

VILLAGE OF LOMBARD
REQUEST FOR BOARD OF TRUSTEES ACTION

For Inclusion on Board Agenda
Bids and Proposals

TO : President and Village Board of Trustees
FROM : Scott Niehaus, Village Manager
DATE : February 21, 2018 Agenda Date: March 15, 2018
TITLE : Vehicle Exhaust Extraction System
SUBMITTED BY: Tom Ellis, Operations Superintendent, Public Works *ME*

RESULTS:

Date Bids Were Published N/A Bidding Closed N/A

Total Number of Bids Received N/A

Total Number of Bidders Meeting Specifications _____

Bid Security Required _____ Yes _____ No

Performance Bond Required _____ Yes _____ No

Were Any Bids Withdrawn _____ Yes _____ No

Explanation:

Waiver of Bids Requested? _____ X _____ Yes _____ No

If yes, explain: Fire Department evaluation Memo dated Feb.12, 2018

See attached memo.

Award Recommended to Lowest _____ Yes _____ No

Responsible Bidder?

If no, explain:

See attached memo.

FISCAL IMPACT:

Amount of Award \$87,230.52 acct. 430.710.720.75620- C.I.P.

BACKGROUND/RECOMMENDATION:

See attached memo.

Has Recommended Bidder Worked for Village Previously x Yes _____ No

If yes, was quality of work acceptable x Yes _____ No

Was item bid in accordance with Public Act 85-1295? _____ Yes X No

Waiver of bids - Public Act 85-1295 does not apply X Yes

REVIEW (as needed):

Village Attorney XX _____ Date _____

Finance Director XX _____ Date _____

Village Manager XX _____ Date _____

NOTE: All materials must be submitted to and approved by the Village Manager's Office by 12:00 noon, Wednesday, prior to the Board Agenda distribution.



February 21, 2018

TO: Village President and Board of Trustees

THROUGH: Scott Niehaus, Village Manager

FROM: Carl S. Goldsmith, Director of Public Works *CS*

SUBJECT: Exhaust Extraction Systems – Fire Stations 44 and 45

Background

The Village Board of Trustees included funds in the 2017 Capital Improvements Plan for the purchase and installation of upgrades to the current Plymovent Exhaust Extraction systems at Fire Stations 44 and 45. This project will provide only updates to the current system. The Village also included \$180,000 in FY 2024 for the full replacement of the system(s). The current systems are approximately 20 years old. These systems are used to remove diesel emissions from the apparatus floor while vehicles are idling. Vehicle exhaust emissions are a significant health risk and could be a serious legal liability for the Village. The current system uses a series of hoses that attach to the tailpipe and uses air handling equipment to remove the emissions from the vehicle bays. The system is designed to allow for the hoses to move with the vehicle as it drives through the station and prior to leaving the station, the hoses release.

As the staff began preparing for the upgrade to the system(s), we determined that based upon the age of the equipment; there are better systems available that would provide a significant improvement to the operation of the systems at both Fire Stations. A decision was made to replace the extraction systems rather than upgrade the existing systems. Funding for the replacements of the systems at Station 44 and 45 come from funding available in the 2017 Capital Improvements Plan; as summarized below:

- **Fire Station #2 Outdoor Storage Facility - \$25,000**

The CIP anticipated the construction of a large storage facility at Station 44 to house seasonal equipment and the rescue boat. Upon review by Public Works personnel, it was determined that no sufficient space could be found to house the facility due to a number of conflicts with underground utilities and station operations. As such, the Fire Department will be replacing the existing shed with a new shed and relocating the boat and other equipment into the Public Works Department garage on St. Charles Road across the street from station 45.

- **Plymovent Upgrade - Fire Station 1 & 2 - \$40,000**

The funding in 2017 for the upgrade to the existing system will be applied towards the replacement of the systems. The future funding in 2024 (\$180,000) will be removed from the CIP in the preparation of the 2019-2028 CIP.

- **Village Hall HVAC Improvements - \$50,000**

The 2017 CIP contained \$200,000 for the replacement of the existing rooftop HVAC unit at the Village Hall. Based upon a very favorable bid of \$37,885, staff recommended proceeding with the installation of separate HVAC rooftop units for the Community Room and Village Board Room, which were anticipated to be completed in the future. The contract for the rooftop units for the Community Room and Village Board Room was awarded in the amount of \$96,450. The total project cost for the HVAC improvements came in at \$134,335. As such, approximately \$66,000 is remaining unspent on the HVAC project.

The Village solicited two proposals for the replacement of the systems. The proposals are summarized below:

	Clean Air Concepts/Magnagrip	Hastings/Plymovent
Proposal #1 F.S.45	\$63,128.00	\$76,136.63
Proposal #2 F.S.44	\$9,128.00	\$11,093.89
Total	\$72,256.00	\$87,230.52
Difference		(\$14,974.52)

While the systems are both designed to extract diesel emissions from the apparatus floor, there are differences in the operation of the two systems. Highlights of the major differences are summarized in an attached memo from the fire department.

Recommendation

The Fire Department recommends that the Village Board of Trustees waive competitive bidding and award a contract to Hastings air Energy Control of New Berlin, Wisconsin in an amount not to exceed \$87,230.52. Please submit this recommendation to the Board of Trustees for their approval at the March 15, 2018 meeting.



Memorandum

Date: February 12, 2018

To: Tom Ellis, Operations Superintendent

From: Jerry Howell, Fire Marshal / Bureau Chief *JH*

Subject: Fire Department Vehicle Exhaust Extraction Systems

PURPOSE

To provide information for the selection and purchase of Fire Department Vehicle Exhaust Extraction Systems

BACKGROUND

The Fire Department's vehicle exhaust extraction systems have reached their expected useful life and are in need of being replaced. Our department and Public Works formed a committee to evaluate and compare two vehicle exhaust extraction systems to select one to be installed in both fire stations. These two systems we have evaluated are MagneGrip Vehicle Exhaust Extraction Systems (a dealer/distributor for Clean Air Concepts) and Plymovent Exhaust Extraction Systems (a dealer/distributor for Hastings Air Energy Control).

Plymovent Exhaust Removal Systems are currently installed in both of our fire stations. Each system is over twenty years old. The Fire Department's vehicle exhaust systems in our stations experience great use over time. The systems are connected and disconnected thousands of times per year. We expect the system(s) we purchase to have an expected useful life of over twenty years.

Our objectives when selecting a system is for the system(s) to be durable, easy to use, ergonomically friendly, low maintenance, readily serviced and to ultimately improve the environmental safety for our staff.

DISCUSSION

The Committee gathered information by inviting each vendor to provide an in-house presentation.

Each company also provided hose and connection assemblies for a side-by-side comparison and evaluation and 30 days testing at Fire Station 45.

Additionally, the Committee visited other fire agencies in the area where each of respective systems is installed. The Committee interviewed those that use the systems and gathered information relative to their experiences.

The Committee also conducted an internal poll and collected information from our own firefighters to discover how our members viewed each system for ease of use and general impressions.

The Committee and our members overwhelmingly prefer the Plymovent system for the following reasons:

- Greater ease of use, connecting and disconnecting the nozzle. No aligning of pins to align and connect.
- Plymovent offers ergonomic handles that allow for easier manipulation of hose/nozzle for connection and disconnection.
- Plymovent system has no moving parts at connection site (i.e.) clips and springs to clean or service. Plymovent utilizes magnets and features corrosion resistant connection components. This design creates less maintenance and greater service longevity.
- Plymovent has a superior safety disconnect design which integrates a two-piece breakaway hose design that reduces potential damage to other components of the system and vehicles.
- Internal tests and information gathered from other fire agencies reveal that Plymovent has a smoother release from the vehicle with no clips, springs or pins and is therefore less prone to causing damage to vehicle and system.
- The Plymovent tailpipe connection adapter is significantly shorter than that of MagneGrip, which protrudes from the body of the vehicle and creates a potential trip hazard walking around the vehicle and a potential catch point when operating the vehicle.
- The Plymovent nozzle has a superior grate which would better prevent objects getting drawn up accidentally by the system when the fan activates and hose is disconnected from a vehicle.
- The Plymovent control panel is uncluttered, more user-friendly and preferred.
- The comments offered by other fire agencies were not favorable for MagneGrip. (see attached Article 1)
- Plymovent service technicians respond from Evergreen Park, IL with a fully stocked van. Our previous service experience with Plymovent has been outstanding. Most parts can be sourced locally, from either New Berlin, WI or Lake Bluff, IL, limiting out-of-service times. There is no local MagneGrip service representative. *(see note)

**Note: an out- of -service system results in vehicle exhaust fumes in the fire stations*

CONCLUSION

The proposed cost for the Plymovent systems is \$14,974 more than the MagneGrip system.

Both systems have similar warranties of (5 years).

However, based on service costs experienced by MagneGrip users, we believe the MagneGrip system's lower initial cost could soon be eclipsed by higher future operating costs over the expected useful life of the systems. The combined purchase cost and an anticipated lower maintenance cost makes Plymovent a better value.

The Plymovent system offers greater ease of use and will require less maintenance. Plymovent has demonstrated outstanding service with local service providers. Faster service translates to shorter down time of these systems and better continuous exhaust removal from our fire stations.

RECCOMENDATION

We respectfully request that Plymovent System be selected as the vendor of choice for the reasons listed above.

- c. Carl Goldsmith, Director of Public Works
Rick Sander, Fire Chief
Ray Kickert, Deputy Fire Chief

ARTICLE 1

Testimonials:

Our committee objectively sought both imperical and anecdotal information from other fire agencies relative to the use of these systems. Attached are some of the comments received:

- **William Whitaker, Fire/EMS Chief, Erlanger Fire, Erlanger KY via email**

"We have experienced both systems. We found the Plymovent system easier to operate, with simpler connections and overall improved venting. The MagneGrip salesperson was extremely difficult to work with"

- **Jason Meeks, Facilities Manager, City of Peoria, Peoria IL via telephone**

Mr. Meeks reported having performed a side-by-side comparison of Plymovent and MagneGrip systems at one of their fire stations. Mr. Meeks reported *"the MagneGrip system failed 4 times in a 6 month period, and each time repairs made under warranty took about 2 weeks to complete"*.

- **Sean Malloy, Chief, Bedford Park Fire Department, Bedford Park IL via telephone**

Chief Malloy reported *"The MagneGrip system they previously had failed "several" times. Furthermore, after their warranty expired, they budgeted \$4,000/year for expected repairs"*.

Chief Malloy also stated that *"perhaps because the process of attaching the MagneGrip nozzle is relatively cumbersome, FD staff simply stopped using it"*.

Chief Malloy reports *"a much better and timelier service experience since switching to Plymovent/Hastings"*.

- **Steven Riley, Deputy Chief, Westmont Fire Department, Westmont IL**

During a visit to The Westmont FD, Deputy Chief Riley explained that, *"due to multiple failures with their installed MagneGrip system, they budget \$8,000/year for vehicle repairs and another \$8,000/year for exhaust system repairs in anticipation of future failures/damage"*.

Deputy Chief Riley reported *"FD staff found the process of attaching the nozzle cumbersome and thus was seldom used"*.

- **Michael Despain, Fire Chief, Lincoln Fire & Rescue Department, Lincoln NE via email**

"MagneGrip is somewhat of a hassle in hooking up when returning to stations. It requires more work to lineup the hose to attach properly."



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Tom Ellis
Lombard Fire Department #1
50 East St. Charles Road
Lombard IL 60148

Ship To:
50 East St. Charles Road
Lombard IL 60148

Date: 10/24/2017
Sales Person: Dean Havnen
Quote #: QUO-34321-B9Z7S3
Expires: 12/29/2017

Quote Per Request

Quote for an entire new system with magnetic nozzle connections

OPTIONAL DEDUCTS TO MEET MAGNA-GRIP SPECIFICATIONS:

- 1) Removal of the Safety Disconnect Handles - Deduct \$1,575.00 from price quote
- 2) Replace 600degree upper flex hose with 350deg upper flex hose - Deduct \$1,600.00 from quote

Scope

System includes:

- (4) 80ft straight rail systems complete for door to door coverage. (3) rails to have three (2) vehicle connections and (1) rail to have one vehicle connection
 - (1) 7.5hp exhaust fan complete with silencer & back-draft damper.
 - (1) Control panel and low voltage control sensors for system activation
- All mechanical installation and electrical line voltage wiring included.

System warranty is 5 YEARS PARTS and LABOR on all system components and 10 YEAR on all aluminum extrusions.



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Tom Ellis

Lombard Fire Department #1
50 East St. Charles Road

Lombard IL 60148

Ship To:

Lombard Fire Department #1
50 East St. Charles Road

Lombard IL 60148

Date: 10/24/2017

Sales Person: Dean Havnen

Quote #: QUO-34321-89Z7S3

Expires: 12/29/2017

Part #	Description	Qty
VE-STRA-80	Straight Rail System 80 Includes: 4- 19' of Extruded Aluminum Profile 1- End Socket w/ Sealing Lid and Rubber End stop (Rear) 160' Rubber Lip 7- Top Suspension Mounts 3- Rail Splicing Sleeve (Internal) Note: Must order end cap of choice, rubber bumper or hydraulic shock separately.	4.00
VE-STRA-MG-UH41	STRA UPPER HOSE PACK - MAGNETIC GRABBER. 4" ST HOSEPACK FOR 1 DROP INCLUDES: UPPER HOSE, CRAB, HOSE CLAMPS, MJETAL SADDLE & BALANCER	7.00
VE-XX-MH410	SBTA. STRA. VSRX MID HOSE PACK 4" ST HOSE X 10' INCLUDES HOSE & CLAMPS	1.00
VE-STRA-MG-LH3435HTBA	STR LOWER HOSE PACK - MAGNETIC BLACK ARMOUR. 3" MG BA, 4" HT HOSE, 3.5" TPA - INCLUDES: MG BA ASSEMBLY, LOWER HOSE, SAFETY DISCONNECT HANDLE (SDCH), CONICAL TAILPIPE ADAPTER (TPA), BALANCER LOCKING CABLE (BLC) & CLAMPS	3.00
VE-STRA-MG-LH545HTBA	STR LOWER HOSE PACK - MAGNETIC BLACK ARMOUR. 5" MG BA, 4" HT HOSE, 5" TPA - INCLUDES: MG BA ASSEMBLY, LOWER HOSE, SAFETY DISCONNECT HANDLE (SDCH), CONICAL TAILPIPE ADAPTER (TPA), BALANCER LOCKING CABLE (BLC) & CLAMPS	4.00
FAN-086N	TEV Fan, 10 Hp, 3450 Rpm, 208-230/460V, 3Ph, 60Hz, Tefc Motor.	1.00
ADAP-036	Rectangular To Round (12" Dia Male Fitting) Transition For Tev 5 Series Fans	1.00
DAMP-046	Damper - Backdraft - 12"	1.00
SIL-12	Silencer - 12" - 12x16x36	1.00
VE-CP-040	Control operation system for 10HP-208V-240V 3PH 26 AMP	1.00
SEN-002	Engine Pressure Sensor Assembly w/ear clips	7.00
SHK-010	HYDRAULIC SHOCKS FOR RAIL	4.00
VE-LEG-LP1	Sq Alumn Leg Tube, 1.2" Sq. X 19' Long,	24.00
FX-CWCW-402	FH Grade Hose, yellow/black, 4"x25'	2.00

NOTE: Shipping and Tax are NOT INCLUDED.

I have read the terms page, a single, separate page from the pricing,
and I accept the terms and conditions of this quotation.

Signed: _____
Name: _____ Title: _____

Terms:

_____ Prepay - 3% Discount:
_____ Net 30 Days from Shipment
_____ Visa/Mastercard/Discover

Purchase Order # _____

Thank you for considering Hastings.

Please remit to:
Hastings Air-Energy Control, Inc.
5555 S. Westridge Drive
New Berlin, WI 53151-7900



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Part #	Description	Qty
VE-WRK-R08	Wireless Receiver w/3 relays, 2400 MHZ with enclosure.	1.00
VE-WRK-T09	Transmitter, Remote, 2.4 GHZ w/spade lugs	7.00
INST-M	Mechanical installation to include: complete demo of the existing system to include all vertical system leg supports. Mounting & bracing of the equipment, all exhaust ducting, mounting of the exhaust fan & control panel and all control wiring.	1.00
INST-E	Electrical line voltage wiring of (1) 10hp exhaust fan & (1) control panel.	1.00
INST-R	Labor and materials for flashing in one equipment roof curb for exhaust ducting to go through roof.	1.00
PD	Per Dlem	1.00
FRT	Freight	1.00
LIFT	Lift Usage Charges	1.00
		\$76,136.63

NOTE: Shipping and Tax are NOT INCLUDED.

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TERMS:

Freight for equipment is FOB destination. Hastings will deliver with our truck. Future parts or filter orders will ship prepaid and add.

Normal delivery is 3 to 4 weeks after receipt of confirming purchase order or prepayment check.

Warranty is per manufacturer specifications. Contact representative for more details.

Payment terms are 3% discount for prepayment with order, or net 30 from date of start up. Payment terms discount (3%) does not apply if the payment is made with a credit card. A 1½ % per month finance charge will be assessed on all invoice balances outstanding past 30 days.

Price does not include sales tax. Please provide municipality's tax exemption certificate.

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Tom Ellis

Lombard Fire Department #2
2020 South Highland Avenue
Lombard IL 60148

Ship To:

2020 South Highland Avenue
Lombard IL 60148

Date: 10/24/2017

Sales Person: Dean Havnen

Quote #: QUO-34319-W3Q3N5

Expires: 12/29/2017

Quote Per Request

Quote to bring the current system up to 2017 standards with magnetic nozzle connection

Installation of the magnetic conversion kits performed by Hastings service technician.

NOTE: Mounting of the tailpipe conical adapter on the apparatus by owner.

Scope

Includes:

- New Control panel with wireless sensors for more consistent system activation
- New Safety disconnect handle
- New Upper hose section with steel saddles
- New Lower hose sections
- New magnetic nozzles



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 Lombard Fire Department #2
 2020 South Highland Avenue

 Lombard IL 60148

Ship To:
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 2020 South Highland Avenue

 Lombard IL 60148

Date: 10/24/2017
 Sales Person: Dean Havnen
 Quote #: QUO-34319-W3Q3N5
 Expires: 12/29/2017

Part #	Description	Qty
VE-STRA-MG-LH545BA	STR LOWER HOSE PACK - MAGNETIC BLACK ARMOUR. 5" MG BA, 4" ST HOSE, 5" TPA - INCLUDES: MG BA ASSEMBLY. LOWER HOSE, SAFETY DISCONNECT HANDLE (SDCH), CONICAL TAILPIPE ADAPTER (TPA), BALANCER LOCKING CABLE (BLC) & CLAMPS	2.00
VE-STRA-MG-LH547BA	STR LOWER HOSE PACK - MAGNETIC BLACK ARMOUR. 5" MG BA, 4" ST HOSE, 7" TPA - INCLUDES: MG BA ASSEMBLY. LOWER HOSE, SAFETY DISCONNECT HANDLE (SDCH), CONICAL TAILPIPE ADAPTER (TPA), BALANCER LOCKING CABLE (BLC) & CLAMPS	1.00
VE-CP-040	Control operation system for 10HP-208V-240V 3PH 26 AMP	1.00
SEN-002	Engine Pressure Sensor Assembly w/ear clips	3.00
VE-WRK-R08	Wireless Receiver w/3 relays, 2400 MHZ with enclosure.	1.00
VE-WRK-T09	Transmitter, Remote, 2.4 GHZ w/spade lugs	3.00
CLAM-034	4-1/4" Diameter Hose Clamp SS Used For PV,EH & Silicone Hose	6.00
FX-CWCW-402	FH Grade Hose, yellow/black, 4"x25'	3.00
SADL-018	4" 90 deg Saddle	3.00
CAB-029		3.00
INST-M	Mechanical installation to install new system upgrade components.	1.00
FRT	Freight	1.00
		\$11,093.89

NOTE: Shipping and Tax are NOT INCLUDED.

I have read the terms page, a single, separate page from the pricing, and I accept the terms and conditions of this quotation.

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Payment terms are 3% discount for prepayment with order, or net 30 from date of start up. Payment terms discount (3%) does not apply if the payment is made with a credit card. A 1½ % per month finance charge will be assessed on all invoice balances outstanding past 30 days.

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