

City Council Members

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City Council Members

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TOM PRATHER, MAYOR

**INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT**

SCOPE

The City of Georgetown is seeking bids for extrication tools for the Fire Department.

GENERAL COMPLIANCE

NOTE TO BIDDERS: Bid submission does not constitute an agreement or a contract with the City of Georgetown.

NO RESPONSE: Bidders unable or unwilling to submit a bid should immediately return the "Bidder Response Form" only with "No Response" marked clearly on the outside of the envelope. Any vendor not submitting a bid is encouraged to indicate the reason(s) for not participating.

ALTERNATE BIDS: It is not the intention of the specifications contained herewith to eliminate any bidder; however, quoted items must equal or exceed stated specifications.

INDICATION OF COMPLIANCE: The bidder shall indicate compliance with either a "Yes" or a "No" for each item specification. Blank spaces shall be considered non-compliance. Any deviation from the specification or where submitted literature does not fully support meeting the specification(s) must be clearly cited on the attached page labeled "EXCEPTIONS TO SPECIFICATIONS AND/OR COMMENTS." No deviation below "minimum" specifications will be accepted.

Additional Information: While not necessary, the proposer may include any product brochures, software documentation, sample reports, or other documentation that may assist the City of Georgetown in better understanding and evaluating the proposer's response. Additional documentation shall not serve as a substitute for other documentation which is required by the Invitation to Bid (ITB) to be submitted with the proposal.



INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

At the time of submission, each bidder will be presumed to have inspected the site(s), if necessary, and to have read the scope and to be thoroughly familiar with the project plans and contract documents (including any and all addenda). The failure or omission of any bidder to examine any form, instrument, or document shall in no way relieve any bidder from any obligation with respect to this bid.

All bids and any additional submitted information becomes the property of the City of Georgetown and will not be returned to the bidder.

BID SUBMISSION: All pages of the original signed hardcopy shall be initialed in ink on the lower right-hand corner. Typed quotation sheets are preferred; however, if hand written, the sheets must be legible and in ink. Any pricing information that is illegible may result in the rejection of the bid.

The bidder must submit one original signed hardcopy, and three (3) duplicates. These must be sealed in a container with the project name, the bidder's name and the opening date clearly marked on the outside of the envelope. The cover of the original bid should be marked "Original" and the cover of the duplicates should be marked "Copy." The bid shall be addressed and delivered to City Clerk, 100 North Court Street, Georgetown, KY 40324 prior to bid opening.

ANY BIDS NOT RECEIVED PRIOR TO THE SCHEDULED OPENING DATE AND TIME WILL BE REJECTED AND RETURNED UNOPENED.

FAILURE TO SUBMIT REQUIRED DOCUMENTATION: Failure to submit ALL forms and information required in this ITB may be grounds for disqualification.

LIABILITY: City of Georgetown is not liable for any expenses incurred in connection with the preparation of bids.

METHOD OF PROCUREMENT: Shall be in conformance with Purchasing Policies as adopted by the City Council for the City of Georgetown, Kentucky. A copy of the City's Purchasing Policy is available on the City's website at www.georgetownky.gov (Finance Department).

KENTUCKY OPEN RECORDS LAW: At the time a bid is submitted to the City, bidder shall identify any information that is submitted as part of the bid that is proprietary or confidential in nature and not subject to release for public inspection. The City of Georgetown will protect any proprietary or confidential information to the extent allowable under the Kentucky Open Records Act.

NEW GOODS, FRESH STOCK: Unless otherwise specifically stated, all Contractors shall provide new commodities, fresh stock, latest model, design or package.

COMPLIANCE WITH LAWS AND REGULATIONS: Each bidder shall comply with all Federal, State & Local regulations concerning this type of service.

METHOD OF AWARD: The award will be based upon the lowest responsive and responsible bidder complying with specifications on each item. The City of

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

Georgetown reserves the right to consider as a part of the bid evaluation the stated warranty, stated delivery schedule, service, features, upgrades and payment terms.

The City of Georgetown reserves the right to reject any and all bids, to award any bid in whole or in part, and/or to waive any irregularities or minor immaterial defects in any and all bids. The right is also reserved to award bids based on the best interest and/or most advantageous to the City. The City of Georgetown may also consider any alternative bid that meets its basic needs.

PRICING: All prices shall be quoted exclusive of any taxes. The City of Georgetown is exempt from Federal excise, transportation and/or Kentucky sales tax. Any items supplied directly to the City from a supplier/manufacturer are exempt from sales tax. Any items purchased by a contractor that will be used in the fulfillment of a contract are not exempt from sales tax.

In case of a discrepancy in the extension of a unit price, the unit price shall govern the total price.

Bidders must provide manufacturer's product literature if available and appropriate with the bid submission.

Bids shall remain firm and open to acceptance by the City of Georgetown for a minimum period of sixty (60) days after the proposal opening. If the time period has expired the City of Georgetown could request a letter from bidders asking to extend the time period.

STANDARD AGREEMENT: The selected Proposer will be required to sign a Standard Agreement for Goods and Services with the City within 14 days of the Notice of Award. The agreement will contain terms and conditions that include duration of the agreement, sworn statement regarding campaign finance laws, a provision indicating that the proposer and its employees or agents are not employees of the City, a termination clause, an additional termination clause of those agreements covering multiple fiscal years in the event that sufficient funds are not appropriated as part of the budget process, provision that Kentucky law applies to interpretation of the agreement and any disputes and that venue shall be Scott County, KY, and a provision that the services cannot be assigned without the prior approval of the City.

A Notice to Proceed will be issued once the agreement has been signed by both parties and all required paperwork herein described is received by the City.

DELIVERY SCHEDULE: Delivery date shall be specified on each item quoted. The vendor will be expected to fulfill the delivery as specified.

PAYMENT: The bid must clearly state the payment terms, including prompt payment discounts and payment due dates. Discounts should be figured into the unit price of the quoted item. The City of Georgetown reserves the right to select the most beneficial terms.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

BONDING: A certified check or Bid Bond in the amount of five percent (5%) of the bid price must be included on the bid response. If a certified check is supplied it must be made payable to the City of Georgetown, and will be returned upon receipt of the Performance Bond and entering into a contract in accordance with specifications. In the event of failure to enter into a contract within the time period set forth in this bid, it is agreed the certified check may be cashed and the funds retained by the City of Georgetown as liquidated damages. Checks of unsuccessful bidders will be returned when the bid has been awarded.

The successful vendor shall provide a Performance Bond, with sufficient surety satisfactory to the City, in an amount equal to the contract price.

DEFAULT; TERMINATION OF CONTRACT: In the event that any of the provisions of this Contract are violated by the bidder, such breach shall constitute a default. In the event of a default, the Owner may serve written notice upon the bidder of its intention to terminate the Contract, such notice to contain the reasons for such intention to terminate the Contract, and unless within ten (10) days after the serving of such notice upon the bidder, such violation or delay shall cease and satisfactory arrangement of correction be made, the Contract shall, upon the expiration of said ten (10) days, cease and terminate.

The City shall be authorized to terminate for its own convenience all contracts for the procurement of supplies and services when the Department Head determines in writing that such termination will be in the best interest of the City.

SAFETY: The successful bidder must perform work in a safe and timely fashion, maintain a clean and safe work environment, follow safety requirements established by OSHA and the City of Georgetown, and may be required to provide safety equipment. If, in the opinion of the City, safety precautions are not in existence, work will cease immediately until corrective action is taken. Work will begin again only when vendor demonstrates to the satisfaction of the City that conditions are without risk.

INSURANCE REQUIREMENTS: The successful bidder covenants and agrees to maintain and keep in force during the term of the contract insurance policies in the following minimum amounts:

<u>Type of Insurance</u>	<u>Limits</u>
Worker's Compensation	Statutory
Commercial General Liability	\$1,000,000/\$1,000,000 CSL
Commercial Automobile Liability	\$1,000,000

On all liability policies of insurance bidder shall have the City named as an additional insured and shall further require that their liability carrier(s) notify the City at least thirty (30) days prior to the effective date of any change(s) in or cancellations of said insurance policies. A current copy of bidder's insurance certificate providing proof of insurance as stated above must be on file in the Purchasing Department prior to bid

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

award. Submission of an Evidence of Insurability from your provider or an Insurance Certificate copy may be included with the bid package.

HOLD HARMLESS AGREEMENT: The bidder covenants to save, defend, keep harmless, and indemnify the City of Georgetown and all of its officers, departments, agencies, agents, and employees from and against all claims, loss, damage, injury, fine, penalties, and costs including court costs and attorney's fees, charges, liability, and exposure however caused resulting from, arising out of, or in any way connected with the bidder's negligent performance or non-performance of the terms of the contract.

CONTRACTOR STATUS: Bidder understands and agrees that its employees, agents, and/or sub-bidders are not employees of City of Georgetown for any purpose whatsoever.

BIDDER'S QUALIFICATIONS: Vendor must demonstrate to the satisfaction of the City of Georgetown that he/she has adequate equipment, personnel, experience and understanding of the specifications to perform service under the contract.

No contract will be awarded to any bidder who, in the opinion of the City, is not qualified to perform satisfactorily due to a previously unfavorable performance, reputation or lack of experience, capital, organization, equipment, and/or personnel to conduct and complete the services in accordance with the terms and conditions of the contract.

Successful bidder must comply with the City of Georgetown ordinances relating to Occupational License Fees, Business Licenses, payroll and net profits and any other ordinances which may apply to any particular bid package.

BIDDER PREFERENCE: Pursuant to KRS 45A.494, which is incorporated herein by reference: "a resident bidder of the Commonwealth shall be given a preference against a nonresident bidder registered in any state that gives or requires a preference to bidders from that state. The preference shall be equal to the preference given or required by the state of the nonresident bidder. "

EQUAL OPPORTUNITY STATUTES: The City of Georgetown is an equal opportunity employer and does not discriminate on the basis of race, color, religion, sex, national origin, age, marital status, physical or mental disability, or any other characteristic protected by law. The City is also committed to employing only United States citizens and aliens who are authorized to work in the United States. The City complies with the Immigration Reform and Control Act of 1986. Therefore, the successful bidder must demonstrate to the satisfaction of the City that he also conforms to all Federal, State, and Local Equal Opportunity statutes. Further, the contractor will reimburse the City of Georgetown for any damages incurred due to any violation of the above mentioned statutes by the contractor while under contract to the City.

"OR EQUAL" CLAUSE: Whenever a material, article or piece of equipment is identified on the plans or in the specifications by reference to manufacturer's or

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

vendors' names, trade names, catalog numbers, etc., it is intended merely to establish a standard; and, any materials, article or equipment of other manufacturers and vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article or equipment so proposed, is, in the opinion of the Owner of equal substance and function.

AMBIGUITY, CONFLICT OR OTHER ERRORS IN ITB: If a bidder discovers any ambiguity, conflict, discrepancy, omission or other such error in the ITB, he/she shall immediately notify the City of Georgetown of such error in writing and request modification or clarification of the document if allowable by the City of Georgetown.

ADDENDA AND INTERPRETATIONS: **No interpretation of the meaning of the plans, specifications or other pre-bid documents will be made to any bidder orally.**

Every request for such interpretation should be in writing addressed to the City Clerk, 100 North Court Street, Georgetown, KY 40324, or by Fax to 502-863-9962, or by email to tracie.hoffman@georgetownky.gov by July 28, 2017 at 4:00 PM. **Any and all such interpretations and any supplemental instructions will be in the form of written addendum to the specifications which, if issued, will be emailed to prospective bidders and posted to the City's website: www.georgetownky.gov** by August 1, 2017 at 4:00 PM. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his/her bid as submitted. All addendums so issued shall become part of the contract documents.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

GENERAL REQUIREMENTS

The City of Georgetown is seeking a vendor to provide extrication tools, specifically pumps, a spreader, a cutter, a combination tool, a ram, hoses and other optional equipment.

It is the intent of these specifications to define and describe the minimum requirements for Rescue Tools.

The Purchaser wishes to secure rescue tools built to withstand the severe and continuous use encountered in emergency rescue service, by experienced and reputable manufacturers of hydraulic rescue tools, hereinafter referred to as the "manufacturer". These specifications cover the general requirements as to the design and test to which the rescue tools must conform. Minor details, where not otherwise specified, are left to the discretion of the manufacturer, who shall be solely responsible for the design of all features.

All tools must be NFPA compliant.

PRE-BID MEETING

No pre-bid meeting will be held.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

SPECIFICATIONS

EQUIPMENT - Compact Rescue Pump 1

This pump must be compliant with NFPA 1936 Standard on Powered Rescue Tools, 2015 edition. It must also comply with EN 13204. Classification to Third Party Standards shall be performed by Underwriters Laboratories, Inc. or by a test laboratory recognized and accepted by this AHJ. The pump must allow operation in a humid and dusty environment. The pump must be capable of powering two tools at full power, independently and simultaneously. The pump must have a connecting block with flat face female couplers of a coaxial design, with the pressure line inside of the return line, allowing for simultaneous connection of both lines with one connection motion. The couplers must be of a flat-face, non-drip style, with built-in automatic locking feature, capable of being operated with one hand and must be supplied with aluminum protective dust caps. The pump shall not require a manual pressure release valve for the purpose of connecting or disconnecting hoses and the user must be able to connect and disconnect hoses and rescue tools while the pump is flowing oil. The pump shall be provided with a Pressure Relief Device to allow the relief of pressure in hose lines resulting from temperature changes.

Engine

The pump shall be driven by a Honda GX100 4-stroke (or equivalent) gasoline engine. The engine shall have a gasoline tank of at least 1.8 qts. (1700cc), that allows the pump to run for three continuous hours. For ease of operation the fuel tank shall incorporate a highly visible fuel level indicator.

Pump

To provide maximum efficiency during rescue operations, the hydraulic pump shall be a 3-stage axial design with two automatic sequence valves, switching to 2nd stage at approximately 2,175 psi (150 bar), to 3rd stage at approximately 4,350 psi (300 bar) to allow full pressure to be built up to a maximum working pressure of 10,443 psi (720 bar). The pump shall be protected with an internal safety valve. In addition, the pump must have an external safety valve, factory set at 10,443 psi (720 bar).

The pump shall have an output of not less than:

- 171 cu in/min (2800 cc/min) in the 1st stage
- 76 cu in/min (1250 cc/min) in the 2nd stage
- 32 cu in/min (525 cc/min) in the 3rd stage

Carrying Frame

The pump shall have a protective carrying frame designed for mobility with a hand grip centered for balance. In order to provide improved grip in all weather

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

conditions, the frame must have a non-slip surface. The frame shall be provided with anti-vibration dampers to keep the pump at its position while running.

Tank and Fluid

The effective oil contents of 4.22 qt. (4 l) must allow for the simultaneous deployment of at least four full size rescue tools. The pump shall be designed for the use of non-toxic mineral oil base hydraulic fluid.

Weight and Dimensions

The complete pump ready for use, including gas, oil and carrying frame shall weigh no more than: 50 lbs. (23 kg). The complete pump unit shall be extremely compact with dimensions within:

(LxWxH): 17.91" 12.4" x 18.11" (455 mm x 315 mm x 460 mm).

Sound level

The sound level of the pump must not exceed 81 dB(A) unloaded, 85 db(A) loaded when measured at a distance of 3.28 ft. (1m).

EQUIPMENT - Compact Rescue Pump 2

This pump must be compliant with NFPA 1936 Standard on Powered Rescue Tools, 2015 edition. It must also comply with EN 13204. Classification to Third Party Standards shall be performed by Underwriters Laboratories, Inc. or by a test laboratory recognized and accepted by this AHJ. The pump must allow operation in a humid and dusty environment. The pump must have a connecting block incorporating a Holmatro CORE Technology™ flat face female coupler of a coaxial design, with the pressure line inside of the return line, allowing for simultaneous connection of both lines with one connection motion. The coupler must be of a non-drip style, with built-in automatic locking feature, capable of being operated with one hand and must be supplied with aluminum protective dust caps. The pump shall not require a manual pressure release valve for the purpose of connecting or disconnecting hoses and the user must be able to connect and disconnect hoses and rescue tools while the pump is flowing oil. The pump shall be provided with a Pressure Relief Device to allow the relief of pressure in hose lines resulting from temperature changes.

Engine

The unit shall be driven by a Honda GXH50 4-stroke (or equivalent) gasoline engine. The engine shall have a gasoline tank with a fuel capacity of 0.81 qt. (770 cc) that allows the pump to run for three continuous hours. For ease of operation the fuel tank shall incorporate a highly visible fuel level indicator.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

Pump

To provide maximum efficiency during rescue operations, the hydraulic pump shall be a 3-stage axial design with two automatic sequence valves, switching to 2nd stage at approximately 2,175 psi (150 bar), to 3rd stage at approximately 4,350 psi (300 bar) to allow full pressure to be built up to a maximum working pressure of 10,443 psi (720 bar). The pump shall be protected with an internal safety valve. In addition, the pump must have an external safety valve, factory set at 10,443 psi (720 bar).

The pump shall have an output of not less than:

- 167.81 cu in/min (2750 cc/min) in the 1st stage
- 79.33 cu in/min (1300 cc/min) in the 2nd stage
- 31.73 cu in/min (520 cc/min) in the 3rd stage

Carrying frame

The pump shall have a protective carrying frame designed for mobility with a hand grip centered for balance. In order to provide improved grip in all weather conditions, the frame must have a non-slip surface. The frame shall be provided with anti-vibration dampers to keep the pump at its position while running.

Tank and Fluid

The effective oil contents 2.64 qt. (2.5 l) must allow for the simultaneous deployment of at least three full size rescue tools. The pump shall be designed for the use of non-toxic mineral oil base hydraulic fluid.

Weight and Dimensions

The complete pump ready for use, including engine oil, mineral oil, gas and carrying frame shall weigh no more than 31.8 lbs. (14.5 kg). The complete pump unit shall be extremely compact with dimensions within (LxWxH): 14.17" x 11.42" x 16.65" (360 mm x 290 mm x 423 mm).

Sound level

The sound level of the pump under load must not exceed 82 dB (A) measured at a distance of 3.28 ft. (1m).

Options

Couplers. The pump shall be optionally available with twin line auto locking, drip-free couplers. These couplers shall also be supplied with aluminum protective dust caps.

Task Lights. To improve visibility of the pump connection(s) and operation controls, clip on LED work lights shall be available to connect to the pump frame.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

Mounting Bracket

The unit must have as an option, a mounting bracket, offered by the same manufacturer, to protect and quickly secure the unit inside the apparatus compartment. The bracket shall consist of an adapter that is bolted to the underside of the power unit, and a locking mount that is bolted to the compartment floor. The locking mechanism shall have a position that allows the operator to easily secure the pump in its locked, storage position with a simple flip of a lever. To further facilitate ease of access to the unit, an optional angle bracket shall be available, which tilts 8 degrees downward toward the operator. When unlocked, it easily slides forward, with no impedance from the compartment's four sides.

Installing the optional Quick Fix and Release Mounting System will modify the pump's ready for use weight and dimensions as follows:

	STANDARD	Pump Wt. (lbs.)	L"	W"	H"
158.152.175	SR 10 PC 1	31.9	14.17	11.42	16.65
150.062.189	w/QF Mounting Plate (pump side)	33.9	14.17	11.42	16.65
150.062.188	w/QF Mounting & Release Bracket (truck side)	33.9	14.17	11.42	17.56
150.062.193	w/QF Angle Bracket (truck side)	33.9	15.39	11.42	19.37

EQUIPMENT - Spreader

The tool must be UL listed. This tool must have successfully completed the rescue tool test program certified by Underwriters Laboratories, Inc. or by a test laboratory recognized and accepted by this AHJ. The tool must be capable of withstanding a static over-load pressure of twice the working pressure. This 2:1 over-load ratio is a UL requirement to provide maximum safety to the operator. This tool must also be compliant with NFPA 1936 Standard on Powered Rescue Tools, 2005 edition. The tool must be capable of withstanding a static over-load pressure of twice the working pressure. This 2:1 over-load ratio is a requirement to provide maximum safety to the operator. The tool must be a "one-person" operated lightweight tool, which means that one person will be able to position, guide and operate the tool without the assistance of other people. For this reason, the tool will be equipped with a carrying handle, which allows the operator to keep the tool evenly balanced in all positions even with one hand. To eliminate connection errors and reduce deployment time the tool shall be supplied with only one compact hydraulic coupler. This single coupler shall have a coaxial design with the pressure line inside of the return line to allow for rapid simultaneous connection of both lines with one connection motion. The coupler design shall incorporate an automatic return valve to permit connection and disconnection of the tool to the hose while under flow. The coupler must be a flat-face, non-drip coupling with built-in automatic locking feature and be one hand operated. Coupler must be supplied with a protective aluminum dust cap. The hose connection will be to the rear of the dead man's handle, leading away in line with the center axis of the tool, avoiding hindrance to the operator.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

Dead Man's Handle

The tool must be activated by means of a rotary Dead Man's handle, operated by a twist of the wrist. For ease of operation, the handle shall have a maximum rotation of 20 degrees in either direction. When the Dead Man's handle is released, it must return to the neutral position automatically. The Dead Man's handle will provide one-handed control of opening and closing functions. The Dead Man's handle shall provide 360-degree access to the operator allowing operation of the tool in any position. The Dead Man's handle must be located in such a way that it can be operated, guided and supported easily by right and left-handed operators without having to change the position of the hands, even when wearing gloves. The Dead Man's control must be capable of withstanding 6000 endurance cycles, one cycle consisting of opening and closing the tool.

Carrying Handle

The distance between the dead man's handle and the U-shaped carrying handle will be no less than 10 ½" (267 mm) to provide a natural position for both hands during operation and to allow for complete control of the tool. The tool shall remain in a balanced horizontal position when held only by the carrying handle. In order to provide improved grip in all weather conditions, the carrying handle must have a non-slip surface. To assist the operator and increase safety while working in dark or poorly lit circumstances the carrying handle shall have integrated LED lights. The lights shall be focused on the working area of the tool and shall be completely weatherproof. Lights should be powered by a field replaceable single AA battery and shall provide a minimum of six continuous hours of illumination.

Safety and Protection

For maximum safety of the operator all cutters, spreaders and rams shall contain a safety relief valve to protect the tool against over pressurization caused by sudden load shift on the tool. The tool will have automatic, non-return check valves built in so that the tool will hold the load when the dead man's handle is released, whether the tool is spreading or pulling. If pressure should drop because of interruption of the power source for any reason, the tool must hold the load. All moving parts such as yoke and levers must be protected by a cover for the safety of the user.

Arms

The arms and yoke of the spreader must be manufactured out of extremely high tensile aluminum alloy, anodized to offer protection against corrosion. The arms of the spreader will be equipped with investment cast hardened tool steel tips, specially designed for quick field replacement without the use of any tools. Spring-loaded tip locking pins will be incorporated into the arms so that no loose parts can be lost. The tips will have serrations on both the inside and the outside for a superior grip in spreading or crushing operations.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

Pump

Hydraulic power must be delivered from a gasoline or electrically driven pump. Alternatively, a manually operated pump or an air driven pump may be used. To provide maximum ease of use (lightest weight) to the operator the pump must be a completely separate unit from the rescue tool.

Forces

The arms of the spreader will have a maximum opening width of 27 3/8" (695 mm), must exert no less than 8,476 lbf (38 kN) at the tips, and at least 33,625 lbf (150 kN) at the base of the tips. Maximum pulling force at full opening will be at least 12,170 lbf (54 kN).

Method of Measuring Forces

The spreading force must be measured at the effective tip area on the moving arms, perpendicular to the centerline of the tool when in an unfixed state. This measurement of force measures the actual force created by the tool when used by the operator.

Weight & Dimensions

The weight of the ready-for-use tool may not exceed 41½ lbs. (18.8 kg) including hydraulic oil. Length not to exceed 30 3/8" (771 mm). Width not to exceed 11 11/16" (297 mm). Height not to exceed 8 1/8" (206 mm)

Corrosion & Wear Protection

Internal and external aluminum parts of the tool that are susceptible to wear or corrosion must be protected by anodization to provide maximum durability. The tool must be capable of withstanding a 10-day salt spray test, and still be able to function normally.

EQUIPMENT – Cutter Option 1

This tool must have successfully completed the rescue tool test program certified by Underwriters Laboratories, Inc. or by a test laboratory recognized and accepted by this AHJ. The tool must be capable of withstanding a static over-load pressure of twice the working pressure. This 2:1 over-load ratio is a requirement to provide maximum safety to the operator. The tool must be capable of operating as a self-contained unit without power cables for maximum portability. The tool must be a "one-person" operated lightweight tool, which means that one person will be able to position, guide and operate the tool without the assistance of others. The tool must operate efficiently in all weather conditions and environments from -4 F (-20 C) to 131 F (55 C).

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

Forces

The maximum cutting force exerted will be no less than 312,260 lbf. (1389 kN) in the recess of the blades, near the hinge bolt. The NFPA performance level rating for this tool shall be A8 B8 C7 D9 E9.

Weight and Dimensions

The maximum opening of the blades will be no less than 7.2" (182 mm) measured at the tips. The weight of the tool must not exceed 35.7 lbs. (16.2 kg). The dimensions (LxWxH) must not exceed 30.8" x 10.5" x 11.1" (783 x 266 x 281 mm).

Dead Man's Handle

The tool must be activated by means of a rotary Dead Man's handle grip, operated by a twist of the wrist. For ease of operation, the handle shall have a maximum rotation of 20 degrees in either direction. When the Dead Man's handle grip is released, it must return to the neutral position automatically. The Dead Man's handle design will provide one-handed ergonomic control of opening and closing functions that does not rely on thumb (single digit) operation. The Dead Man's handle shall provide 360° access to the operator allowing operation of the tool in any position. The Dead Man's handle must be located in such a way that it can be operated, guided and supported easily by right and left-handed operators without having to change the position of the hands, even when wearing gloves. The Dead Man's control must be capable of withstanding 6000 endurance cycles, one cycle consisting of opening and closing the tool.

Lighted Carrying Handle

Designed for ease of control, the tool's carrying handle shall allow natural hand position for right or left-handed operators. The lightweight, steel carrying handle shall have six integrated LED lights. The tool shall remain in a balanced horizontal position when held only by the carrying handle. In order to provide improved grip in all weather conditions, the carrying handle must have a non-slip surface.

Task Lighting

To assist in any poorly lit or nighttime rescue scenario, 6-LED lights shall be included. To provide maximum lighting, with minimal interference, the LEDs should be oriented in a position forward of the operator's hands in the carrying handle. The lights shall be focused on the working area of the tool and must be completely weatherproof. To dedicate all of the tool's 28v lithium ion battery power to the rescue operation, the LED task lights must be powered by a single field replaceable AA battery and shall provide a minimum of six continuous hours of illumination. To preserve AA battery life an on/off switch for the lights must also be included in the carrying handle.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

Blades

The blades of the cutter will be fabricated from high grade tool steel, hardened to improve durability. The blades shall be manufactured from forged bar stock by CNC machining technology. The design of the blade shall be derived to meet the requirement of today's rescuer facing New Car Technology. The blades will be constructed so as to be re-grindable.

Hinge Bolt System

To allow better access to tight spaces and improve cutting and spreading precision, the tool shall utilize an integrated locking hinge bolt system that must not extend beyond the blade holder profile. It shall be physically locked by means of a precision interlocking ring that maintains factory set torque values. For added protection from damage, corrosion resistant steel covers will shield the hinge bolt system and blade holders on each side. The profile height at the widest point must be less than 3.38". Bolt heads or nuts that protrude beyond the blade holder profile, 1) impede tool operation; 2) increase surface area exposed to damage; 3) risk compromised torque values and blade performance due to exposure during rescue operations. For these reasons, this type of hinge bolt system is unacceptable. For ease of maintenance and lower maintenance cost, the hinge bolt system must not use any blade shims, and the factory recommended torque may not exceed 38 ft-lb (50Nm).

Pump

Hydraulic power must be delivered from a gasoline, electrical or hydraulically driven pump. Alternatively, a manually operated pump or an air driven pump may be used. The pump must be a completely separate unit from the rescue tool.

Safety and Protection

For maximum safety of the operator all cutters, spreaders and rams shall contain a safety relief valve to protect the tool against sudden load shift. All moving parts such as yoke and levers must be protected by a cover for the safety of the operator.

Corrosion and Wear Protection

Internal and external aluminum parts of the tool that are susceptible to wear or corrosion must be protected by anodization to provide maximum durability. The tool must be capable of withstanding a 10-day salt spray test, and still be able to function normally.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

EQUIPMENT - Cutter Option 2

General

This tool must have successfully completed the rescue tool test program certified by Underwriters Laboratories, Inc. or by a test laboratory recognized and accepted by this AHJ. The tool must be capable of withstanding a static over-load pressure of twice the working pressure. This 2:1 over-load ratio is a UL requirement to provide maximum safety to the operator. This tool must *also* be compliant with NFPA 1936 Standard on Powered Rescue Tools, 2015 edition. The tool must be a "one-person" operated lightweight tool, which means that one person will be able to position, guide and operate the tool without the assistance of other people. For this reason, the tool will be equipped with a carrying handle, which allows the operator to keep the tool evenly balanced in all positions even with one hand. To eliminate connection errors and reduce deployment time the tool shall be supplied with one hydraulic coupler. This single coupler shall have a coaxial design with the pressure line inside of the return line to allow for rapid simultaneous connection of both lines with one connection motion. To avoid hindrance to the operator the coupler must be extremely compact and lightweight. The coupler design shall incorporate an automatic return valve to permit connection and disconnection of the tool to the hose *while under flow*. The coupler must be a flat-face, non-drip coupling with a built-in automatic locking feature and must be one hand operated. The coupler shall permit an unhindered 360° rotation at the connection point to avoid twisting or stressing the hose. The coupler must be supplied with a protective aluminum dust cap. The hose connection point will be to the rear of the dead man's handle, leading away in line with the center axis of the tool, avoiding interference with the operation of the tool.

Forces

The maximum force will be no less than 312,260 lbf. (1389 kN) in the recess of the blades, near the hinge bolt. The NFPA performance level rating for this tool shall be A8 B8 C7 D9 E9.

Ergonomic Advantage

Cutter jaw mounted at an angle of 30 degrees in relation to the body of the tool to reduce the effect of tool movement towards the passenger cell and thus the patient. This blade design allows for a more ergonomic positioning when cutting above or below waist height, less strain on the rescuer.

Weight and Dimensions

The maximum opening of the blades will be no less than 7.2" (182 mm) measured at the tips. The weight of the tool must not exceed 35.7 lbs. (16.2 kg). The dimensions (LxWxH) must not exceed 30.8" x 10.5" x 11.1" (783 x 266 x 281 mm).

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

Dead Man's Handle

The tool must be activated by means of a rotary Dead Man's handle grip, operated by a twist of the wrist. For ease of operation, the handle shall have a maximum rotation of 20° in either direction. When the Dead Man's handle grip is released, it must return to the neutral position automatically. The Dead Man's handle design will provide one-handed ergonomic control of opening and closing functions that does not rely on thumb (single digit) operation. The Dead Man's handle shall provide 360° access to the operator allowing operation of the tool in any position. The Dead Man's handle must be located in such a way that it can be operated, guided and supported easily by right and left-handed operators without having to change the position of the hands, even when wearing gloves. The Dead Man's control must be capable of withstanding 6000 endurance cycles, one cycle consisting of opening and closing the tool.

Lighted Carrying Handle

Designed for ease of control, the tool's carrying handle shall allow natural hand position for right or left-handed operators. The lightweight, steel carrying handle shall have six integrated LED lights. The tool shall remain in a balanced horizontal position when held only by the carrying handle. In order to provide improved grip in all weather conditions, the carrying handle must have a non-slip surface.

Task Lighting

To assist in any poorly lit or nighttime rescue scenario, 6-LED lights shall be included. To provide maximum lighting, with minimal interference, the LEDs should be oriented in a position forward of the operator's hands in the carrying handle. The lights shall be focused on the working area of the tool and must be completely weatherproof. The LED task lights must be powered by a single field replaceable AA battery and shall provide a minimum of six continuous hours of illumination. To preserve AA battery life an on/off switch for the lights must also be included in the carrying handle.

Blades

The blades of the cutter will be fabricated from high grade tool steel, hardened to improve durability. The blades shall be manufactured from forged bar stock by CNC machining technology. The design of the blade shall be derived to meet the requirement of today's rescuer facing *New Car Technology*. The blades will be constructed so as to be re-grindable.

Hinge Bolt System

To allow better access to tight spaces and improve cutting and spreading precision, the-tool shall utilize an integrated locking hinge bolt system that must not extend beyond the blade holder profile. It shall be physically locked by means of a precision interlocking ring that maintains factory set torque values. For added

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

protection from damage, corrosion resistant steel covers will shield the hinge bolt system and blade holders on each side. The profile height at the widest point must be less than 3.38". Bolt heads or nuts that protrude beyond the blade holder profile, 1) impede tool operation; 2) increase surface area exposed to damage; 3) risk compromised torque values and blade performance due to exposure during rescue operations. For these reasons, this type of hinge bolt system is unacceptable. For ease of maintenance and lower maintenance cost, the hinge bolt system must not use any blade shims, and the factory recommended torque may not exceed 38 ft-lb (50Nm).

Pump

Hydraulic power must be delivered from a gasoline, electrical or hydraulically driven pump. Alternatively, a manually operated pump or an air driven pump may be used. The pump must be a completely separate unit from the rescue tool.

Safety and Protection

For maximum safety of the operator all cutters, spreaders and rams shall contain a safety relief valve to protect the tool against sudden load shift. All moving parts such as yoke and levers must be protected by a cover for the safety of the operator.

Corrosion and Wear Protection

Internal and external aluminum parts of the tool that are susceptible to wear or corrosion must be protected by anodization to provide maximum durability. The tool must be capable of withstanding a 10-day salt spray test, and still be able to function normally.

EQUIPMENT - Combination Tool

This tool must have successfully completed the rescue tool test program certified by Underwriters Laboratories, Inc. or by a test laboratory recognized and accepted by this AHJ. This tool must be capable of withstanding a static over-load pressure of twice the working pressure. This 2:1 over-load ratio is a UL requirement to provide maximum safety to the operator. This tool must **also** be compliant with NFPA 1936 Standard on Powered Rescue Tools, 2015 edition. The tool must be a "one-person" operated lightweight tool, which means that one person will be able to position, guide and operate the tool without the assistance of other people. For this reason, the tool will be equipped with a carrying handle, which allows the operator to keep the tool evenly balanced in all positions even with one hand. To eliminate connection errors and reduce deployment time the tool shall be supplied with one hydraulic coupler. This single coupler shall have a coaxial design with the pressure line inside of the return line to allow for rapid simultaneous connection of both lines with one connection motion. To avoid hindrance to the operator the coupler must be extremely compact and lightweight. The coupler design shall incorporate an automatic return valve to permit connection and disconnection of the tool to the hose *while under flow*.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

The coupler must be a flat-face, non-drip coupling with a built-in automatic locking feature and must be one hand operated. The coupler shall permit an unhindered 360° rotation at the connection point to avoid twisting or stressing the hose. The coupler must be supplied with a protective aluminum dust cap. The hose connection point will be to the rear of the dead man's handle, leading away in line with the center axis of the tool, avoiding interference with the operation of the tool.

Forces

The maximum cutting force exerted will be no less than 45,861 lbf (204 kN). Maximum spreading force must be at least 12,140 lbf (53.5 kN). Maximum pulling force shall be no less than 6,744 lbf. (30.3 kN). Maximum squeezing force shall be no less than 6070 lbf (27.1 kN). The NFPA performance level rating for this tool shall be A5 B5 C4 D6 E4. The force calculations using the NFPA 1936 standard shall be no less than: HSF – 7194 lbf (32 kN); LSF – 5620 lbf (25 kN); HPF – 6070 lbf (26.5 kN); LPF – 4047 lbf (17.7 kN).

Weight & Dimensions

Maximum spreader opening will be no less than 17" (431 mm). Maximum cutter opening will be 13.9" (352 mm). The weight of an operable tool may not exceed 19.6 lbs. (8.9 kg) including hydraulic oil. When fitted with Lighted Carrying Handle, length, width and height is not to exceed: 26.1" x 11.3" x 7.6" (664 x 287 x 193 mm). When fitted with Fold-Flat Carry Handle, length, width and height not to exceed: 26.1" x 8.8" x 4.4" (664 x 223 x 112 mm)

Dead Man's Handle

The tool must be activated by means of a rotary Dead Man's handle, operated by a twist of the wrist. For ease of operation, the handle shall have a maximum rotation of 20 degrees in either direction. When the Dead Man's handle is released, it must return to the neutral position automatically. The Dead Man's handle will provide one-handed control of opening and closing functions. The Dead Man's handle shall provide 360-degree access to the operator allowing operation of the tool in any position. The Dead Man's handle must be located in such a way that it can be operated, guided and supported easily by right and left-handed operators without having to change the position of the hands, even when wearing gloves. The Dead Man's control must be capable of withstanding 6000 endurance cycles, one cycle consisting of opening and closing the tool.

Carrying Handle

For added user flexibility, the manufacturer will offer two carry handle options. Both designed to allow natural hand position for right or left-handed operators, both shall maintain a balanced position when held only by the carrying handle. In order to provide improved grip in all weather conditions, both optional carry handles must have a non-slip surface.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

Handle with Task Lighting Option

To assist in any poorly lit or nighttime rescue scenario, 4-LED lights shall be included. To provide maximum lighting, with minimal interference, the LEDs should be oriented in a position forward of the operator's hands in the carrying handle. The lights shall be focused on the working area of the tool and must be completely weatherproof. To dedicate all of the tool's 28v lithium ion battery power to the rescue operation, the LED task lights must be powered by a single field replaceable AA battery and shall provide a minimum of six continuous hours of illumination. To preserve AA battery life when not needed, an on/off switch for the lights must also be included in the carrying handle.

Rescue Handle Option

The lightweight aluminum fold-flat carrying handle shall have four front-to-back locking positions across 180 degrees, providing improved maneuverability and an extremely compact storage profile of 4.4" (112 mm). To allow for use at almost any angle the handle shall also have continuous swivel around the tool cylinder for 360-degree positioning through 11 locking positions.

Hinge Bolt System

To allow better access to tight spaces and improve cutting and spreading precision, the-tool shall utilize an integrated locking hinge bolt system that must not extend beyond the blade holder profile. It shall be physically locked by means of a precision interlocking ring that maintains factory set torque values. The profile height at the widest point must be less than 2.4" (61 mm). Bolt heads or nuts that protrude beyond the blade holder profile, 1) impede tool operation; 2) increase surface area exposed to damage; 3) risk compromised torque values and blade performance due to exposure during rescue operations. For these reasons, this type of hinge bolt system is unacceptable. For ease of maintenance and lower maintenance cost, the hinge bolt system must not use any blade shims, and the factory recommended torque may not exceed 38 ft-lb (50Nm).

Blades/Arms

The blades of the combi cutter will be fabricated out of high-grade tool steel that is hardened to improve durability. The cutting, gripping and spreading surfaces of the blades will be re-grindable to ensure a longer life span. For maximum safety and gripping when cutting, cutting edges will have specially designed half round serrations.

Pump

Hydraulic power must be delivered from a gasoline or electrically driven pump. Alternatively, a manually operated pump or an air driven pump may be used. The pump must be a completely separate unit from the rescue tool.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

Safety and Protection

For maximum safety of the operator all cutters, spreaders and rams shall contain a safety relief valve to protect the tool against over pressurization caused by accidentally disconnecting the return line of the tool. The tool will have automatic, non-return check valves built in so that the tool will hold the load when the dead man's handle is released, whether the tool is spreading or pulling. If pressure should drop because of interruption of the power source for any reason, the tool must hold the load. All moving parts such as yoke and levers must be protected by a cover for the safety of the operator.

Corrosion & Wear Protection

Internal and external aluminum parts of the tool that are susceptible to wear or corrosion must be protected by anodize to provide maximum durability. The tool must be capable of withstanding a 10-day salt spray test, and still be able to function normally. Blades must have a method of lubrication through the hinge bolt using a grease gun.

EQUIPMENT - Telescopic Rescue Ram

This tool must also be compliant with NFPA 1936 Standard on Powered Rescue Tools, 2015 edition. The tool must be capable of performing 1000 endurance cycles, whereby one cycle consists of completely opening and closing the tool at its maximum pressure during its stroke. The tool must be capable of withstanding a static over-load pressure of twice the working pressure. This 2:1 over-load ratio is a requirement to provide maximum safety to the operator. The tool must be a "one-person" operated lightweight tool, which means that one person will be able to position, guide and operate the tool without the assistance of other people. For this reason, the tool will be equipped with a carrying handle, which allows the operator to keep the tool evenly balanced in all positions even with one hand. To eliminate connection errors and reduce deployment time the tool shall be supplied with only one compact hydraulic coupler. This single coupler shall have a coaxial design with the pressure line inside of the return line to allow for rapid simultaneous connection of both lines with one connection motion. The coupler design shall incorporate an automatic return valve to permit connection and disconnection of the tool to the hose while under flow. The coupler must be a flat-face, non-drip coupling with built-in automatic locking feature and be one hand operated. Coupler must be supplied with a protective aluminum dust cap. The hose connection will be to the rear of the dead man's handle, leading away in line with the center axis of the tool, avoiding hindrance to the operator.

Dead Man's Handle

The tool must be activated by means of a rotary Dead Man's handle, operated by a twist of the wrist. For ease of operation, the handle shall have a maximum rotation of 20 degrees in either direction. When the Dead Man's handle is released, it must return to the neutral position automatically. The Dead Man's handle will

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

provide one-handed control of opening and closing functions. The Dead Man's handle shall provide 360-degree access to the operator allowing operation of the tool in any position. The Dead Man's handle must be located in such a way that it can be operated, guided and supported easily by right and left-handed operators without having to change the position of the hands, even when wearing gloves. The Dead Man's control must be capable of withstanding 6000 endurance cycles, one cycle consisting of opening and closing the tool. In addition, the ram must be able to rotate under load to allow the operating handle to be moved out of the way for patient removal.

Carrying Handle

To assist in carrying and positioning of the rescue ram, it shall be supplied with a carrying handle.

Safety and Protection

When both ram plungers are fully extended and under maximum load, the safety factor against bending or buckling must be at least 2:1. For maximum safety of the operator all cutters, spreaders and rams shall contain a safety relief valve to protect the tool against over pressurization caused by sudden load shift on the tool. The tool will have automatic, non-return check valves built in so that the tool will hold the load when the dead man's handle is released. If pressure should drop because of interruption of the power source for any reason, the tool must hold the load.

Pump

Hydraulic power must be delivered from a gasoline or electrically driven pump. Alternatively, a manually operated pump or an air driven pump may be used. To provide maximum ease of use (lightest weight) to the operator the pump must be a completely separate unit from the rescue tool.

Grip Heads

The ends of the plungers will have non-threaded connections of the grip heads to allow rotation of the tool even when the tool is under a load. Tool shall be delivered with two diamond shaped grip heads designed to prevent off-center loads.

Forces

The first plunger will have a maximum pushing force of no less than 49,145 lbf (218.6 kN). The second plunger will have a maximum pushing force of no less than 18,210 lbf (81 kN).

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

Weight & Dimensions

Length of closed tool not to exceed 21 1/8" (537 mm).
Length of extended tool not to exceed 49 15/16" (1269 mm). Width not to exceed 13 3/4" (350 mm),
Height not to exceed 5 1/4" (133 mm)
Stroke of first plunger 14 15/16" (380 mm).
Stroke of second plunger 13 13/16" (352 mm).
Weight not to exceed 36.5 lbs. (16.6 kg).

Corrosion & Wear Protection

Internal and external aluminum parts of the tool that are susceptible to wear or corrosion must be protected by anodization to provide maximum durability. The tool must be capable of withstanding a 10-day salt spray test, and still be able to function normally.

Accessories – Ram Support Unit (Quantity: 1; possibly 2)

Provides firm surface to allow for full extension and effectiveness of the ram during pushing operations such as dash displacements.

EQUIPMENT - Coaxial Hydraulic Hose

This hose must be compliant with NFPA 1936 Standard on Powered Rescue Tools, 2015 edition. The hose assembly shall be of a "coaxial" design with a single coupler and protective bend restrictor at each end. For increased safety to the user the hose pressure line shall be encapsulated inside of the outer return line to shield the pressure line from damage inherent on the rescue scene. The working pressure of the interior pressure line shall be 10,500 psi (720 bar). The outer return line shall have a working pressure of 365 psi (25 bar). The hose must be capable of withstanding a static overload pressure of at least four times the maximum working pressure. This overload ratio is a requirement to provide maximum safety to the operator. All hoses shall be delivered ready to use as a complete unit that has been pre-filled with hydraulic mineral oil and hydro tested.

The inner pressure hose shall be constructed from Polyurethane reinforced with para-aramid yarn for increased strength, reduced weight and maximum flexibility. Para-aramid fibers as a reinforcement in this construction offer very desirable properties such as high strength (5X stronger than steel), low weight, no corrosion, non-conductive. The outer return hose shall be constructed of polyurethane reinforced with polyester yarn. The hose shall remain flexible in cold temperatures, with a useable temperature range of -4°F (-20 °C) to 162°F (72°C). The Orange- colored outer hose shall be designated by the manufacturer to be electrically non- conductive.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

The couplers must allow for simultaneous connection of both pressure and return lines to eliminate connection errors and reduce deployment time. To avoid hindrance to the operator the coupler must be extremely compact and lightweight. The coupler design shall incorporate an automatic return valve that will permit connection and disconnection to the tool or pump while under flow. The couplers must be flat-face, non-drip couplings with built-in automatic locking feature and be one hand operated. To avoid stressing the hose the couplers shall allow the hose to freely swivel 360° while connected to a pump and a tool, without twisting or kinking the hose. Each coupler must be supplied with a protective aluminum dust cap.

Hose assemblies shall be in 32 ft. (10 M) lengths. For maximum portability, the weight of a hose assembly shall fall within the following guidelines:

- 32 ft. (10 M) hose shall not exceed 11 lbs.

OPTIONAL EQUIPMENT

Electro-Hydraulic Spreader

The tool is a designed hydraulically activated piston with two equal, opposite light metal alloy spreader arms that are symmetrically opened by mechanical joints, thereby spreading objects. Closing the spreader arms is also carried out hydraulically and mechanically by reverse order of the piston.

Electro-hydraulic devices do not need to be connected to an external hydraulic source. Generation of the required hydraulic pressure takes place within the body of the device by either a quick exchange lithium/ion battery or an external power supply.

Two batteries shall be provided with the tool.

The electro-hydraulic tool is equipped with lights to facilitate work under poor lighting conditions. For simplicity, the lights must be powered by the same Lithium-Ion battery that powers the electro-hydraulic tool and not a secondary battery.

The cylinder of the tool shall be a one-piece design made of anti-corrosive light aluminum alloy for its lightweight, strength and long life. The body of the tool shall have a high impact, non-metallic housing. The housing shall have ventilation holes on both sides of the unit for cooling the motor.

The spreader can produce a maximum spreading force of up to 147,924 lbf. (658 kN).

The tool shall produce a maximum spreading distance of 28.7 in (730 mm).

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

According to NFPA testing standards the HSF test point produced 16,186 lbf (72 kN), the LSF test point produced 11,016 lbf (49 kN).

To maximize the capability of the spreader the unit should include an optional chain and shackle package for pulling operations, use only HURST chain set KSV 11. This should not require the removal of the tips for attachment. According to NFPA testing standards the HPF test point produced 10,341 lbf (46 kN), the LPF test point produced 6,295lbf (28 kN).

The tool shall produce a pulling distance of 22.4 in (569 mm).

The tips are to be removable, multifunctional tips that can be used for spreading, squeezing and pulling without the need to be changed.

The removable tips shall have machined "Sharks Tooth" aggressive 4 row design for maximum performance and gripping capability.

The tips shall be easily removed by depressing spring loaded "button" style detent pins.

The arms of the tool should be made of aluminum alloy and attach via removable links for ease of repair, efficient power transmission and smooth operation. The arms shall include a metal protective and gripping squeezing plate on both the inside and the outside of each arm.

The control mechanism shall feature a star-grip control actuator for ease of operation by allowing 360 ° operations in any position. The tool must provide a non-interflow shear seal "dead man" actuator, whereby the unit stops functioning when thumb pressure is released. The star grip automatically returns to the central position, guaranteeing the full load-holding.

The tool shall have two handles. One located at the center of the tool and the other located below the control mechanism. The center crossbar handle allows easy ergonomic manipulation from the center or either side.

The tool will be equipped with a dual pilot check valve. This is to prevent accidental movement of the arms in the event of power loss.

The tool shall be protected by a pressure relief valve that prevents it from being over pressurized.

The tool dimensions without the battery shall not be any longer than 39.4 in (1002 mm), wider than 10.4 in (265 mm) or higher than 11 in (280 mm).

The nominal electrical voltage (with power supply) is 24 V. The nominal electrical voltage (with lithium/ion battery) is 25.2 V.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

The tool shall be able to tolerate an ambient temperature range of -4°F (-20°C) up to +131°F (+55°C).

The tool must be NFPA 1936; 2015 Edition certified and shall be labelled as such bearing the mark of the testing agency.

The tool shall have an IP protection class rating of IP54.

The tool will not weigh more than 44.1 lbs. (20 kg) excluding the power supply.

Electro-Hydraulic Cutter

The tool is designed to be a hydraulically operated piston activating mechanical joints symmetrically to open or close a set of two opposite blade arms whereby cutting surfaces go on top of each other without making contact thus enabling objects to be cut.

Electro-hydraulic devices do not need to be connected to an external hydraulic source, generation of the required hydraulic pressure takes place within the body of the device by either a quick exchange lithium/ion battery or an external power supply.

Two batteries shall be provided with the tool.

The electro-hydraulic tool is equipped with light-emitting diodes attached on the operating side to facilitate work under poor lighting conditions. For simplicity, the lights must be powered by the same Lithium-Ion battery that powers the electro-hydraulic tool and not a secondary battery

The cylinder of the tool shall be made of anti-corrosive light aluminum alloy for its lightweight, strength and long life. The body of the tool shall have a high impact, non-metallic housing. The housing shall have ventilation holes on both sides of the unit for cooling the motor.

The maximum cutter opening at the tips will be 7.6 in (192 mm).

The cutter will be of slightly curved blade geometry for pulling the debris away and to the center with intelligent cutter geometry reducing tool movement and providing maximum cutting performance.

The blades shall be made of investment cast dropped-forged steel which has a glass-pearl blasted finish and are regrind able. The blades of the tool should be attached to the piston rod via removable links for ease of repair, efficient power

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

transmission and smooth operation. The pivot points of the blades shall have a rubber boot hand guard for safety purposes.

The engineered curved blades with sophisticated geometry close at the tips and then pull the object to be cut towards the point where the maximum cutting force is applied to the relevant working range providing superior cutting performance and significantly reducing cutter wear.

The cutting performance of the tool shall be able to cut up to 1.57 in (40 mm) diameter round stock steel.

The tool shall have a dual pilot check valve to prevent accidental movement of the blades in the event of power loss.

The control mechanism shall feature a star-grip control actuator for ease of operation by allowing 360 ° operations in any position. The mechanism shall be separate and independent from the handle to provide added control in close-quarter operation.

The tool must provide a non-interflow shear seal "dead man" actuator, whereby the unit stops functioning when thumb pressure is released.

The opening and closing positions are clearly marked.

The tool shall be protected by a pressure relief valve that prevents it from being over pressurized.

The tool dimensions without the battery shall not be any longer than 36.2 (920 mm), wider than 11.7 in (296 mm) or higher than 10.3 in (262 mm).

The maximum operating pressure to the tool will be 11,603 psi (80 MPa) (800 bar).

The nominal electrical voltage (with power supply) is 24 V. The nominal electrical voltage (with lithium/ion battery) is 25.2 V.

The current consumption should be 12 amp in idle mode and 45 amp at maximum load.

The tool shall be able to tolerate an ambient temperature range of -4°F (-20°C) up to +131°F (+55°C).

The tool must be NFPA 1936; 2015 Edition certified and shall be labelled as such bearing the mark of the testing agency.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

Cutting classification should no less than A8 / B9 / C8 / D9 / E9 as defined in NFPA 1936; 2010 and certified by a 3rd party testing agency.

The tool will not weigh more than 49.4 lbs. (21.8 kg) excluding the power supply.

Electro-Hydraulic Combination Tool

The tool is a designed hydraulically activated piston with two equal, opposite blade arms that are symmetrically opened by mechanical joints, thereby spreading, squeezing, pulling or cutting objects.

Electro-hydraulic devices do not need to be connected to an external hydraulic source, generation of the required hydraulic pressure takes place within the body of the device by either a quick exchange lithium/ion battery or an external power supply.

Two batteries shall be provided with the tool.

The electro-hydraulic tool is equipped with lights to increase visibility under poor lighting conditions. For simplicity, the lights must be powered by the same Lithium-Ion battery that powers the electro-hydraulic tool and not a secondary battery

The cylinder of the tool shall be made of anti-corrosive light aluminum alloy for its lightweight, strength and long life. The body of the tool shall have a high impact, non-metallic housing. The housing shall have ventilation holes on both sides of the unit for cooling the motor. The protective housing shall protect the battery from being damaged protect the operators hand from being pinched between object and the tool

The maximum spreading force shall be up to 292,000 lbf (1300 kN). NFPA HSF test point produced 11,000 lbf (49 kN), the LSF test point produced 8.770 lbf (39 kN).

The tool shall produce a spreading distance up to 17.7 in (450 mm) measured at the blade tips.

The tool shall produce a maximum pulling force of 22,000 lbf (98 kN). NFPA HPF test point produced 14,800 lbf (66 kN), the LPF test point produced 10,800 lbf (48 kN).

To maximize the capability of the combination tool the unit should utilize an optional chain and shackle package for pulling operations, use only HURST chain set KSV 13 along with the necessary pulling attachment.

The tool shall produce a pulling distance of 11.7 in (297 mm).

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

The tips are to be removable, multifunctional tips that can be used for spreading, peeling, squeezing and pulling without the need to be changed.

The removable tips shall have "Sharks Tooth" aggressive design for maximum performance and gripping capability

The maximum cutter opening shall be 14.5 in (369 mm).

The blades of the tool shall be of a straight serrated edge design for maximum cutting performance. The blades of the tool shall contain shackle holes for pulling applications. The blades of the tool should be attached to the piston rod via removable links, for ease of repair, efficient power transmission and smooth operation. The blades shall be made of heat treated, shock resistant, forged tool steel. The pivot points of the blades shall have rubber booted hand guard for safety purposes.

The control mechanism shall feature a star-grip control actuator for ease of operation by allowing 360 ° operations in any position. The tool must provide a non-interflow shear seal "dead man" actuator, whereby the unit stops functioning when thumb pressure is released. The star grip automatically returns to the central position, guaranteeing the full load-holding.

The tool shall have (2) two handles for ease of operation in any position. One shall be located toward the center of the tool to create an even balance. The second handle shall

be located below the control mechanism and be an integral part of the protective housing and allow for easy operation of the Star Control with the thumb of the operator.

The tool will be equipped with a dual pilot check valve. This is to prevent accidental movement of the arms in the event of power loss.

The tool shall be protected by a pressure relief valve that prevents it from being over pressurized.

The tool dimensions without the battery shall not be any longer than 40.7 in. (1033 mm), wider than 11.6 in (294 mm) or higher than 11.2 in (285 mm).

The maximum operating pressure to the tool will be 10,200 psi (70 MPa) (750 bar).

The nominal electrical voltage (with power supply) is 25 V. The nominal electrical voltage (with lithium/ion battery) is 25.2 V.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

The estimated current consumption at nominal voltage is 12 amps at idle mode and 42 amps at maximum load.

The noise level in idle mode shall be 69 dB (A) and 71 dB (A) in maximum load.

The tool shall be able to tolerate an ambient temperature range of -4°F (-20°C) up to +131°F (+55°C).

The tool must be NFPA 1936; 2015 Edition certified and shall be labelled as such bearing the mark of the testing agency.

The tool shall have an IP protection class rating of 54.

Cutting classification should be no less than A8 / B9 / C8 / D9 / E9 as defined in NFPA 1936; 2015 and certified by a 3rd party testing agency.

The tool will not weigh more than 52.9 lbs. (24.5 kg) excluding the power supply.

Electro-Hydraulic Rescue Ram

The rescue ram is a double-acting hydraulic cylinder. Extension and retraction is carried out hydraulically.

The rescue ram is a multi-stage cylinder for applying pressure with varying pressure forces depending on the piston stage. The pressure force remains constant within one piston stage.

The ram shall extend to a distance of up to 53 in (1347 mm). The retracted length is to be no less than 23.5 in. (313 mm).

The ram shall feature a two-stage stroke. The maximum stroke for piston 1 shall be 15.2 in (387 mm) producing up to 28,600 lbf (127 kN) force. The maximum stroke for piston 2 shall be 14.3 in (363 mm) producing up to 13,500 lbf (60 kN) force. The piston stroke overall shall be 29.5 in (750 mm).

Two batteries shall be provided with the tool.

The tool shall include heat-treated, investment-cast steel ram claw feet on the piston side and on the cylinder side for durable gripping and minimizing slippage.

The tool shall have a dual pilot check valve to prevent accidental movement of the piston rod in the event of power loss.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

The control mechanism shall feature a star-grip control for ease of operation by allowing 360° operation in any position. The mechanism shall be separate and independent from the handle to provide added control in close-quarter operation.

The tool must provide a "dead man" actuator whereby the unit stops functioning when hand pressure is released.

The extend piston and retract piston are clearly marked.

The tool must be NFPA 1936; 2015 Edition certified and shall be labelled as such bearing the mark of the testing agency.

The tool will not weigh more than 41.9 lbs. (19 kg) excluding the power supply.

Electro-hydraulic devices do not need to be connected to an external hydraulic source, generation of the required hydraulic pressure takes place within the body of the device by either a quick exchange lithium/ion battery or an external power supply.

The electro-hydraulic tool is equipped with lights to facilitate work under poor lighting conditions.

The cylinder of the tool shall be made of anti-corrosive light aluminum alloy for its lightweight, strength and long life. The body of the tool shall have a high impact, non-metallic housing. The housing shall have ventilation holes on both sides of the unit for cooling the motor.

The tool shall be able to tolerate an ambient temperature range of -4°F (-20°C) up to +131°F (+55°C).

Power Supply

The power supply should be able to convert the voltage of the external power source in such a way that it can be used instead of a battery.

With the power supply, the devices shall operate the tool in order to complete the vehicle rescue when connecting them to an external power source. The device is not designed for a continuous use or industrial application.

The power supply should have an adapter on one side which can be simply inserted into the connection slot of the devices and locked. The other side of the power supply should have a 26.2' (8m) cord with a NEMA 5-15 Grounded Plug.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

The mains plug should be a NEMA 5-15 - 125 volt.

The mains plug and adapter should both be connected by a cable to the inverter box. The cable connecting the adapter to the inverter box should be 26.2 ft. (8 m) and the cable connecting the plug to the inverter box should be 16.4 ft. (5 m).

The cables are type H 07RNF, with a cross section $3 \times 1.5\text{mm}^2$.

The cables connecting to the filter box should be able to withstand an axial pulling force of min. 112.4 lbs. (500 N).

The inverter box should be made of aluminum and have an IP rating of 67 or greater.

The integrated inverter is appropriate for the conversion of AC voltage to DC voltage. The input voltage shall be 110v, input frequency shall be 50 Hz/60Hz, and the output voltage shall be 25.2 Volt DC.

The weight of the power supply shall not exceed 9.26 lbs. (4.2 kg).

TRAINING – SERVICE

The vendor or manufacturer shall provide technician level training on site or at their facility to Georgetown Fire Department member(s). A description of this training shall be provided in the bid response.

WARRANTY

The manufacturer shall warrant all tools against all defects in material and workmanship for as long as owned by the original purchaser.

SALES AND SERVICE SUPPORT

Details of sales and service support shall be included in bid response.

TECHNICAL SERVICE SUPPORT

Details of technical service support shall be included in bid response.

ADDITIONAL BID INSTRUCTIONS

Please provide an itemization of the costs on the page below, listing the cost for each piece of equipment and any shipping or training associated therewith. Then, please provide the total bid amount on the next page. Do not include optional equipment in the total bid amount.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

PRICES TO INCLUDE SHIPPING & NECESSARY TRAINING

Compact Rescue Pump 1	\$ _____
Compact Rescue Pump 2	\$ _____
Spreader	\$ _____
Cutter Option 1	\$ _____
OR	
Cutter Option 2	\$ _____
Combination Tool	\$ _____
Telescopic Rescue Ram	\$ _____
Ram Support Unit	\$ _____
Hydraulic Hose	\$ _____

TOTAL BASE COST: \$ _____
(Enter for "Total Bid Amount" on next page)

Optional Equipment

Electro-hydraulic Spreader	\$ _____
Electro-hydraulic Cutter	\$ _____
Electro-hydraulic Combination Tool	\$ _____
Electro-hydraulic Ram	\$ _____
Power Supply	\$ _____
Technician Level Training	

Delivery Schedule _____ days

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

BIDDER RESPONSE FORM

TOTAL BID AMOUNT: \$ _____

NAME OF FIRM: _____

ADDRESS: _____

NAME (Type or Print): _____

TELEPHONE: _____

EMAIL: _____

* Authorized Signature: _____

Date: _____

* Signature certifies the proposed solution and services meet all requirements outlined in this bid proposal and the vendor will comply with all specified requirements unless exceptions are noted below.

Bidder Acknowledges receipt of Addendum as noted: (mark N/A if none)

_____ Dated _____

_____ Dated _____

_____ Dated _____

Sub-Contractor / Supplier	Contract Amount
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_____	\$ _____
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_____	\$ _____
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_____	\$ _____
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_____	\$ _____
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Check here _____ and attach additional sheet for additional Sub-Contractors / Suppliers.

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

AFFIDAVIT

Comes the Affiant, _____, and after being first duly sworn under penalty of perjury as follows:

1. His/her name is _____ and he/she is the individual or the authorized representative of _____ (hereinafter referred to as "Bidder"), and is authorized to submit the Bidder Response Form, equal opportunity agreement and Vendor's Statement Pursuant to KRS 45A.343 attached hereto and incorporated herein by reference.
2. Bidder will pay all taxes and fees, which are owed to the City of Georgetown at the time the bid is submitted, prior to award of the contract and will maintain a "current" status in regard to those taxes and fees during the life of the contract.
3. Bidder will obtain a City of Georgetown business license, if applicable, prior to award of the contract.
4. Bidder has authorized the City of Georgetown to verify the above-mentioned information with the Division of Revenue and to disclose that taxes and/or fees are delinquent or that a business license has not been obtained.
5. Bidder has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky within the past five (5) years and the award of a contract to the Bidder will not violate any provision of the campaign finance laws of the Commonwealth.
6. Bidder has not knowingly violated any provision of Chapter 2 of the City of Georgetown Code of Ordinances, known as "Ethics Act."
7. Bidder acknowledges that "knowingly" for purposes of this Affidavit means, with respect to conduct or to circumstances described by a statute or ordinance defining an offense, that a person is aware or should have been aware that his conduct is of that nature or that the circumstance exists.

Further, Affiant sayeth naught.

Affiant

STATE OF _____

COUNTY OF _____

The foregoing instrument was subscribed, sworn to and acknowledged before me by _____ on this the _____ day of _____, 2017.

My Commission expires: _____

NOTARY PUBLIC, STATE AT LARGE

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

EQUAL OPPORTUNITY AGREEMENT

The Law

- Title VII of the Civil Rights Act of 1964 (amended 1972) states that it is unlawful for an employer to discriminate in employment because of race, color, religion, sex, age (40-70 years) or national origin.
- Executive Order No. 11246 on Nondiscrimination under Federal contract prohibits employment discrimination by vendor and sub-vendor doing business with the Federal Government or recipients of Federal funds. This order was later amended by Executive Order No. 11375 to prohibit discrimination on the basis of sex.
- Section 503 of the Rehabilitation Act of 1973 states:
 - The Vendor will not discriminate against any employee or applicant for employment because of physical or mental handicap.
- Section 2012 of the Vietnam Era Veterans Readjustment Act of 1973 requires Affirmative Action on behalf of disabled veterans and veterans of the Vietnam Era by vendors having Federal contracts.
- Section 206(A) of Executive Order 12086, Consolidation of Contract Compliance Functions for Equal Employment Opportunity, states:
 - The Secretary of Labor may investigate the employment practices of any Government vendor or sub-vendor to determine whether or not the contractual provisions specified in Section 202 of this order have been violated.

The City of Georgetown practices Equal Opportunity in recruiting, hiring and promoting. It is the Government's intent to affirmatively provide employment opportunities for those individuals who have previously not been allowed to enter into the mainstream of society. In following this commitment to Equal Employment Opportunity and because the Government is the benefactor of the Federal funds, it is both against the Government policy and illegal for the Government to let contracts to companies which knowingly or unknowingly practice discrimination in their employment practices. Violation of the above mentioned ordinances may cause a contract to be canceled and the vendors may be declared ineligible for future consideration.

Please sign this statement in the appropriate space acknowledging that you have read and understand the provisions contained herein. Return this document as part of your application packet.

Bidders

I/We agree to comply with the Civil Rights Laws listed above that govern employment rights of minorities, women, Vietnam veterans, handicapped and aged persons.

Signature

Name of Firm

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

VENDOR'S STATEMENT PURSUANT TO KRS 45A.343

45A.343 Local Public Agency may adopt provisions of KRS 45A.345 to 45A.460 – Effect of Adoption – Contracts are required to mandate revealing of violations of and compliance with specified KRS chapters – Effect of nondisclosure or noncompliance. (KRS 136 – Corporate taxes; KRS 139 – Sales & use taxes; KRS 141 – Income taxes; KRS 337 – Wage and hour; KRS 338 – Occupational safety; KRS 341 – Unemployment; KRS 342 – Workers Comp.)

The undersigned, as a duly authorized officer of _____ pursuant to KRS 45A.343 states;

1. To the best of my knowledge, information and belief, _____ has not been finally determined to have violated any of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, or 342 that apply to it within the five year period preceding this statement.

2. _____ acknowledges that it will be required to be in compliance with those provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342 that apply to it for the duration of the Contract to be entered into with the City of Georgetown, Kentucky.

3. _____ acknowledges that if it fails to reveal any final determination of violation of KRS Chapters 136, 139, 141, 337, 338, 341, or 342, or to comply with the applicable provisions of those statutes for the duration of the aforesaid Contract, such shall be grounds for The City of Georgetown, Kentucky to:

- a) Cancel its contract with _____, and
- b) Disqualify _____ from eligibility for future contracts awarded by The City of Georgetown for a period of two years.

This the _____ day of _____, 2017.

Firm: _____

By: _____

Title: _____

INVITATION TO BID
Fire Department Extrication Tools
BID OPENING:
Tuesday, August 8, 2017 at 2:00 PM EDT

CHECKLIST FOR REQUIREMENTS

Initial "_____" for all below as indicated or bid may be rejected.

- _____ Bidder received and understands the Invitation to Bid Package and Specifications.
- _____ A Bid Bond or certified check in the amount of five percent (5%) of this bid made payable to the City of Georgetown is attached hereto.
- _____ Proof of Required Insurance Coverages attached.
- _____ BIDDER RESPONSE FORM completed and attached.
- _____ AFFIDAVIT signed and attached.
- _____ EQUAL EMPLOYMENT AGREEMENT signed and attached.
- _____ VENDOR'S STATEMENT PURSUANT TO KRS 45A.343 signed and attached.
- _____ EXCEPTIONS TO SPECIFICATIONS AND/OR COMMENTS completed and attached (IF APPLICABLE).
- _____ Warranty information attached (IF APPLICABLE).
- _____ Verification of service and manufacturing qualifications attached (IF APPLICABLE).