

Scope of Work

The Troup County Fire Department will be accepting bids for complete Source Capture Exhaust Systems for the following locations:

Troup County Fire Department Station 1, four (4) drops, back in bay.

Troup County Fire Department Station 2, three (3) drops, back in bay.

Troup County Fire Department Station 4, four (4) drops, drive-thru bay.

Troup County Fire Department Station 6, two (2) drops, drive-thru bay.

Troup County Fire Department Station 10, two (2) drops, back in bay.

Troup County Fire Department Station 11, two (2) drops, drive-thru bay.

Troup County Fire Department Station 12. Three (3) drops, two (2) drive thru and one (1) back in bay.

Technical Specifications

1.0 Specifications:

Provide all labor, materials, and equipment necessary to put in working operations a complete turnkey system that will ventilate diesel and gasoline exhaust from the vehicle's exhaust pipe to the outside of the fire station. All necessary controls, motors, fittings, ductwork, blowers, labor and all other equipment and materials specified shall be part of the work. Tailpipe modifications are to be performed by the bidder and included in bid pricing.

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

1.1 The exhaust system shall be a source capture system designed to vent 100% of exhaust gasses from diesel and gasoline engines and particulate safely to the outside of the fire station. System to be installed as a turnkey project with all labor, tailpipe modifications and duct material included in the scope of work. Electrical connections and disconnect switch shall be part of bidders project scope.

1.2 The system shall not impede personnel boarding the apparatus. The hose assembly shall not come into contact with the vehicle other than one connection point to the vehicle's exhaust pipe. The hose assembly shall not touch or drag on the bay floor.

1.3 The exhaust system shall not block doorways, exits, and aisles in the apparatus bay, which could endanger the welfare of fire personnel or visitors.

1.4 The department shall be able to use the exhaust removal system for performing engine and pump checks indoors.

1.5 The system must be designed for high-temperature vehicle exhaust fire rescue applications. The system shall automatically activate, disconnect, shutdown, and reactivate upon return of the apparatus to the station.

1.6 The system shall under no circumstances allow exhaust to leak or bypass the collection nozzle.

1.7 No tailpipe adapter shall extend past the side of the apparatus in compliance with NFPA 1901.

1.8 Exceptions or variances from any of the specifications outlined must be acknowledged and listed.

2.0 Quality Standard Assurance and Experience:

2.1 All standards of quality are met and adhere to UL, NFPA, AMCA, ASME, UMC, NEC and all local and state building codes. The product is to be supplied by the manufacturer with a current ISO-9001 certificate in manufacturing, design, layout, and sales functions.

2.2 Manufacturing Experience: System manufacture must have manufacturing experience of automatic vehicle exhaust removal systems for the fire rescue market. Five (5) references nearest to Troup County, Georgia must be included with proposal.

2.3 Rated capacities and product features must be included for the following:

- a. Fan power ratings with blower curves provided
- b. Motor ratings and electrical characteristics
- c. Hose ratings and testing verification
- d. Controller specifications
- e. Proposed Rail/track information and specifications

2.4 Shop drawings: a drawing showing detailed layout of the system for each location including elevations, length of the track assembly, and duct layout with detail and fan location.

3.0 Air Volume and Fan Requirements:

3.1 The exhaust fan shall provide an appropriate cfm to avoid pressure loss in the duct system but also limit noise.

3.2 Fans shall be tested and balanced prior to installation, be manufactured in an ISO Certified Facility in accordance to AMCA Certification standards.

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

3.4 Fan motor shall be totally enclosed, fan cooled and comply with UL 705 and NEMA Standards.

4.0 Installation and Duct Connections:

4.1 Complete installation including labor and all parts including the exhaust fan, control box, ductwork, rails/track, hose, nozzle connection, exhaust pipe modification, electrical work and any other work required to have an operational Source Capture Exhaust System are included in the scope of work.

4.2 All penetration through walls and ceilings/roof shall be properly sealed. If a fire rated wall is penetrated, a proper fire rated sealant shall be used. An appropriate rain cap shall be provided on the building exterior.

4.3 All duct material installed as part of this project shall conform to Class II SMACNA Standards.

4.4 All system components shall be labeled with manufacture identification.

4.5 Installation of the system shall be accomplished by a factory authorized installer that has experience installing emergency vehicle exhaust removal systems.

5.0 Nozzle Details and Attachment:

5.1 The system must provide complete exhaust removal at the source from vehicle start up to exit of the apparatus from the station. Nozzles should sufficiently seal to vent to the outside even in the event that fan does not properly activate.

5.2 The system shall be designed so that attachment of hose to exhaust is accomplished by the operator standing erect and using one simple motion to connect the system to the vehicle. A rigid lower hose section with handle shall be provided to allow for easy hose connection.

5.3 Exhaust pipe adapter shall be an appropriate diameter to provide sufficient ground clearance.

5.4 The adapter and nozzle shall be standardized to allow vehicles to operate out of all bays at any equipped fire station.

5.5 Magnetic nozzle designs are preferred, if pneumatic nozzles are proposed it will be listed in the exceptions.

6.0 Sliding/Expandable Hose Track:

6.1 The exhaust system shall use a track/rail support system to convey the exhaust hose from the vehicle's parked position all the way to the door threshold.

6.2 The track/rail system shall operate in a manner that allows the hose to remain attached to the vehicle and move freely to the disconnect point at the door threshold.

7.0 Suction Rail/Vertical Stack:

7.1 Each fire station will be evaluated by the bidder to determine the best option based on number of bays, drive-thru or back in, and vehicles with vertical exhaust.

8.0 Hose Support:

8.1 The hose will be supported in a way that it will retract and not touch the bay floor.

9.0 Exhaust Hose

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

10.0 Auto-Start Control System:

10.1 When the nozzle is connected to the vehicle's exhaust and the driver starts the vehicle, the exhaust fan will automatically start and exhaust the gases directly to the outside of the station. This automatic feature shall activate when the vehicle ignition is turned on.

10.2 The controller shall keep the exhaust fan running for as long as the vehicle runs inside the station.

10.3 A timer will keep the exhaust fan operating for a period of time designated by the customer after the hose is disconnected and the apparatus leaves the station.

10.4 The controller shall be notified by a transmitter in each apparatus to activate the exhaust fan when an apparatus returns to a station. The transmitter shall have a feature that allows apparatus checks to be conducted outside the apparatus bay without activating the exhaust removal system.

10.5 Transmitters shall operate on a common frequency for all fire stations.

11.0 System Warranty and Parts:

11.1 The bidder shall guarantee all materials, equipment and workmanship for a minimum of one (1) year. A warranty certificate describing the warranty to be provided must be included. Location and name of nearest service provider should be listed. Location of parts inventory shall be included.

11.2 Cost for a three (3) year warranty and a five (5) year warranty for parts and labor shall be included in proposal.

11.3 A parts breakdown and price list for replacement parts will be included with proposal.

11.4 Cost for annual service and inspection of each system shall be included in proposal.

11.5 Cost for cleaning of hoses and ductwork shall be included in proposal.

12.0 Training:

12.1 The contractor shall provide training to department personnel in the daily use and maintenance of the vehicle exhaust removal system that has been installed at each station.

13.0 DEFINITIONS:

AMCA- Air Movement and Control Association International, Inc.

ASME- American Society of Mechanical Engineers

NEC- National Electrical Code

NEMA- National Electrical Manufacturers Association

NFPA- National Fire Protection Association

SMACNA- Sheet Metal and Air Conditioning Contractors National Association

UL- Underwriters Laboratories

UMC- Uniform Mechanical Code

BID RESPONSE PAGE

LOCATION	LOCATION BID PRICE
Troup County Fire Department Station 1	_____
Troup County Fire Department Station 2	_____
Troup County Fire Department Station 4	_____
Troup County Fire Department Station 6	_____
Troup County Fire Department Station 10	_____
Troup County Fire Department Station 11	_____
Troup County Fire Department Station 12	_____
GRAND TOTAL	_____

Location of nearest service person _____

Average response time for service call _____

Amount of time after bid award to start project. _____

Billing for each location as it is completed is allowed.

Entire project must be completed within 10 months of bid award date.

Company Name _____

Address _____

Telephone _____ Email Address _____

Signature _____

Print Name _____