



INVITATION TO BID

FINANCE DEPARTMENT

GREGORY N. L'HEUREUX
Finance Director

KRISTIE BRADBURY
Deputy Finance Director

COLLEEN C. SELBERG
Purchasing Agent

TWO (2) HEAVY-DUTY MOBILE LIFTING SYSTEMS

Sealed bids for furnishing two (2) Heavy Duty Mobile Lifting Systems to the City of South Portland School Department, as specified below, in the attached specifications and Proposal will be received by the City Purchasing Agent, Room 105, City Hall, 25 Cottage Road, South Portland, Maine, 04106, until 3:00 P.M., Friday, December 4, 2015 at which time they will be publicly opened and read aloud. Proposals received after stated day and time will not be considered.

Bids shall be submitted on the attached Bid Proposal form in sealed envelopes, plainly marked "Bid #16-16 H.D. Mobile Lifts" and shall be addressed to the Purchasing Agent at the above address.

Delivery to be made upon receipt of purchase order and shall be F.O.B. Destination, School Bus Garage, 1142 Highland Avenue, South Portland, Maine.

Bidder will state in the bid the name and model number of the equipment that is being offering and will include with the bid a catalog or brochure marked to indicate the standard factory equipment of the model which is bid.

Bid alternates where the complete Bid Proposal form has been completed may be considered.

If the equipment offered by a bidder under the attached specifications meets the specifications except for minor factors or reasonably small amounts in dimensions, and if it shall be determined by the City that these minor variations from the specifications do not prevent the equipment being bid from performing as satisfactorily or from being as good as equipment fully meeting these specifications, then these minor variations from the specifications may be waived by the City, if it deems it to be to its advantage, and the equipment with the waived variations in specifications will be accepted as fully meeting these specifications.

Since a prompt delivery is needed, delivery date as well as price may be made a factor in determining the award of this bid.

It is the custom of the City of South Portland to pay its bills within 20 to 30 days following delivery of and receipt of bills for all items covered by the purchase order. In

submitting bids under attached specifications, bidders should take into consideration all discounts, both trade and time, allowed in accordance with the above payment policy.

All bidders should quote net prices, therefore, exclusive of all Federal Excise Taxes.

The City of South Portland reserves the right to waive all informalities in bids, to accept any bid or to reject any or all bids should it be deemed in its best interest to do so. The City of South Portland also reserves the right to purchase one versus two of the bid Heavy Duty Mobile Lift Systems should it be deemed in its best interest to do so. Except as otherwise required by law or as specifically provided to the contrary herein, the award of this bid shall be governed by the City's purchasing ordinance.

Colleen C. Selberg
Purchasing Agent

Mailing address: P. O. Box 9422 South Portland, ME 04116-9422
Telephone (207) 767-3201 Fax (207) 767-7620

LIFT SPECIFICATIONS FOR TWO (2) MULTI-COLUMN HEAVY DUTY MOBILE LIFTING SYSTEMS

GENERAL DESCRIPTION

These specifications set forth the requirements for two (2) multi-column Heavy Duty Mobile Lifting Systems to raise medium and heavy-duty trucks and equipment for the purpose of inspection, service or maintenance.

One lifting system for single chassis vehicles shall consist of control and slave columns with the main difference being that a control column shall have the power supply connection and shall have the capability of being designated as a control column or slave column. A set shall consist of 4 columns; two control/slave columns and 2 slave. The lift system shall be designed as to permit combining sets to a system of columns by adding additional columns without modifications to the electric or mechanical configuration of the jacks.

Primary control panels shall have the option of being designated to operate as either control or slave columns. This shall allow the possibility of operating two separate pairs of two with separate power controls (thereby permitting operation in geographically distant areas); one complete set of four or individual columns.

The lifting mechanism in each column shall be a hydraulic cylinder with locking system continuously engaged. The locking device shall be load bearing with a safety factor of 5 and shall remain functional during lifting and lowering as well as when the columns are idle. Additionally, each lift column's hydraulic cylinder must have a velocity fuse.

Each lift column shall have an infinitely variable work height. Minimal up/down movement shall be possible from any intermediate position. All raising/lowering operations must be 1 hand, 1 button (push & hold). Raising a column to release locks before lowering shall not be required.

The lift shall have all of the safety, durability, maintainability, and performance features described herein. The entire lift system shall have been approved and certified by the ALI (Automotive Lift Institute) certification program for automotive lifts and shall meet the requirements inherent in the testing of the program, including mechanical as well as electrical testing. Proof of certification of the lift must be submitted with bid at the time of bid. ETL is an ALI sponsored independent nationally recognized testing laboratory (NRTL) approved by OSHA. ETL administers the ALI certification program.

The manufacturer of the lifting system shall have been certified ISO 9001. ISO 9001 Certification shall be submitted with bid at the time of bid. Lifting system shall comply with all applicable US Federal, State and local safety regulations and the latest version of ANSI/ALI ALCTV-1998 as well as UL 201.

The lifting system shall be a system that uses components relatively available in the United States ensuring years of easily replaceable parts. Preference will be given to a lifting system that is U.S. manufactured, meaning it is fabricated, welded and assembled in the U.S.

Each column shall be structurally designed to have the motor and hydraulic pump assembly positioned in the center of the column to promote greater stability while moving the column. Lift systems with motors mounted on the top of the column shall not be accepted due to their inherent top-heaviness and possibility of tipping while moving.

Electrical equipment and controls shall meet the requirements of UL 201 and shall have been tested by an NRTL (Nationally Recognized Testing Laboratory) as approved by OSHA.

GENERAL SPECIFICATIONS

CAPACITY:	18000 lbs. per column 36000 lbs. per pair 72000 lbs. per set of 4
LIFT HEIGHT:	69" maximum. System has field programmable height limit.
LIFT TIME:	69" (full rise) 60 seconds
POWER REQUIREMENT:	Preference is for a battery-operated system as below: 110 volt built-in multi-stage charging system that includes 12 volt Deep-cycle batteries.
*ELECTRICAL CONTROLS:	Preference is for a wireless unit as follows: 12 radio frequencies with channel range from 100 to 120 for each frequency. NEMA 4 rated & meets the requirements of UL 201 for garage equipment. Control voltage 110VAC 24VDC PCB Microprocessor The PCB and control panel employ systems o.k. LEDs (green). These signify all columns are linked and are communicating with each other. When system integrity is verified, the LEDs will illuminate indicating systems operation is possible. PCB is easily removable for service inspection. All columns are equipped with an emergency stop button (red mushroom palm button). Operation of the system can be halted by pressing any E-stop on any column. E-stop circuit is to be mechanical (daisy chain) and not to be controlled through microprocessor. Microprocessor shuts the entire system off when an obstruction blocks the lifting carriage from lowering. Square D & Allen-Bradley components. There should be a cable transducer on each column that reports travel & position to the microprocessor.
ELECTRICAL CABLES:	If the lift system utilizes power cables, the specifications are as follows. 50' long power cable on each control column. Power cable is OSHA approved, meets requirements of UL 201 for abrasion, gas & oil resistance.

45' interconnecting cable on each column. Interconnecting cable is OSHA orange, meets requirements of UL 201 for abrasion, gas & oil resistance.

SAFETY SYSTEMS:

Single point, continuously engaged, electrically operated mechanical safety device in each column.

Safety solenoid mounted on outside of column for easy access.

Velocity fuse that closes in the event of a line break. Three (3) normally closed solenoid valves ensuring safe & care free operation of the lift.

JACKING UNIT:

Heavy duty jack, 3 position control for ease of mobility (unloaded)

CARRIAGE BEARINGS:

UHMWPE
No lubrication required Lifetime guarantee

TIRE CRADLE SIZE:

R24.5 to R17
Adapters included for small diameter wheels to R13

**OPERATION:
combination of**

1 master column shall be capable of operating any

(4) Columns. System is expandable at a later date by adding additional columns requiring no modification or change to controls.

LEDs give visual confirmation of Lift operating conditions i.e.:
acceptable range, out of level and column error.

Systems mode - operation of all columns in the set from any column.

Manual mode - operation of the individual column selected.
Note: All other columns in the set are rendered inoperable.

Paired mode - operation of any combination of columns (2 or more) when paired mode is selected. Note: All other columns not paired are rendered inoperable.

All operational functions (raise, lower, park) in all modes are one touch, dead-man type requiring constant pressure by the operator.

Power switch will reset/re-boot microprocessor in event of voluntary or involuntary electrical shutdown.

Controls feature field programmable vertical travel limiter to accommodate unique customer requirements or vehicles as well low ceiling conditions. Travel limit may be set or released with one button for entire system of 4 columns etc.

LIFT COLUMN: 1 Piece High formed 50 steel
102.5" X 5/16"

LIFT CARRIAGE: Internal box structure eliminates pinch points.

(8) ultra high molecular polyethylene bearings. No lubrication required for bearings. Bearings have a lifetime guarantee.

LIFT BASE: (4) wheels on the lift base (2) steerable

Heavy duty jack attached to steerable wheels.

Jack features 3 position control for ease of mobility (unloaded). Jack lifts to approximately 1-1/2" for adequate clearance when moving.

Jack automatically lowers if lift is loaded while extended.

HYDRAULIC SYSTEM Hydraulic pump driven by 2HP Totally Enclosed Fan Cooled (TEFC) motor, UL approved and equipped with 2 manual lowering valves per column for safety, allowing lowering of vehicle in case of loss of electrical power. Standard voltage should be 460V/230V 3 PH.

BID PROPOSAL

The UNDERSIGNED hereby proposes to furnish two (2) Heavy Duty Mobile Lift Systems to the City of South Portland School Department, in accordance with the attached Invitation to Bid and the attached specifications, and at the following price, warranty, and delivery time:

Price Per 4-Column HD Mobile Lift System \$ _____

Year, Make & Model # _____

Warranty _____

Delivery Date _____

Note that the City of South Portland reserves the right to purchase one HD Mobile Lift System should that be in its best interest at the quoted price above.

Indicate the following:

1. If selected as the final bidder, can your company provide one or two loaner lift systems until your bid has been approved by both the Board of Education and the City of South Portland and delivery of the purchased lift systems occurs. ____ YES ____ NO
2. Would you charge for the use of these loaner systems, and what would your fee be and indicate the basis
for the fee: _____ Fee Per ____ Work Day ____ Week
3. Is an extended warranty available? ____ YES ____ NO. If yes, indicate the price and terms of the extended warranty(ies).

Signed: _____
(Corporation, Firm or Company)

By: _____
(Officer, Authorized Individual or Owner)

Title: _____
Mailing
Address: _____

Zip Code: _____ Date: _____

Telephone: _____ Fax: _____

E-Mail: _____

Note: Bids must bear the handwritten signature of a duly authorized member or employee of the organization making the bid.

COMPLIANCE WITH BID SPECIFICATIONS (Submitted with Bid Proposal)

LIFTING CAPACITY

YES ___ NO ___ Each jack shall have a minimum normal nominal rated capacity of 18,000 lbs. per jack; 36,000 lbs., per pair, or 72,000 lbs. per set of four.

If NO, indicate deviation from specification: _____

LIFTING HEIGHT

YES ___ NO ___ The lifting height of each fork shall be no less than 69 inches as measured from the ground to the bottom of the lifting fork. System has field programmable height limit.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The controls feature field programmable vertical travel limit to accommodate large vehicles as well as low ceiling conditions. Travel limit may be set or released with one button for entire system of 4 columns .

If NO, indicate deviation from specification: _____

LIFTING SPEED

YES ___ NO ___ The lifting speed shall not be less than 69 inches per minute either in the ascent mode and 69 inches per minute in the descent mode.

If NO, indicate deviation from specification: _____

TIRE SIZE

YES ___ NO ___ Wheel contact forks shall freely accept tire sizes between R 17 to R 24.5 inclusive. Clear distance between forks shall not exceed 22 inches to prevent wheel assembly from passing through. Fork length shall not be less than 12 inches.

If NO, indicate deviation from specification: _____

YES ___ NO ___ 2 Sleeve adapters shall be available to permit lifting of smaller vehicles such as vans and automobiles. Adapter(s) shall allow for lifting of vehicles with tires down to 13", and must be mounted on lift for convenience purposes.

If NO, indicate deviation from specification: _____

ENVIRONMENT AND POWER SOURCE

YES ___ NO ___ Lift control built to Nema 4 Rating. Electrical and hydraulic equipment shall be suitable for all-weather use indoors and outdoors and shall be specifically designed to be able to operate outdoors on a continual basis and not an occasional basis. All controls shall be waterproof with cables connected if applicable.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The lift system will be battery operated with 12 volt deep-cycle batteries. It will utilize a 110 volt built-in multi-stage charging system. Batteries will be included.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The lift system will utilize a 2 HP totally enclosed electric motor that is fan cooled. Preference is for a U.S. manufactured motor. Standard voltage should be 460V/230V 3 PH.

INDICATE VOLTAGE/PHASE OF BIDDED MODEL: _____

If NO, indicate deviation from specification: _____

PALLET JACK MECHANISM

YES ___ NO ___ A pallet jack mechanism shall be used to move the lifting column. It shall be permanently attached having two wheels to permit maximum rear stabilization for the lifting column.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The pallet jack mechanism shall have three positions: lift position; neutral position, and lower position and shall have a loop type handle.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The pallet jack mechanism shall have a maximum pressure valve that automatically lowers the pallet jack when the load on the column exceeds 1,100 lbs.

If NO, indicate deviation from specification: _____

CONTROLS

YES ___ NO ___ The lift system will be operated with a wireless control system. The wireless system will encompass 12 radio frequencies with channel range from 100 to 120 for each frequency.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The various functions of the mobile lifting system shall be controlled from the control panels on the columns. The control system shall have been tested and approved by a Nationally Recognized Testing Laboratory as established by OSHA to be compliant with the requirements of UL 201.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The column control panels shall be convertible to be used as a control or a slave panel. This shall permit each control column to be used either as a control or a slave within the same operating set of 4 columns. The system shall be expandable at a later date and requires no modification of changes to controls.

If NO, indicate deviation from specification: _____

YES ___ NO ___ Each control panel whether it is designated as a control or a slave panel shall have an emergency stop switch which stops all movement, either ascent or descent immediately upon activation. The emergency stop switch must be palm operated.

If NO, indicate deviation from specification: _____

YES ___ NO ___ Each control box (control and slave columns) shall as a minimum contain:

- * micro processor
- * an "UP" button
- * a "DOWN" button
- * a "PARK" button
- * an "EMERGENCY STOP" button (palm operated).
- * quick disconnect for interconnecting cable (if applicable).
- * mode selector switch MANUAL/SYSTEMS/PAIRED.
- * a control power indicator ACCEPTABLE RANGE light (green)
- * column condition lights "HIGH/LOW" (red)
- * a COLUMN ERROR light (red)
- * control box NEMA 4 rated.

If NO, indicate deviation from specification: _____

YES ___ NO ___ Each control column control box shall contain these additional controls as a minimum:

- * power on/off selector switch
- * control/slave selector switch

If NO, indicate deviation from specification: _____

YES ___ NO ___ Each control column shall have a "set reference" capability that allows the setting of height memory.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The "set reference" capability shall serve to set memory height. The actual height of each column shall be stored in the height memory function. When all the columns are raised at the same time, the height memory shall ensure that all columns lift simultaneously and do not exceed the programmed separation. The height memory function shall provide for the safe lifting of vehicles that have different lifting points (e.g., trailer to be lifted by the wheels and by the chassis).

If NO, indicate deviation from specification: _____

YES ___ NO ___ Within a set of four columns it shall be possible to integrate two primary control panels and two slave panels. One control panel shall be wired to power and the second control panel is designated as a slave/control panel. (Not powered)

If NO, indicate deviation from specification: _____

YES ___ NO ___ Within a set of four columns it shall be possible to utilize two control panels and two slave panels. One control panel shall be connected to power and permit operation of a set of two columns and the other control panel is connected to power and permit operation of a separate set of two columns while operating as a set of 4. Control and E-stop circuits are unaffected by this configuration.

If NO, indicate deviation from specification: _____

YES ___ NO ___ It shall be possible to add additional columns without modification to the control panels.

If NO, indicate deviation from specification: _____

YES ___ NO ___ If applicable, connecting cables shall be able to be disconnected quickly and easily between columns. Cables shall be heavy-duty type UL 201 certified gas, oil, and abrasive resistant.

If NO, indicate deviation from specification: _____

YES ___ NO ___ Control panels shall utilize a printed circuit board and microprocessor to permit operation of the lift. PCB shall have LED lights that facilitate trouble-shooting.

If NO, indicate deviation from specification: _____

YES ___ NO ___ Paired operation shall be possible with any number of columns.

If NO, indicate deviation from specification: _____

YES ___ NO ___ Paired operation shall be permitted from any height position of the lifting column(s). Moreover, it shall be possible to switch back and forth from, and to manual operation, system operation (all columns), or paired operation in any order regardless of physical position or height setting of the columns or paired operation in any order regardless of physical position or height setting of the columns or in other words at every height.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The control system shall utilize a micro-processor integrated within the printed circuit board to provide various safety and operational requirements described above. An analog-measuring device, such as potentiometers shall provide the control system's adaptive leveling function. Encoders or other systems that utilize PLC's (programmable logic controllers) shall not be used.

If NO, indicate deviation from specification: _____

YES ___ NO ___ For ease of maintenance, the entire printed circuit board shall be removable.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The control panel shall be rated NEMA 4.

If NO, indicate deviation from specification: _____

YES ___ NO ___ If the control system utilizes cables, the control panel shall be supplied with female connector sealing caps to render system waterproof when lifts are not being used and cables are disconnected.

If NO, indicate deviation from specification: _____

DRIVE MECHANISM

YES ___ NO ___ The drive system shall be hydraulic drive and shall permit lifting without any pulsation, jerks, or unsteady lifting. Lifting shall be smooth. Hydraulic system shall comprise an electrically-powered pump, flow control valves, and a fluid reservoir.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The hydraulic lifting cylinder shall be of piston type to prevent leakage in case of piston damage. Piston shall be mounted to the base of the column.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The lifting carriage shall ride on durable ultra-high molecular weight polyethylene bearings requiring no lubrication and have a lifetime guarantee.

If NO, indicate deviation from specification: _____

YES ___ NO ___ In order to promote optimal distribution of stresses from the carriage to the column, the vertical distance between the guide wheels shall be at least 36" (from center to center).

If NO, indicate deviation from specification: _____

YES ___ NO ___ The carriage shall have a 1/4-inch clearance from the floor in the lowered position, to enhance mobility when power is cut-off.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The lift shall be designed not to require end stops to limit lifting with an electronic and redundant mechanical end and designed that end stops in the lowest position are not required due to the environmental conditions (dirt, etc.).

If NO, indicate deviation from specification: _____

YES ___ NO ___ The hydraulic unit shall come equipped with 3 two-way normally closed valves, two of which are in line for safe operation of the lift. Additionally, two of these three valves must have manual controls giving the operator backup safety during emergency lowering.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The hydraulic lifting cylinder shall be equipped with a wiper to remove dirt, dust and other contaminants on the plunger.

If NO, indicate deviation from specification: _____

YES ___ NO ___ Each hydraulic cylinder shall be equipped with a hose burst check valve to prevent descent in the event of a major fluid leak.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The piston shall be chromium plated for low abrasion conditions and to prevent slip-stick problems.

If NO, indicate deviation from specification: _____

SAFETY DEVICES

YES ___ NO ___ An independent and fail-safe mechanical safety device (safety pawl) shall be present on each column. This safety device shall be totally independent from the lifting drive system. (Systems that utilize non-load bearing "safety nuts" shall not be approved since they are integrated with the lifting drive itself.)

If NO, indicate deviation from specification: _____

YES ___ NO ___ This "safety pawl" system shall be used to insure proper and automatic locking at any position either in the ascent or descent mode. The locking notches (minimum 19) shall be integrated into the lift carriage and the locking pawl shall be wedged against the lift column. The mechanical safety pawl shall automatically engage when the lift is not operating (either in the descent or ascent mode).

If NO, indicate deviation from specification: _____

YES ___ NO ___ A solenoid valve shall release the locking pawl when the lift is in operation.
(lower mode)

If NO, indicate deviation from specification: _____

YES ___ NO ___ "Up" and "down" push buttons shall be of a "dead-man" type design requiring constant pressure on the button by the operator in order to operate the lift system. One hand operation for both lifting and lowering of vehicle is required. During the lowering cycle, the lift must automatically raise, release mechanical safety pawl and lower.

If NO, indicate deviation from specification: _____

YES ___ NO ___ If the system utilizes control cables, the cable holding bracket shall be of steel construction to provide safe storage of cables when unit is not in operation. Power cables shall not be less than 50 feet in length. Interconnecting cables between columns shall not be less than 45 feet in length.

If NO, indicate deviation from specification: _____

YES ___ NO ___ All control voltage shall be no greater than 24/110VAC .

If NO, indicate deviation from specification: _____

YES ___ NO ___ Emergency lowering of the columns shall be facilitated by means of 2 manual lowering valves in each column. Manual lowering shall be accomplished without use of cranks or special tools.

If NO, indicate deviation from specification: _____

YES ___ NO ___ For safe and unmistakable operation, the operating system shall be equipped with an analogue measuring device.

The analogue measuring device shall provide for automatic leveling and synchronization. This system shall insure that the lift system raises and lowers at the same time. The automatic leveling system shall operate within the full range of travel while operating in **SYSTEMS** or **PAIRED MODE**. Staggered height operation (when operating columns with varying heights) must also be properly controlled.

If NO, indicate deviation from specification: _____

YES ___ NO ___ If, during lifting or lowering, the height of the columns becomes unsynchronized or the forks are at different lifting height from one another the automatic leveling system shall operate in the following manner:
* If the difference is greater than 1.25" but less than 1.75", the system shall automatically compensate and shall automatically regulate the differences.
* If the difference is greater than 1.75" but less than 2.375", the offending column will momentarily stop operation to automatically regulate the difference.

* If the difference is greater than 2.375" between lifting forks then all movement ceases requiring investigation as to cause.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The operating system shall have a fault indication system. Fault indication shall be provided by red and green visual LED's. All lift columns shall provide a column error signal to identify which column or columns are in error within the system.

If NO, indicate deviation from specification: _____

MAINTENANCE

YES ___ NO ___ The mobile lift system shall essentially be a maintenance free lifting system, only requiring visual checks of the structural integrity of the lifting system itself and the proper function of the mechanical safety pawls.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The mobile lift system shall not need to have hydraulic oil replaced in increments of less than two (2) years.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The lifting system shall be a maintenance free design. The lift columns shall have no external grease or oil reservoir to fill for lubrication of lifting system.

If NO, indicate deviation from specification: _____

WARRANTY AND SPECIAL REQUIREMENTS

YES ___ NO ___ The lift system shall be warranted as noted:
* Structural integrity & workmanship including hydraulic cylinders for a period of 5 years.
* All electrical components & motors for a period of 1 year.
* Labor for a period of 1 year.
* Lifting system bearings lifetime for as long as the lift is in service.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The lift system shall use domestically available parts making replacement parts readily available from multiple sources.

If NO, indicate deviation from specification: _____

YES ___ NO ___ The lift system shall be ETL certified to ANSI/ALCTV-1998 & UL -201 minimum column capacity of 18,000 lbs., 2 column paired capacity of 36,000 lbs. and expandable to multiple pairs.

If NO, indicate deviation from specification: _____