Serving the community of east Grays Harbor County

Request For Proposal (RFP)

Project Title:

Grays Harbor Fire District 5, Station 55

Diesel Exhaust Removal System Installation

Chief Adam Fulbright

Grays Harbor Fire District 5

P.O. Box 717 Elma, Wa 98466

1. Bids will be received by Grays Harbor Fire District 5 at Station 55 for the Diesel Exhaust Removal System and Installation as listed below.

2. Copies of the RFP packets will be available at GHFD5 Station 55 112 N. 2nd St. Elma, WA 98541

3. Any questions regarding the bid packet can be submitted in writing or by contacting:

Chief Adam Fulbright

Phone: 360) 482-6266

Email: afubright@ghfd5.org

4. The right is reserved, as the interest of the fire district, to purchase individual equipment, materials or supplies from more than one bidder or all equipment, materials and supplies from one bidder, to reject any or all bids and to accept, modify or reject any items of the bid.

6. Sealed bids must be received by GHFD5 by July 15th, 2021. Envelopes must be marked "Sealed bid for GHFD5 Diesel Exhaust Removal System and Installation".

7. Bids will be reviewed by the Fire Chief. Recommendations will be submitted to the board of Fire Commissioners. GHFD5 has the right to reject or except any bid.

8. Awarding of the bid will be no later than August 15th, 2021.

9. Installation of the Diesel Exhaust Removal System will need to start with in 30 days of the awarded bid. Any changes to this timeline from the Proposer is at the sole discretion of GHFD5 Fire Chief and Board of Commissioners.

SCOPE.

The bidder shall provide all labor, materials, and equipment necessary, to put in working operation a complete system to remove both diesel and automotive exhaust gases, and particulate of operating vehicles within the confines of specified fire station(s). All necessary controls, motors, fittings, louvers,

ductwork, blower(s), labor and all other equipment and materials specified shall be part of the Proposers work.

All items of equipment and materials described in these specifications are to be furnished installed and placed into proper operating condition in accordance with good practice and manufacturer's written or published instructions.

All workmanship and materials shall be in accordance with applicable codes and regulations. i.e, SMACNA, BOCA, NEC, ASTM, UBC, UMC, NFPA, AMCA and IMC. Such codes and regulations are to be considered part of these specifications.

The bidder shall warranty all materials, equipment and workmanship for a period of one (1) year from the date of final acceptance of the completed job, against original defects of material and workmanship, improper or insufficient maintenance, excessive wear and deterioration. Repairs shall be made at the Proposers expense.

Quality Standard Assurance and Experience

All standards of quality are meet and adhered to: UL, NFPA, AMCA, IMC, ASME, UMC, NEC and all local and state building codes.

Proposer must include copies of:

Business License

Certificates of Insurance and Endorsements, including but not limited to:

General liability, Automotive, Employer's Liability and Workers' compensation.

A current ISO-9001-2008 certificate must be included in the bid package from the manufacturer of the system.

Independent System testing information documenting the overall the effectiveness of the proposed system in a fire hall must be available.

At least 10 recent fire station references in the state within the last five years a list must be included to verify experience in the fire/ rescue market. References are only to be provided for the specific equipment and models

being proposed for this project. Contact information shall be provided upon request.

Manufacturing Experience: Companies that have 5 or more years of manufacturing experience of automatic vehicle exhaust removal systems for the fire/ rescue market are preferred.

Installing Contractor must show experience of installing vehicle exhaust removal systems in the fire rescue industry.

System Description

The exhaust system shall be a source capture system designed to handle exhaust fumes from diesel engines. The system shall address a total of 6 capture points housed in Station 55 in Elma Wa. Fans shall be large enough to provide a minimum of 650cfm per vehicle. System shall be designed to provide as much flexibility as possible. System must be compatible and integrate with existing equipment in Station 55. Tailpipe Adapters shall be of similar size throughout. Installation must be neat and clean using best material available.

Air Volume and Fan Requirements

The exhaust fan for each facility shall provide a minimum of 650 cfm per vehicle at 6.0 inches static pressure loss. Motor and Blower curve performance information from the manufacturer must be provided with the bid document showing air handling capacity at various static pressure losses.

Exhaust system hose drops shall be the same cross-sectional diameter as the vehicle tailpipe or greater. Also, exhaust system shall maintain CFM that matches the cfm of the vehicle engine exhaust when running at 1500 RPM. Hose drops that do not match or exceed the size of the tailpipe and the cfm of the engine's exhaust shall not be accepted.

The fan shall be a backward incline fan made from continuous welded construction. Fan housings that are screwed together or riveted are not acceptable. Fans shall be tested and balanced prior to installation, be manufactured in an ISO Certified Facility in accordance too AMCA

Certification Standards. A safety disconnect in the vicinity of the blower fan motor must be provided.

Turnkey Installation

Complete exhaust system installation including the exhaust fan, control box, duct work, track, hose and nozzle connection must be completed. All electrical work from the panel out is included in this scope of work. Tailpipe modifications from the muffler out that are required to ensure proper system operation are to be included in the scope of the work. All duct material installed shall conform to existing Class II SMACNA Standards. An appropriate rain cap shall be provided on the building exterior.

All system components shall be labeled with manufacturer identification.

Installation of Exhaust System shall be accomplished by a factory trained and authorized installation team that specializes in the business of installing emergency response exhaust systems. Name of installation firm must be indicated in the bid document with exhaust removal system experience provided.

Nozzle Attachment

The Exhaust Capture System must provide complete, 100% exhaust removal at the source from vehicle start up to exit of the apparatus from the station. In no event shall the nozzle allow for the potential escaping of diesel exhaust into the bay area. A check valve is required to stop contaminant from escaping into the bay area. It is a requirement of this bid that the system be capable of capturing 100% of exhaust gas and particulate even in the event the fan does not activate. Any nozzle that does not seal completely seal 100% around the tailpipe will not be accepted.

The exhaust system shall be attached to the vehicle within 3 feet outside of the garage door threshold.

The system shall be designed so that attachment to exhaust hose is accomplished by the operator standing erect and with one simple motion to connect system to the vehicle.

A rigid lower hose section with handle shall be provided to allow for easy hose connection.

The nozzle shall allow for the introduction of ambient air to significantly cool the air stream inside the hose and prolong the life of the equipment. Any

system that does not seal around the tailpipe and allow for cool ambient air introduction shall be eliminated.

All adapters and nozzles shall be of similar size to allow vehicles to freely move from bay to bay. Any Nozzle adapter shall not exceed 7-inch diameter to allow adequate ground to tailpipe clearance.

Tailpipe adapter and nozzle must have inlet that is 5 inches or greater so, exhaust airflow is not impeded. Nozzle to flex hose elbow transition must also be 5 inches or larger to maximize airflow.

Nozzle Release and Material

The release of the nozzle shall occur by a forward motion of an apparatus. The separation shall be accomplished by a simple mechanical release. Systems requiring support systems for nozzle separation such as pneumatics or electronics are discouraged.

The disconnection of the hose shall not be speed dependent and have a balancer that helps lift the exhaust nozzle off the vehicle tailpipe. The nozzle must separate from the tailpipe at the same point each time regardless of the speed of the vehicle.

Any auto-release system that is speed sensitive requiring the driver to modify the exit speed to control the nozzle release shall not be accepted. Any nozzle requiring trip switches and support systems such as compressed air or electrical support to operate, or release are discouraged.

Release of nozzle from the tailpipe shall not cause tugging or stretching of the hose to occur. Stress from separation and transporting of the hose to the door shall be borne by an internal cable to prolong life of the hose.

Nozzle elbows constructed of one piece, cast aluminum are preferred to eliminate the possibility of denting, rusting and breaking. Tailpipe adapters and nozzles should be made of rust resistant components.

Sliding Aluminum Track/ Expandable Hose Track

The exhaust system shall use a lightweight aluminum track support system to convey the exhaust hose from door threshold to vehicle park position. The aluminum track shall be of box lock design with two cross supports for rigidity. Systems that use steel uni-strut or aluminum H track design are not acceptable.

An expandable hose track system shall be offered in the station to eliminate hose loops. The expandable hose shall be 6-inch diameter and have a compression/expansion ratio 0f 6:1. The expandable hose shall be attached to the track using a set of trolleys secured to the hose at 9-inch intervals.

Rail and track system must be supported using adjustable, telescopic support legs allowing for future adjustment and changes to the system.

Suction Rail

The suction rail system shall be comprised of Rail Sections which shall have a length of ten feet (10'). Aluminum Material shall be 6063-T-5 with a standard mill finish.

The aluminum suction rail shall be constructed from a one-piece continuous extruded aluminum profile. Construction shall be 6" round in diameter, with guide rails on each side to accommodate the external trolley assembly, and molded slots on the top for leg and support bracing.

The trolley assembly shall be of external guide rail design. Four Delron wheels must be out of the exhaust airstream and allow the trolley assembly to roll freely along the external guide rails. The chassis shall include a fitted cone assembly, designed to part the memory sealing lips. The cone assembly shall be designed with a series of friction rollers. These rollers shall be designed to reduce the resistance between the memory lips and the cone assembly.

Shock absorber assembly shall incorporate an adjustable hydraulic cylinder, capable of reducing the forward impact of the trolley assembly, without causing damage to either the suction rail or the trolley assembly.

A rubber bumper shall be located on the trolley assembly and designed as a contact point. The hydraulic cylinder shall be equipped with a rubber bumper end stop.

Both bumpers shall be designed to align upon impact, and at no time shall metal to metal or plastic to metal contact be allowed.

The System Balancer

The hose balancer shall be designed to operate as a non-locking or self-locking adjustable balancer with a lifting capacity of no less than 31 lbs to keep hose off bay floor.

Hose shall be supported by the balancer using a lifting elbow with an internal cable to reduce stress and wear and tear to the hose.

Extraction System Exhaust Hose

The flexible exhaust hose is manufactured for the sole purpose of venting high temperature exhaust gases which are produced by internal combustion engines.

This construction of hose must be capable of operating at a continuous minimum temperature of 400°F and intermittent temperatures of 550°F. Hoses that are not rated at or higher than these temperatures will not be accepted. Testing support data verifying the hose rating must be included in the submittal portion of this bid package.

Five-inch diameter flex hoses are preferred to smaller hoses to provide less static pressure loss and more efficient fan performance.

A two-foot, rigid, lower section hose shall be included with extreme heat tolerance. Hose shall be tested by independent certified laboratory to be capable to 850 degrees F. Lower section hose additionally shall be flame retardant and be constructed using engineered materials to maintain shape and integrity.

Auto-Start Control System

Shall be designed to sense the output pressure normally generated by any internal combustion engine. When the nozzle is connected to the vehicle's exhaust tailpipe and the vehicle is started by the operator an automatic controller, the increased output pressure shall be detected by a pressure sensor and activate the exhaust fan. A low voltage timer will keep the exhaust fan operating for a period of time designated by fire department procedures. As an option, ignition start activation may be also offered for consideration.

Controller Electrical controller must be UL listed/approved and manufactured in accordance with Underwriters Laboratories standard UL-508 enclosed industrial control panels and incorporate a limited energy control circuit. For safety the enclosure must be NEMA4X rated fiberglass construction with a watertight seal.

12.1 System Warranty

Complete exhaust system parts warranty shall be for a minimum of 5 years. A warranty certificate describing the warranty to be provided must be included in the bid. Location and name of nearest service outlet should be listed in the bid. Location of parts inventory shall be indicated as well.

System Suppliers

A. **PlymoVent Corporation**/Plymovent Industrial Ventilation Systems or approved equal.

115 Melrich Road

Cranbury, New Jersey 08512

USA

Toll Free: (800) 644-0911

FAX: (609) 655-0569

WEB: info@plymoventusa.com

B. Air Exchange, Inc.

495-A Edison Ct.

Fairfield, CA 94534

Contact Name: Chris Koss

Toll Free: (800) 300-2945

Email: info@airexchange.com

Email: ckoss@airexchange.com

Changes in suppliers must be agreed upon by both the Fire District and the Commissioners. The proposer must submit the request in writing and must meet all listed requirements.