

**Hampstead Fire & Rescue
17 Little's Lane
Hampstead NH 03841**

**REQUEST FOR PROPOSAL
TOWN OF HAMPSTEAD
FIRE DEPARTMENT VEHICLE EXHAUST SYSTEM**

The Town of Hampstead is accepting proposals to provide a Vehicle Exhaust System as outlined in the following bid form. Bid Packages are available at the Fire Station or www.hampsteadnh.us.

All proposals should be submitted in a sealed envelope marked "**Fire Department Vehicle Exhaust System**" and addressed to:

Town of Hampstead
Town Office
11 Main Street
Hampstead, NH 03841
Attention: Sally Theriault, Administrative Assistant

Proposals must be received no later than 4:00 pm on Monday, March 8, 2010.

Proposals cannot be withdrawn for a period of ninety (90) days. The Town reserves the right to reject any or all proposals and take such action as may be deemed necessary in the best interests of the Town.

Contact Persons: Should any questions arise, please contact Michael Carrier at (603) 329-6006 or email 46c1hfd@comcast.net

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Bid Form

The Undersigned proposes to furnish all labor and materials required for Source Capture Vehicle Exhaust System in accordance with the accompanying specifications, for the contact price specified below.

This bid includes Addenda numbered _____

The proposed contract price is:

_____ \$ _____
(Written Words) (Figures)

The undersigned certifies under penalties of perjury that this bid has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club or other organization, entity or group of individuals.

Date _____

(Signed name of bidder)

Corporate Seal _____

(Printed name of bidder)

(Title)

(Company name)

(Address)

(City, State, Zip Code)

(Phone)

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The intent of these specifications is to set a minimum standard for the design, supply and installation of a Source Capture Emergency Vehicle Exhaust Fume Removal System that is proven, dependable and operate efficiently. These performance specifications are the result of investigations by the Fire Department of several types of Source Capture Emergency Vehicle Exhaust Fume Removal Systems. Based on the investigations, the specifications are an accumulation of benefits and features required for proper and safe operation in the Fire Station.

These specifications must be returned with bid form. Response must be noted where indicated to ensure that all bidders meet requirements of the specification. All bidders taking exception to any specification must include a valid explanation or be subject to bid refusal. The Fire Department will review all bids and evaluate the bidder's qualifications and the equipment to be supplied by the bidder.

Administration

Contractor must comply with all State and Local bidding / contract laws.

The successful bidder will be required to provide a Certificate of Insurance acceptable to the Town of Hampstead.

Pre-bid Conference

Contractor must contact and meet with the Fire Chief or his designee previous to February 25, 2010. This is mandatory to insure the vendor has on site knowledge of the fire department requirements.

Please call 603-329-6006 to arrange appointment.

Comply Exception

Contractor must make an on site survey of the facility and provide a detailed layout drawing showing location of vehicles, system track or rail, exhaust blower and ductwork to be supplied. This is a mandatory requirement to ensure the proposed system meets the intent of the specifications and fits within the building space.

Drawing must be included with the bid.

Comply Exception

Contractor's Qualifications

The Contractor must have installed in Fire Departments at least six (6) Source Capture Emergency Vehicle Exhaust Fume Removal Systems of the same manufacture and model as bid that have installed and operating for a minimum of two (2) years in New Hampshire. This requirement is to allow the Town's representatives to physically visit Fire Stations were systems are installed and see how the system perform after the system warranties have expired.

Comply Exception

A list of all installations made by the contractor in Fire Departments must be included with bid.

Comply Exception

Contractor must stock parts in New England for the Source Capture Vehicle Exhaust Fume Removal System and be able to provide immediate service and periodic maintenance beyond the warranty period. Insert address of where parts are stocked and service center_____.

Comply Exception

Manufacture's Qualifications

Bids will only be considered using manufactures that have established a reputation of permanency and reliability in the field of Vehicle Exhaust Ventilation Systems manufacture for minimum of five (5) years. Letter from the manufacturer must be attached.

Comply Exception

The manufacture must be ISO 9001 Certified. A copy of the certificate must be attached.

Comply Exception

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Scope of Work

Contractor will modify tail pipes as required to accommodate tail pipe nozzle supplied with source capture emergency vehicle exhaust system.

Fire Department is responsible for electrical wiring.

Contractor shall provide and install at Central Fire station, 17 Little's Lane, Hampstead, NH 03841, a pneumatic nozzle type source capture emergency vehicle exhaust fume removal system for seven (7) fire apparatus. Five (5) fire apparatus are separated from the other two (2) fire apparatus therefore two (2) separate complete systems are required.

Comply Exception

System for Bays #2, #3, #4, #5 & #6:

Contractor shall furnish and install five (5) pneumatic sliding balancer track type system, 19' long as outlined in the equipment specifications.

Comply Exception

Contractor shall provide and install one (1) automatic start control panel listed by UL in accordance with underwriters laboratories standard UL-508 as outlined in the equipment specifications.

Comply Exception

Contractor shall provide and install one (1) exhaust blower as outlined in the equipment specifications.

Comply Exception

Contractor shall provide and install one (1) air filtration system to reduce the diesel exhaust particulate (soot) from the exhaust blower discharge.

Comply Exception

Contractor shall provide and install one (1) silencer as outlined in the equipment specifications.

Comply Exception

System for Bays #1 & #7:

Contractor shall furnish and install two (2) pneumatic sliding balancer track type system, 19' long as outlined in the equipment specifications.

Comply Exception

Contractor shall provide and install one (1) automatic start control panel listed by UL in accordance with underwriters laboratories standard UL-508 as outlined in the equipment specifications.

Comply Exception

Contractor shall provide and install one (1) exhaust blower as outlined in the equipment specifications.

Comply Exception

Contractor shall provide and install one (1) air filtration system to reduce the diesel exhaust particulate (soot) from the exhaust blower discharge.

Comply Exception

Contractor shall provide and install one (1) silencer as outlined in the equipment specifications.

Comply Exception

For Safety and Health Concerns the following are Mandatory Requirements of a Source Capture Emergency Vehicle Exhaust Removal System.

Upon emergency dispatch of the vehicle, the exhaust blower shall start when the vehicle is started. This is a mandatory requirement to insure that the engine exhaust fumes do not accumulate in the fire station and are removed immediately.

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Comply Exception

The nozzle must be a control release and disconnect near the threshold of the exit door regardless of the speed the vehicle. Nozzles that require magnets or mechanical tension to pull off the vehicle's tailpipe are not acceptable.

Comply Exception

The pneumatic nozzle must inflate to provide a positive airtight seal around the exhaust tail pipe when connected, to prevent exhaust gases from escaping when the vehicle's engine is accelerated. This is a mandatory requirement.

Comply Exception

The pneumatic nozzle must be tested for effectiveness to capture the exhaust fumes by an independent agency. This is a mandatory requirement. Copy of the test report must be included with the bid.

Comply Exception

The tailpipe termination of the vehicle is a 90° angle (perpendicular) to vehicle body to prevent toxic exhaust fumes from being discharged rearward into station after the exhaust system nozzle releases at the door. This is a mandatory requirement.

Comply Exception

The tailpipe shall not be modified to extend beyond the body of the vehicle nor shall tailpipe be increased in size to accommodate the system nozzle. This is a mandatory requirement.

Comply Exception

The manual connection of the nozzle to the tailpipe must be done from an upright standing position without bending over. This is a mandatory requirement is to reduce personnel exposure of the toxic diesel exhaust fumes and prevent personnel from possible burns from handling the nozzle or touching the hot exhaust tailpipe. Additional, personnel bending down to connect the nozzle to the vehicle's tailpipe would be out of view of the driver, which is not acceptable.

Comply Exception

The manual connection of the nozzle to the tailpipe must be a single operation, from an upright standing position, without requiring manual attachments or adjustments to other parts of the system. This is a mandatory requirement to eliminate operations that distracts the personnel while the vehicle is moving in to the Fire Station.

Comply Exception

The hose must be rated for 400° (F) continuous, 500° (F) intermittent temperature to insure the exhaust fume does not deteriorate the hose and leak. This is a mandatory requirement.

Comply Exception

A copy of the hose temperature test report must be included. This is a mandatory requirement.

Comply Exception

The safety disconnect coupling with adjustable tension release shall completely separate the lower nozzle section from the upper hose assembly in the unlikely event of the exhaust nozzle becomes entangled in the wheels or the under carriage of the vehicle. This is a mandatory requirement to prevent the track or rail supports from being pulled out of the ceiling caused by excessive mechanical tension and strain. The tension of the safety disconnect coupling must be adjustable to accommodate any vehicle. Non-adjustable tension safety disconnect systems are not acceptable. The safety disconnect coupling must be reusable. External release cables or other devices that may catch or snag on the fire fighters' turn-out gear are not acceptable.

Comply Exception

The automatic control panel shall be UL, ETL or other qualified electrical testing agency, listed and manufactured in accordance with Underwriters Laboratories standard UL-508. Panel must for listed by a

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qualified electrical testing agency and bear the agency label. This is a mandatory requirement. Insert qualified electrical testing agency file number for automatic control panel _____ and manufacture name _____

Comply Exception

Copy of the qualified electrical testing agency Authorization Page must be attached. This is a mandatory requirement.

Comply Exception

Function of the Pneumatic Sliding Balancer Track Type system shall be:

When the fire apparatus's engine is started, pressure sensors located in the ductwork and wired to the control panel shall automatically start the exhaust blower.

Comply Exception

As the vehicle leaves the fire station, the flexible 4" diameter exhaust hose equipped with a pneumatic nozzle shall move towards the exit door along the ceiling mounted aluminum track. The traveling trolley shall glide along the track with a spring coiled balancer that supports the hose. The balancer must keep the exhaust hose away from the exiting apparatus. Mounted to the aluminum track shall be an uncoupling release valve that automatically releases compressed air from the pneumatic nozzle allowing a smooth uncoupling of the nozzle at the threshold of the exit door, regardless of the speed the vehicle may exit the building.

Comply Exception

Upon the vehicles return to the fire station, the flexible exhaust hose equipped with a pneumatic nozzle is attached to the vehicles exhaust tail pipe and inflated with a manual control by an operator standing in an upright vertically position at the entrance door. When the pneumatic nozzle is attached to the vehicle's exhaust tailpipe, the exhaust blower will automatically start to assure total collection of exhaust gases prior to vehicle entering the building. The vehicle can then be positioned in its designated parking position.

Comply Exception

Pneumatic Sliding Balancer Track Type Source Capture Emergency Vehicle Exhaust Fume Removal system shall be delivered and installed equal to the following specifications:

The track must be extruded aluminum to resist corrosion with channel to accept ball bearing rollers of the traveling trolley. Rubber impact end stops are to be mounted on each end of the track.

Comply Exception

The traveling trolley shall be galvanized steel assembly with upper ball bearing wheels to fit inside track extrusion and lower ball bearing wheels to fit on outside of track extrusion to prevent rocking or shifting of the trolley as it moves along full length of track.

Comply Exception

Flexible hose shall not exceed 4 inches in diameter for ease of handling and to minimize space requirements on the apparatus floor. Flexible hose greater than 4 inches in diameter are not acceptable. Wire helix must be bound and protected in lamination to further protect hose. Hose with exposed wire helix is not acceptable because of possible burns or injury to personnel.

Comply Exception

The pneumatic nozzle shall be constructed of high temperature synthetic rubber, vulcanized to high temperature synthetic fabric. A NOMEX inner liner shall be provided as a primary temperature and friction barrier.

Comply Exception

The single size nozzle must accept all vehicles with tailpipes 2" up to 6" diameter to allow vehicles to be interchangeable between bays or fire stations. This will allow all of the vehicles to be parked in any bay or fire

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station. Nozzles that require different sizes for different size vehicle tailpipe are not acceptable because they restrict the location of the vehicles. This is a mandatory requirement.

Comply Exception

The transition from the nozzle to the flexible hose shall be completely seam-welded construction to prevent leaks of exhaust fumes. Spot welded construction is not acceptable. The transition is to keep the hose from sagging and excessive fatigue. Transition shall have a metal debris screen to prevent foreign material from damaging the flexible hose or exhaust blower. The transition shall be chrome plated for durability.

Comply Exception

The spring balancer that supports the hose assembly as it travels along the track must be enclosed type with stainless steel cable.

Comply Exception

Manual inflation/deflation valve shall be sliding type with push button for manual inflation of the nozzle. The valve is to incorporate a handle that the operator can easily operate from a standing position to connect the nozzle to the tailpipe. When the release valve mounted on the track or rail is activated, the release valve shall deflate the nozzle. If the adjustable safety disconnect coupling separates, the valve shall have safety release to deflate the nozzle automatically.

Comply Exception

Without replacement or alterations, the proposed system track must be expandable to accommodate future tandem arrangement or drive-thru arrangement of the vehicle. Systems that require the original installation to be removed and replaced to achieve tandem arrangement or drive-thru arrangement of the vehicle are not acceptable.

Comply Exception

Automatic Start Control Panel

The control panel shall contain the motor starter, overload, solid-state circuit card with timer adjustments from 7 to 360 seconds, fused low voltage transformer, in a NEMA 12 rated key lock electrical enclosure.

Comply Exception

Soft touch AUTO START- STOP - MANUAL RUN membrane controls shall be on the face of the control panel.

Comply Exception

Control panel must have system indicator LED lights on the soft touch membrane controls. They shall be marked and function as:

1. AUTO START: This LED shall show the system is in full automatic mode of operation and electrical power is supplied to the control panel.
2. FAN ON: This LED shall show that electrical power is supplied to the exhaust blower.
3. STOP: This LED shall show the exhaust blower is manually shut down. After three seconds this will return to AUTO START ready mode to prevent the exhaust blower from inadvertently being shut down.
4. MANUAL RUN: This LED shall show the exhaust blower is operating in a continuous mode until interrupted by the STOP mode being activated.
5. NO AIRFLOW ALARM: This shall monitor the exhaust blower and advise when the exhaust blower is not operating properly

Comply Exception

The low voltage sensors shall signal the start of the exhaust blower.

Comply Exception

Control panel must not utilize or produce electrical frequency transmission because it may interfere with communication equipment.

Comply Exception

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Controls that require electrical or pneumatic devices installed on the vehicle to activate the exhaust blower are not permitted. These additional after market devices may cause interference with original equipment and cause a delay in response time.

Comply Exception

Exhaust Blowers

System for Bays #2, #3, #4, #5 & #6:

Exhaust Blower

Exhaust Blower shall be 7.5 HP 208 Volt, 3Ø, 3450 RPM TEFC direct drive motor, designed to deliver 2500 CFM at 8.2 inches E.S.P. The inlet shall be 9 13/16" diameter and the outlet shall be 10" diameter.

Construction shall be class B spark resistance with powder coated steel housing and aluminum wheel with shaft seals.

Comply Exception

System for Bays #1 & #7:

Exhaust Blower

Exhaust Blower shall be 3 HP 208 Volt, 3Ø, 3450 RPM TEFC direct drive motor, designed to deliver 1000 CFM at 7.0 inches E.S.P. The inlet shall be 7 7/8" diameter and the outlet shall be 8" diameter. Construction shall be class B spark resistance with powder coated steel housing and aluminum wheel with shaft seals.

Comply Exception

Silencer

Outside shell of the silencer is constructed of galvanized steel spiral duct, lined with acoustical foam material. The inside has expanded galvanized metal to allow the sound to pass through to the acoustical foam material.

Comply Exception

Ductwork

Duct work to connect the exhaust blower to the hose assembly or multiple hose assemblies must be round industrial spiral duct, defined in SMACNA Industrial Duct Construction to prevent deflection under use.

Comply Exception

Duct work to be of the taper design to maintain constant velocities without the need for dampers to balance the system.

Comply Exception

All joints must be double-lipped EPDM rubber seal type conforming to SMACNA's Class 3 leakage standards, sealed with a mechanical joint seal or welded to provide a positive leak proof seal. Ductwork joints that do not conform to the above are not acceptable.

Comply Exception

The size and gauge of the ductwork shall be in strict accordance of the manufacture specifications to insure proper operation for the specific exhaust removal system(s) being bid that meets the above characteristics and comply with applicable industry standards and local, state and federal regulations and codes.

Comply Exception

Installation

This installation is considered to be supplemental equipment and subordinate to and must be coordinated with any system, fixture and appurtenance that is in the existing fire station.

Comply Exception

The means and methods of installation are the sole responsibility of the contractor and shall comply with applicable industry standards and local, state and federal regulations and codes and meet all requirements as set forth in the specifications.

Comply Exception

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All hangers, fasteners and appurtenances shall be used and/or installed in accordance of the manufacture specifications for the specific exhaust removal system(s) being bid that must meet the characteristics and performance set forth in the specification.

Comply Exception

Installation of the source capture emergency vehicle exhaust system(s) to include mounting the track and rail assemblies with supports and bracing to ceiling.

Comply Exception

All penetrations of the exterior wall must be core drilled to allow ductwork to exit the building. The discharge ductwork shall terminate a minimum of two (2) feet above the roofline with and EPA type backdraft damper. Ductwork is not permitted to exit the building through a window opening.

Comply Exception

Pneumatic airline circuit must be complete and connected to an air compressor.

Comply Exception

Sensors are to be installed in proper location and control panel mounted.

Comply Exception

List Installations that are operating for more than (2) two years New Hampshire. They must be a source capture emergency vehicle exhaust systems of the same manufacture and model as bid

Install Date	Fire Department	State	Equipment Manufacture	Model & Type of Equipment

Explanation of Exceptions to Specifications

Item	Explanation

These specifications must be returned with bid and response noted in each block. Explanations of Exceptions to the Specifications are to be noted.

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Bidder _____ Signature _____
Address _____ Printed Name _____
_____ Title _____
Phone _____ Date _____

Standard Abbreviations

AMCA	Air Movement and Control Association
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
UL	Underwriters Laboratories
ETL	Electrical Test Laboratories
CSA	Canadian Standards Association
CFM	Cubic Feet per Minute
NEMA	National Electrical Manufacturers Association
ASME	American Society of Mechanical Engineers
NFPA	National Fire Protection Association
EPA	Environmental Protection Agency
SWSI	Single Width Single Inlet
ISO	International Standards Organization
"	Inch or Inches
°	Degree
(F)	Fahrenheit
" S.P.	Static Pressure measured in inches of water
EPDM	Ethylene propylene diene monomer