occupational Safety and Health Act (OSHA)

1.2.5 National Electrical Manufacturers Association (NEMA)

1.2.6 National Electrical Manufacturers Association (NEMA)

1.2.7 National Electrical Code (NEC)

## 2.0 Dust Collector & Supporting Equipment

### 2.1 General Description

2.1.1 Be a Cartridge Type collector.

2.1.2 Be a modular pulse jet continuous duty collector.

2.1.3 Incorporate **downward airflow** technology of collecting dust. **Bottom entry, upward airflow, not acceptable per EPA recommendations.**

2.1.4 Be heavy duty, industrial grade, and capable of performing reliably under partial or full load conditions.

## 2.2 Collector Construction

2.2.1 Collector Housing & Clean Plenum Construction: All welded 7 and 10 gauge mild steel construction. Each access hole contains 2 filters. Modules are welded together for air tight integrity. All housings are shipped together. Housings are rated for:

- - 25" to +10" W.G.
- seismic zone 4
- 30 lbs./sq. ft roof load

## 2.2.2 Hopper & Discharge Construction

- (1) Hopper shall be fabricated from 10 gauge H.R.S. Standard configuration is 45° sloped, ledgeless, pyramid type. Hopper will be rated at -25" W.G. Bottom discharge openings lead to a manual slide gate attaching to a 55 Gallon Drum Lid with latches and Flex Hose. 55 Gallon Container is not included.
- (2) Bottom discharge openings and legs CAN BE adapted to accept Rotary Airlocks and/or 55 Gallon Drum and/ or dump hopper and/or conveying equipment.

## 2.2.3 Dust Laden Air Inlet & Clean Air Outlet

2.2.3.1 Inlet - The inlet shall be a High Flow design and will be 16" diameter flanged and drilled. Designed to Handle P Red of 0.40 bar same as collector. **Inlet must direct dirty air to a pre-separation dirty side drop out zone.**

2.2.3.2 High-flow inlet adder includes front duct connection for higher airflow applications (1 inlet per filter module). High-flow inlets distribute air to non-filtration areas while protecting filters from direct airflow. High-flow inlet heights match standard inlet heights.

2.2.3.3 Clean Air Outlet – To be located on the rear and have a connection for duct to connect to the exhaust fan inlet.

- 2.2.3.4

- **EXPLOSION VENTING:** (1) 34" x 46" membrane style, top or side-mounted explosion relief vent(s). Explosion vents limit overpressure in the event of a deflagration in order to maintain the structural integrity of the collector. Maximum Kst value is:290 (based on NFPA-68-2018, without ducting after relief panels). If the collector is located inside, ducting may be necessary to direct explosion vent discharge to a safe location. DFE 3-12 P-red: 0.40 BAR .

#### 2.2.4 Support Legs Structure

Standard support legs shall be 4" x 4" x 3/8" angle iron and provide a 48" clearance under hopper connection. Legs to be 12 Gauge Construction. 10 Gauge base under leg structure and collector.

#### 2.2.5 Coating/Finishing of Collector Housing, Hopper, and Leg Assembly

Housing, hopper, and legs are finished with a durable, multi-coat textured liquid or powder finish that meets an ASTM B117 salt spray test of 2,000 hours on standardized test panels. The exterior color will be Torit Blue. The interior shall be primed with a durable liquid or powder primer.

### 2.3 Filters

Manufacturer of filters must be also be the same manufacturer of dust collector. Filter must be installed at factory prior to shipment. Each module will contain Ultra-Web cartridge filters. The filter base media shall have superimposed a NANO fiber layer of fibrous material to enhance surface loading, increase cleaning efficiency, and provide operation at lower pressure drops. Filters are arranged in a horizontal orientation angle for ease of filter changeout. **They shall be serviced from outside the collector through a front access port, therefore negating confined space permitting. Vertical cartridge filters will not be accepted. Bag filters will not be accepted.** Standard

filters are operable at 150°F. Filter efficiency shall be a minimum 98.2% at 1" w.g. pressure drop on 0.3 micron DOP smoke and have a minimum ASHRAE Dust Spot Test (ASHRAE 52-76) efficiency of 99% at 4.0" W.G. pressure drop. The elements shall have an inner protective liner of galvanized expanded metal 72% open with a welded seam and no liner on exterior of filters. **Filter efficiency data certified by BIA** (independent laboratory) **will be required.**

2.3.1 12 filters of Ultra-Web media, each measuring 13.74 X 13.74 Inner and Outer Diameter x 26" long and containing 254 sq. ft. of media maximum, will provide a total filter area of 3,048 square feet. Filter to Meet MERV 15 Standards as set forth in ASHRAE 52.2-2007. Higher square footage of filter elements not acceptable because of OSHA requirement for loaded filter changeout.

2.3.2 **The cartridge filter must feature 27% or more of its filter media at the bottom of the cartridge element, placing the most possible filter media in the downward direction. Traditional round cartridges (DFT) only have 25% of their media in the downward direction and will not be accepted.**

2.3.2 Filter Cleaning Cycle Control and Monitoring

Filter cartridges shall be automatically cleaned by compressed air reverse flow. Each module shall contain NEMA 4 solenoids operating diaphragm valves. One diaphragm valve cleans two filters with one pulse of air. Piping connections shall be 1" NPT. **Compressed air pulse nozzle must be designed to shape compressed air pulse to the shape of the filter. Pulse venturi must be built and designed to match the shape of the filter and the venturiers must be located in the dirty air chamber.** Filter cartridges and dust collector will be monitored and controlled according to the following specifications:

A Torit Delta P-Plus controller with downtime cleaning and Timer board in a NEMA 12 enclosure. The differential pressure gauge measures filter resistance providing a visual display of filter cleaning and change requirements.

2.3.3 Filter Inspection and Removal

Filters are arranged in a horizontal orientation angle for ease of filter change out. They shall be serviced from outside the collector through a front access port, therefore **negating confined space permitting.** One filter may be accessed through each opening. All removal and installation is accomplished without tools.

## 2.4 Fan

Unit comes equipped with a Backwardly Inclined Ground Mounted Exhaust Fan. 20 HP, 3450 RPM, 460V/60Hz/3 phase TEFC Premium Efficiency Motor. This fan will be direct drive to the clean air chamber of the dust collector housing. The fan requires inlet/outlet discharge flanges, rubber in shear vibration isolators, a flexibly coupling and a 75dba discharge silencer. The silencer manufacturer shall be DB Noise Reduction, Inc or VAW systems.

### 2.4.1 Capacity

This unit will be capable of achieving 5,000 CFM at the specified SP of 13" WC per schedule. It will have an air to cloth ratio of 1.64: 1 when running 5,000 CFM.

All equipment conveying air and material into, through and out of the equipment to be protected shall be interlocked through the system control unit contacts so that the process will shut-down when the system is actuated or disarmed.

## 2.5 Electrical Control Panel

- 20 HP VFD WITH AIRFLOW CONTROLLER
- DELTA P PLUS CLEANING CONTROLS
- NEMA 12 ENCLOSURE
- INTEGRATED ISOLATION DEVICE CONTROLS
- IEC DISCONNECT
- EASY START/STOP BOTTONS
- NO RETURN VALVE RELAY

## 2.6 NFPA INLET ISOLATION DEVICE

- MONITORING FUNCTION AND LOCKING DEVICE
- SAFETY INTEGRATED WEAR AND TEAR SENSOR
- SENSOR TO MONITOR FLAP POSITION

- LED LIGHTS FOR ALL SENSORS

## 2.7 Sealed Drum Kit

- **55 GALLON DRUM CONSTRUCTION:** UN Solid rating 1A2/X430/S
- **PAINT SYSTEM – STANDARD FINISH:** Exterior surfaces finished with a durable, multi-coat textured liquid or powder finish that meets an ASTM B117 salt spray test of 2,000 hours on standardized test panels. The exterior color will be Torit Blue. The interior shall be primed with a durable liquid or powder primer.
- **EXPLOSION VENTING:** Use of the sealed drum kit adjusts the Max Kst for the collector. The new max Kst is 170 for the Donaldson Torit dust collector model DFE 3-12. The adjusted max. Kst value is based on stated relief panel sizes and quantities, configuration selections (standard hopper with a sealed drum kit on the discharge, inlets as noted per collector design, adjusted collector dimensions/volumes, vent location as noted in collector). Sizing is based on formulas from NFPA-68-2018 for outdoor installations (no vent ducts).

## 2.8 Warranty

Major structural components of the dust collector must be free from defects in materials and workmanship and be warranted for 10 years from date of shipment.

### Prevailing Wage:

Prevailing wager is required on this project. Please see attached prevailing wage schedule. A new schedule will be issued if the project is done over winter break. Contractor should take this into account when bidder this project.

### Payment:

Midland Public Schools will issue payment up to three weeks after final completion of work and final district inspection.



Site Visit

Contractors may walk the site to determine the scope of work, equipment and materials needed to satisfy all requirements of this RFP by setting up an appointment with Michael Moeggenberg before the bid opening:

Michael Moeggenberg  
Director of Facilities and Operations  
Midland Public Schools  
989-923-5035  
[moeggenbergmj@midlandps.org](mailto:moeggenbergmj@midlandps.org)

Safety:

The Contractor shall be responsible for compliance with all applicable federal and state laws, codes, and regulations, including but not limited to MIOSHA and the Right-to-Know.

Fines for MIOSHA Violations:

If the District is assessed any fines for MIOSHA violations arising out of these contract services and attributable to the Contractor, the Contractor shall reimburse the district for these.

Permits:

The contractor is required to obtain and pay for any state and local permits pertaining to this RFP. This is to include all required documentation for Michigan State plan review (LARA). The contractor is responsible for sending all needed drawings through the Michigan State Plan Review. The contractor is responsible for any electrical and mechanical permits.

Insurance Requirements:

The Contractor will provide the district with the required insurance certificates before the Contractor is awarded the contract. These certificates of insurance shall be submitted to the District's Maintenance Department. Once the contract is awarded Midland Public Schools will need to be added as an additional insured to the insurance policies.

**Minimum Required Insurance Limits**

	Minimum Limits
Commercial General Liability	
Fire Damage	\$100,000
Medical Expenses	\$ 10,000
Personal & Adv. Injury	
Each Occurrence	\$1,000,000

Aggregate \$2,000,000	
Products - Comp/Op Agg.	\$1,000,000
Property Damage	
Each Occurrence	\$1,000,000
Aggregate	\$2,000,000
Excess Liability (Umbrella)	
Each Occurrence	\$5,000,000
Aggregate	\$10,000,000
Fidelity/Employee Dishonesty Bond	\$50,000
Automobile Liability (Including Hired & Non-Owned)	
Personal Injury/Bodily Injury	
Each Occurrence	\$1,000,000
Or Combined Single Limit	\$1,000,000
Property Damage	
Each Occurrence	\$500,000

The Contractor must also provide all of its employees working on this contract with Workers' Compensation insurance. The district will not be responsible for any job-related injuries to the Contractor's employees. Contractor will provide the district with proof of insurance with at least the following coverage limits:

Minimum Limits  
 Coverage A Statutory  
 Coverage B as follows:  
 Each Accident \$500,000  
 Disease - Policy Limit \$1,000,000  
 Disease - Each Employee \$500,000

Owners' Rights:

The Board of Education reserves the right to accept or reject any or all item(s) in the bid; to accept or reject any or all bid(s); to waive any informalities therein; or for any reason, to award the contract to other than the low bidder. If a unit price or extended price is obviously in error and the other is obviously correct, the incorrect price will be disregarded.

All bids shall be firm for ninety days (90) from the date of the bid opening. All bids must include a signed "Iran Economic Sanctions Act Certification" a "Familial Relationship Disclosure" form and "Compliance with School Safety Initiative Legislation" (enclosed with RFP documents).

Bid Security

A Bid Security by a qualified surety authorized to do business in Michigan in the amount of five percent (5%) of the Base Bid shall accompany each proposal or proposal combination. The Bid

Security may be in the form of a Bid Bond, Cashier's Check, or Money Order. Personal checks are not acceptable.

### Payment Bond

Prior to the issuance of a purchase order authorizing commencement of this contract, and in cases before beginning work under the contract, the contractor(s) selected will qualify for, sign, and deliver to Midland Public Schools Business Office, an executed payment bond secured by the surety company. The bond will be in the amount of 5% of the contract. Midland Public Schools requires that the bonding companies be limited to those listed on the U.S. Department of Treasury Circular 570 and must be licensed in the State of Michigan. The U.S. Department of Treasury Circular 570 can be viewed at the following web site: <http://fms.treas.gov/c570/index.html>. Certificates of such insurance and bonds will be filed with the Business Office within five working days of bid award and before any work begins.

### Work Timeline:

The work can begin after receiving a district purchase order and must be completed by August 17, 2024. The district will entertain work being started and completed over winter break, December 23, 2024, thru January 3, 2025.

### **Instruction to Bidders**

1. It shall be the bidder's responsibility to read this entire document, review all enclosures and attachment, and comply with all requirements specified within.
2. Bids received after the scheduled opening time will not be accepted.
3. The only bids accepted will be hard copy paper bids.
4. No bid may be withdrawn, changed or modified in any way for a period of ninety (90) calendar days from date of bid opening.
5. Negligence on the part of the bidder in preparing the bid confers no rights for the withdrawal of the bid after it has been opened.
6. Bids received prior to time of opening will be kept securely unopened. No responsibility will be attached to a school district employee who prematurely opens an incorrectly addressed bid proposal.
7. If either a unit price or extended price is obviously in error or the other is obviously correct, the incorrect price will be disregarded.
8. Midland Public Schools is exempt from state and federal taxes.
9. All bids are subject to acceptance by Midland Public Schools Board of Education which reserves the right to accept or reject any or all bids, to split awards by items, to waive irregularities or defects, and accept other than the low bid when deemed to be in the best interest of Midland Public Schools.
10. The laws of the State of Michigan shall govern rights, obligations, and remedies of the Parties under this bid and any agreement reached through this process.

11. All information included in a bid response is subject to the Freedom of Information Act and may be disclosed in its entirety after the formal, public bid opening has been completed.
12. By submission of the proposal, the bidder certifies that the pricing structure offered has been arrived at independently without consultation, communication, or agreement of such prices for the purpose of restricting competition with any other bidder or competitor.
13. The bidder agrees to hold and save Midland Public Schools, its officers, agents, and employees harmless from liability of any kind, including costs and expenses, with respect to any claim, action, cost or judgment for patent, copyright or trademark infringement arising out of the purchase or use of equipment, materials, supplies, or services covered by this bid document.
14. The contractor shall provide items of a minor nature, not specifically noted in this specification, to provide a complete, operable and Owner acceptable service.
15. Contractors are required to comply with the Safety Rules and Accident Prevention plan. The district reserves the right to exclude any worker(s) from the job site(s) for violation of these work rules or any other such offenses deemed inappropriate by the district.
16. The contractor shall clean their job area daily and dispose of all trash and debris leaving the area broom clean.
17. It is the responsibility of the contractor/bidder to field verify all existing field conditions. Bidders shall inspect the work site and take such steps as may be reasonably necessary to ascertain the nature of the work; and general and local conditions which can affect the work or cost thereof. Failure to do so will not relieve the bidders from responsibility for estimating properly the difficulty or cost of successfully performing the work.
18. The sites are available for your inspections by appointment.



## Iran Economic Sanctions Act Certification

I am the \_\_\_\_\_ (insert title) of \_\_\_\_\_ (insert bidder company name), or I am bidding in my individual capacity ("Bidder"), with authority to submit a binding bid for the purchase and installation of a dust collector to Midland Public Schools. I have personal knowledge of the matters described in this Certification, and I am familiar with the Iran Economic Sanctions Act, MCL 129.311, et seq. ("Act"). I am fully aware that the school district will rely on my representations in evaluating bids.

I certify that Bidder is not an Iran-linked business, as that term is defined in the Act. I understand that submission of a false certification may result in contract termination, ineligibility to bid for three (3) years, and a civil penalty of \$250,000 or twice the bid amount, whichever is greater, plus related investigation and legal costs.

Signature \_\_\_\_\_

## **Affidavit of Bidder-Compliance with School Safety Initiative Legislation**

The undersigned, the owner or authorized officer of \_\_\_\_\_ (the “Bidder”), certifies to Midland Public Schools (the “School District”), that any and all persons who will work directly or indirectly for the Bidder, including, but not limited to, Bidder’s employees, agents, vendors, subcontractors or consultants, and who will work at or on any School District property, shall at all times be in compliance with MCL 380.1230, 380.1230a, 380.1230c, 380.1230d, and 380.1230g and have not been convicted of any “listed offenses”.<sup>1</sup> The Bidder further warrants and represents that all persons who will work directly or indirectly for the Bidder, including, but not limited to, Bidder’s employees, agents, vendors, subcontractors or consultants, and who will work at or on any School District property, shall at all times be in compliance with MCL 380.1230, 380.1230a, 380.1230c, 380.1230d, and 380.1230g. In this regard, Bidder agrees, without limitation, to report within 3 business days to the School District when any such person is charged with a crime listed in Section 1535a(1) of the Revised School Code<sup>2</sup> or a substantially similar law, and to immediately report to the School District if that person is subsequently convicted, plead guilty or plead no contest to that crime.

**BIDDER:** \_\_\_\_\_

By: \_\_\_\_\_

Its: \_\_\_\_\_

