BID OPENING DATE AND TIME

On: February 28, 2007 **AT: 10:30 A.M.**

BID NO.	PAGE	INVITATION AND BID	BIDDER MUST COMPLETE BELOW
S7D02880	1 OF 18	ADVERTISED	BIDDER AGREES TO COMPLY WITH ALL CONDITIONS OF THIS BID. UNSIGNED BIDS WILL NOT BE ACCEPTED.

This Invitation to Bid with your quotations must be received prior to the above cited bid opening date and time.

DEPARTMENT **DIVISION**

OFFICE OF FLEET MANANGMENT

AWARDED

DATE

FOR THE PROCUREMENT COMMISSIONER

CITY OF PHILADELPHIA
PROCUREMENT DEPARTMENT
MUNICIPAL SERVICES BLDG.
1401 JFK BLVD, ROOM 170A
PHILADELPHIA, PA 19102-1685

NAME AND ADDRESS OF FIRM

Federal EIN/Social Security Number

BUYER: H. ORTMAN
J. WASHINGTON

TITLE OF BID: **LADDER TOWER**

GENERAL INFORMATION

This Invitation to Bid is issued under the Anti-Discrimination Policy described in the Mayor's Executive Order 02-05.

While there are no Participation Ranges projected for this Bid, bidders are prohibited from discriminating in their selection of subcontractors and are encouraged to solicit quotes from businesses on an equitable basis with other firms.

For informational purposes only, please describe any such commitments on a separate sheet and identify the subcontractor's name, MBEC Certification Number, and dollar amount/ percentage of work.

BID QUESTIONS

All questions concerning this Invitation to Bid, including specifications and conditions, must be presented prior to the bid opening date and time. Contact the Procurement Department, Public Information Center by calling **(215) 686-4721, 686-4720, or 686-4719** with questions.

BID SECURITY

When applicable, BIDDERS MUST SUBMIT BID SECURITY.

BID SIGNATURE

BIDDERS MUST SIGN PAGE 8 OF THE "TERMS AND CONDITIONS".

For City Use Only

BID SECURITY See Conditions of Bidding	MASTER BID SECURITY		CERTIFIED CHECK SUBMITTED WITH BID	
	☐ YES	☐ NO	AMOUNT	CHECK NUMBER

VOLUNTARY PARTICIPATION AND COMMITMENT FORM (BID)

Please list any MBEC Certified and SBA vendors that will participate in this bid, including the Primary Bidder.

Disadvantaged Minority (M-BE), Women (W-BE), and Disabled (DS-BE) Owned Business Enterprises[1]

Bid Number		**Name of Bidder**			
Primary Bidder	**M-BE** ❑	**W-BE** ❑	**DS-BE** ❑	**N/A** ❑	**SBA** ❑
Federal Tax Identification #					
Amount Committed		**Type of Work or Materials**			
Dollar Amount	**$**				
Percent of Total Bid	**%**				
Sub Contractor	**M-BE** ❑	**W-BE** ❑	**DS-BE** ❑		
Vendor Name					
Federal Tax Identification #					
Amount Committed		**Type of Work or Materials**			
Dollar Amount	**$**				
Percent of Total Bid	**%**				
Sub Contractor	**M-BE** ❑	**W-BE** ❑	**DS-BE** ❑		
Vendor Name					
Federal Tax Identification #					
Amount Committed		**Type of Work or Materials**			
Dollar Amount	**$**				
Percent of Total Bid	**%**				
Sub Contractor	**M-BE** ❑	**W-BE** ❑	**DS-BE** ❑		
Vendor Name					
Federal Tax Identification #					
Amount Committed		**Type of Work or Materials**			
Dollar Amount	**$**				
Percent of Total Bid	**%**				

1 M-BE/W-BE/DS-BES listed above **MUST** be certified by the MBEC prior to Bid Opening Date.

SECTION 1: GENERAL BID SUBMISSION

1.1 TITLE: **LADDER TOWER**

1.2 CONTRACT TERM: **Date of Award to One Year** ("Initial Term"), with an option to renew for up to **Two (2)** additional **One (1)** year periods, ("the Renewal Term") exercisable, at the City's sole discretion, as of the expiration of the Initial Term or then current Renewal term. The City may, at its sole discretion, renew the contract for up to three (3) months at the beginning of each renewal period(s) (the "Additional Performance Period"), if a decision has been made not to renew the contract for an entire year. Further, the City may, at its sole discretion renew the contract for up to three (3) months after all renewal period have expired, in order to prevent a lapse in coverage until a new contract is in place.

1.2.1 The City shall exercise such sole option to renew the Contract Term by issuing a letter (the "Renewal Notice") notifying the Contractor that the Contract is renewed for the Renewal Term or Additional Performance Period (identified by commencement and termination dates) that is specified in the Renewal Notice. The Contract shall be deemed to be renewed for such Renewal Term or Additional Performance Period, and Contractor shall be obligated to perform all terms and conditions of the Contract throughout such Renewal Term or Additional Performance Period, as of the effective date indicated on the City's Renewal Notice, whether or not Contractor has agreed, verbally or in writing, to such renewal of the Contract term.

1.2.2 If an individual Performance Bond and/or Labor and Payment Bond is required under this Invitation and Bid, such bond(s) shall be and remain in full force and effect throughout the Initial Term, all Renewal Terms, any Additional Performance Period, and the period of any unexpired warranty provided or required under the Contract, without notice of Contract renewal by the City to the surety or the consent of the surety thereto. It is the sole responsibility of the Contractor to ensure that such bond(s) remain in full force and effect as provided in this Section 1.2.2, and failure to do so shall be an event of default pursuant to Section 16, Default, of the attached Terms and Conditions Of Bidding And Contract.

If participation in the City's Master Performance Security Program is required under this Invitation and Bid, Contractor shall pay the required annual fee for such participation for each Renewal Term upon the issuance of the Renewal Notice.

1.3 CONTRACT TYPE: **REQUIREMENTS**

1.3.1 The following items are required in the operation of various City agencies as ordered. Exact quantities cannot now be determined but estimates thereof are listed herein. Quantities listed may be increased or decreased to meet the requirements of the City during the period of this contract. A minimum is not guaranteed. Purchase orders issued as a result of this bid will be for equipment to be delivered generally on an as-needed basis. Successful bidders are cautioned not to deliver any equipment without first being advised to do so by the ordering agency.

Purchase orders issued as a result of this bid will be for equipment to be delivered, generally, on an as-needed basis. The successful bidder(s) are cautioned not to deliver equipment unless advised to do so.

1.3.2 It is the intent of the Procurement Department to make an award for the period as stated above subject to the appropriation of funds in succeeding fiscal year/years by City Council. The City's fiscal year is from July 1st to June 30th inclusive.

Vehicles on the bid to be ordered after the end of the fiscal year are subject to the issuance of purchase orders for the following fiscal years. The City is not liable for the award involving following fiscal years' funds until such orders are issued.

The successful bidder(s) obligation to deliver on such purchase orders shall not take effect until the orders are issued. To simplify the contract procedure, however, the successful vendor will be required to furnish a Performance Bond or Performance Security Fee to cover units awarded to him.

1.4 METHODOLOGY OF ACQUISITION: **PURCHASE** only.

1.5 STATEMENT OF DIRECTION:

1.5.1 It is the intent of the City of Philadelphia to make an award for a LADDER TOWER for the Office of Fleet Manangement as specified herein during the contract period.

1.6 BID SECURITY

1.6.1 For the purpose of this bid only, paragraph 8 of the attached "Conditions of Bidding-General" is hereby deleted. Instead, bidders must submit with their bid a Bid Bond executed on the attached City Bid Bond Form in the amount of 10% of the bidder's bid.

1.7 BID INFORMATION:

1.7.1 All information concerning this bid will be contained in this bid document as issued or amended.

1.7.2 Information provided verbally by any City official shall not be binding or relevant.

1.8 BID SUBMISSION:

1.8.1 Bid information must be submitted to the City of Philadelphia no later than the time and date for the bid opening.

1.8.2 Advertised sealed bids will be received and read publicly at 10:30 AM in Room #170A, 1st Floor, Municipal Services Building, 1401 JFK Boulevard.

1.8.3 Bid should be complete and include ALL information required as described in the various paragraphs of the bid specifications.

1.8.4 COPIES OF BID SPECIFICATIONS

This bid makes reference to Procurement Department Specifications and/or Purchase Descriptions.

Bidders are requested to retain Procurement Department Specifications for future reference.

1.8.5 All pricing must be completed on the forms provided; be complete; and be in ink or typed.

1.8.6 The bid must be complete as to required bid signatures and corporate seal, and fully accept the terms and conditions contained in the bid.

1.8.7 In accordance with the City of Philadelphia's Regulations Relating to Local Bidding Preferences for Procurement Contracts", this bid may be subject to a 5% local bid preference. **In order to determine eligibility to receive the 5% preference, if applicable, bidder must be certified at the time of the bid opening and should submit the Local Business Entity ("LBE") certification number as issued by the Procurement Department.**

Further, by submission of this bid, bidder makes the following certification in connection with the grant of any local bidding preference:

"I certify, that if awarded this contract on the basis of application of the LBE preference, my company or my subcontractor, throughout the entirety of this contract, will perform the majority of the work under this contract within the geographic limits of the City of Philadelphia, and I will, or cause my subcontractor to, maintain within the City a majority of the inventory or equipment that will be used on this contract or the amount of inventory that is customary for this industry."

LBE Certification Number(s)_____

The Procurement Commissioner reserves the right to request this information as well as any additional or clarifying information at any time prior to award of the bid.

NOTE: If you wish to apply for Local Business Entity (LBE) certification, go to www.phila.gov/bids. Please provide sufficient time prior to bidding for processing of the LBE application.

1.8.8 **BID PROCESSING FEE:**

All bids submitted where the bid total is greater than $25,000 must be accompanied by the proper Bid Processing Fee. The fee shall be in the form of a separate check or money order in accordance with Paragraph 17 of the "Terms and Conditions of Bidding and Contract".

1.8.9 CONTACT PERSON:

PRE-AWARD:
Indicate below to whom in your firm questions concerning this Invitation and Bid should be directed:

Name:_____

Address:_____

City/State/ZC:_____

Telephone No.(_____)_____ Ext.:_____

Fax No.(_____)_____

E-mail address_____

POST-AWARD:
Indicate below to whom in your firm questions concerning the Contract resulting from this Invitation and Bid should be directed:

Name:_____

Address:_____

City/State/ZC:_____

Telephone No.(_____)_____ Ext.:_____

Fax No.(_____)_____

E-mail address_____

1.8.10 ALTERNATES SUBMITTED

If an alternate to any item is offered, bidder must follow instructions in Paragraph 2 of "Terms and Conditions of Bidding and Contract". State the brand name and the model number of each alternate offered.

Detailed technical information on the alternate should accompany the bid. Failure to state alternates will obligate bidder to provide material and/or service specified in the bid.

Any other product information submitted by bidder in connection with this bid is for purposes of product description, information and specification only. Bidder agrees that any additional terms or conditions contained therein, including, but not limited to, disclaimers or limitations of liability, do not become part of the bid.

1.8.11 FORMS TO BE RETURNED WITH BID:

Form #80-247B (one for each type of vehicle offered) is to be completed and returned with bid.

The Temporary Certificate shall be forwarded to the Office of Fleet Management, Attention: James Muller, 100 S. Broad St., 3rd floor, Philadelphia, PA l9l02. Bidder shall state year, make, model, body model, manufacturer's cut off date, and delivery after receipt of order.

YEAR:_____

MAKE:_____

MODEL:_____

BODY MODEL:_____

MANUFACTURER'S CUT OFF DATE:_____

DELIVERY ARO:_____

1.8.12 BID QUESTIONS OR PROBLEMS

In preparing the bid response, should any bidder need clarification on the bid requirements, identify a discrepancy in the specifications, determine that a specified product has been discontinued or an alternate procedure is advised, etc.; then the bidder is STRONGLY encouraged to bring these issues to the attention of the Procurement Department's Public Information Unit prior to the bid opening by calling (215) 686-4720 or 4721, or by faxing (215) 686-4716. Questions, whether phoned or faxed, should be received no later than seven (7) calendar days prior to the scheduled opening date of the bid. The City reserves the right to only respond to those questions submitted prior to the stated deadline. If it is in the City's best interest to do so, the bid MAY be amended to reflect the proposed changes/modifications. Exceptions taken DO NOT obligate the City to change the specifications. The City of Philadelphia, Procurement Department will notify all bidders in writing, by addendum duly issued, of any interpretations/changes made to specifications or instructions. The City will not accept responsibility for oral instructions, suggestions or changes by any City agency.

Otherwise the successful bidder will have to provide the product or service exactly as defined in this bid, and in accordance with the directions in Sections 2 & 5.

1.9 BIDDER QUALIFICATION:

1.9.1 All bidders must be a bona fide manufacturer of, or dealer in, the article specified within the bid. To demonstrate this, bidders should submit the following reference information with their bid. References provided should be pertinent to the commodity requested in this Invitation and Bid and demonstrate the bidders ability to perform on a contract of this size and scope.

Please note that reference information in each section must be completed. Failure to submit this information may result in the bidder's disqualification.

SECTION 1:

Customer Reference other than an employee or department of the City of Philadelphia, (excluding suppliers or financial institutions).

Firm Name:	_____	_____	_____
Contact Name:	_____	_____	_____
Phone No.:	_____	_____	_____
Type Work:	_____	_____	_____
Years dealing w/your firm:	_____	_____	_____

SECTION 2:

Previous purchase order(s)/contract(s) with the City of Philadelphia; (State "None" if applicable).

Dept. Name:	_____	_____	_____
Contact Name:	_____	_____	_____
Phone No.:	_____	_____	_____
PO#/Contract#:	_____	_____	_____
Items:	_____	_____	_____

1.10 MANDATORY PRE-BID MEETING

A **MANDATORY PRE-BID MEETING** for all interested parties will be held on **Tuesday, February 20, 2007** at 1PM in the Municipal Services Building, 1st Floor, Room 170A, 1401 JFK Blvd., Philadelphia, PA 19102.

The purpose of this meeting is to respond to questions from prospective bidders. Bidders are encouraged to submit questions in writing at this time. All questions that materially impact upon the bid process will be answered, in writing, in a formal addendum issued by the City. Oral responses by City employees or their representatives are not binding and shall not in any way be a commitment by the City.

Attendance at this Pre-Bid Meeting is Mandatory. Only bidders who attend the Pre-Bid Meeting and are subsequently qualified by the City will be eligible for award.

SECTION 2: SPECIFICIC REQUIREMENTS:

2.1 Submit pricing for each item listed below in Section 5: Pricing. Pricing shall be for the unit of measure(s) as indicated in parenthesis () and all prices shall remain firm for the life of the contract. Bidder shall submit pricing on item(s) indicated plus all options.

2.1.1 **42881-000-055**
LADDER, TOWER, (FIRE TRUCK)
PER PROCUREMENT DEPT. SPEC. 41-V-20M:86
AND SPEC. CODE 32846B.13.
OMIT SECTION 19.0, PRE-PRODUCTION INSPECTIONS EA

OPTIONS

2.2.2 **42881-009-065**
ITEM 19.1, PRECONSTRUCTION EA

2.2.3 **42881-009-066**
ITEM 19.2, INSPECTION COMPLETED CHASSIS EA

2.2.4 **42881-009-067**
ITEM 19.3, INSPECTION PRE PAINT EA

2.2.5 **42881-009-068**
ITEM 19.4, INSPECTION, FINAL, COMPLETION EA

GENERAL SPECIFICATIONS:

2.2 DELIVERY INSTRUCTIONS:
Department will contact vendor with delivery instructions.

All Invoices Against This Purchase Order Should Be Mailed To:
Office of Fleet Management
Accounting Unit, 3rd Floor
100 South Broad Street
Philadelphia, PA 19110

All motor vehicles, which are furnished by the awarded vendor, must be manufactured in the United States, Canada or Mexico. Motor vehicles consist of passenger cars and trucks in accordance with 75 Pa. C.S. §102, known as the Vehicle Code. A motor vehicle is manufactured in the United States, Canada or Mexico if a substantial majority of the principal components are assembled into the final products in an assembly plant in the United States, Canada or Mexico. The awarded contractor shall be prepared to prove that the motor vehicles which will be or have been furnished to the City of Philadelphia are, or were, in fact, manufactured in the United States, Canada or Mexico in accordance with Sections 3731-3736 of the Commonwealth Procurement Code (62 Pa. C.S. §§3731-3736, with applicability to the City of Philadelphia at 62 Pa.C.S. §3102), known as the Motor Vehicle Procurement Act. No payment shall be made to the awarded contractor unless the City of Philadelphia is satisfied that the contractor has complied with these provisions and the Motor Vehicle Procurement Act.
Any payments made to the contractor, which should have not been made, shall be recoverable directly from the contractor. In addition to the withholding of payments, any person who willfully violates any of the provisions of the Motor Vehicle Procurement Act, may be prohibited by the City of Philadelphia from participation in contracts awarded by the City of Philadelphia for a period of three years from the date of the determination that a violation has occurred.

SECTION 3: BID EVALUATION AND AWARD

3.1 EVALUATION

3.1.1 Bid will be evaluated by the Procurement Department.

3.1.2 Bids will be evaluated for responsiveness to the bid specifications and for responsibility of the bidders.

3.1.3 Bids which are determined to be non-responsive for reasons of:

(i) improper bid security
(ii) improper bid execution
(iii) incompleteness
(iv) offering counter terms and conditions
(V) improper or incomplete execution of MBEC documents (if applicable)

may be disqualified by the City without notice to the bidder. The decision of the City is final.

3.1.4 Bidders whose bids are determined to be non-responsible for reasons of bidder qualification shall be notified by the City of the reasons for the determination and may contest the finding of non-responsibility through the prescribed procedures described in paragraph 12 of “Terms and Conditions of Bidding and Contract”.

3.2 AWARD

3.2.1 This Invitation and Bid shall be awarded to the lowest responsive and responsible bidder(s).

3.2.2 This Invitation and Bid shall be awarded as a whole based on the price of line item.

3.2.4 The contract award will be in the amount of the total amount bid for the item 5.1 plus a 5% contingency amount to allow and provide for technological changes, improvements or amplifications as the result of the pilot inspection, etc.

If the 5 % local bid preference is applicable, the total bid price or total section price of the certified Local Business Entity (LBE) will be multiplied by .95 and rounded to the second decimal place. The adjusted bid price of the LBE will then be used in determining the lowest responsive and responsible bidder.

Unless the Procurement Commissioner determines not to grant a preference for the reasons stated in subsection b., of the LBE Regulation, an LBE, whose bid is otherwise responsive and responsible and who has submitted the information required above, shall be granted a five percent bid preference on competitive bid(s) awards that are over $25,000.00 and awarded as a whole or by section.

3.2.5 Performance Security

If the total award amount is $500,000 or less, bidders attention is directed to paragraph 9 of "Terms and Conditions of Bidding and Contract", for the required Performance Security.

Please note however, that all awards as a result of this bid will have a minimum contract amount of $25,001.00. All awards at the $25,001.00 amount will be subject to a $50.00 Master Performance Security Fee.

If the total award amount exceeds $500,000, the Master Performance Security Program does not apply. Upon notification of award, the City will require the successful vendor to provide an individual Performance Bond in the amount of 100% of the contract award as specified in the Letter of Award. For any subsequent renewal periods, sections 1.2.1 and 1.2.2 shall apply.

3.2.6 **City of Philadelphia-Business, Corporate and Slavery Era Insurance Disclosure**

In accordance with Section 17-104 of The Philadelphia Code, the Bidder, after execution of this Contract, will complete an affidavit certifying and representing that the Bidder (including any parent company, subsidiary, exclusive distributor or company affiliated with Bidder) has searched any and all records of the Bidder or any predecessor business entity regarding records of investments or profits from slavery or slaveholder insurance policies during the slavery era. The names of any slaves or slaveholders described in those records must be disclosed in the affidavit.

The Bidder expressly understands and agrees that any false certification or representation in connection with this Paragraph and/or any failure to comply with the provisions of this Paragraph shall constitute a substantial breach of this Contract entitling the City to all rights and remedies provided in this Contract or otherwise available in law (including, but not limited to, Section 17-104 of the Philadelphia Code) or equity and the contract will be deemed voidable. In addition, it is understood that false certification or representation is subject to prosecution under Title 18 Pa.C.S.A. Section 4904.

3.2.7 Insurance

Insurance is a requirement for this bid in accordance with Paragraph 14 of the "Terms and Conditions of Bidding and Contract". No contract will be executed nor purchase order issued unless and until all required insurance certificates, in the required amount, are received. **All insurance MUST meet the following requirements:**

- Insured must be in the same name and address as the Bidder
- The insurance carrier must be rated "A" or better by AM Best
- The certificate holder must be the City of Philadelphia, and specifically named as an additional insured on the certificate the "Description of Operations section".
- Certificate must be signed by an authorized representative of the insurance company/carrier

All certificates are to be sent to the Office of Risk Management, One Parkway, 1515 Arch Street, 14th Floor, Philadelphia, PA 19102, Attn. Debbie Lawton or FAX to (215) 683-1705.

SECTION 4: CONTRACT MANAGEMENT

4.1 CITY OF PHILADELPHIA RESPONSIBILITY

4.1.1 Order Against Contracts

Subsequent to contract conformance of a Requirements bid, purchase orders will be issued at such time that the product is needed. Such purchase orders will show if delivery is to be made upon receipt of order, or only after notification by the using department.

4.1.1.1 The purchase order will be issued for unit and price not including contingency.

4.1.1.2 If during the production process the City identifies a need, the City will issue a change order. The total of the original purchase order and the change orders cannot exceed the contract total.

4.1.2 Invoices submitted shall be processed for payment upon the City's acceptance of the subject vehicle or equipment.

4.1.3 The using agencies and departments are responsible for monitoring the products delivered as described in the contract. If any problems arise, a letter should be sent to the vendor requesting resolution by a specified date. A copy should be sent to the buyer.

If vendor does not resolve the breach of contract by the requested date the matter should be turned over to the buyer.

4.1.4 ADD-ONS

The City reserves the right to add, delete or change locations; or to acquire other types of options that the vendor can supply that are similar to, but not specifically called for in this bid. The procedure for such acquisitions shall be as follows:

Procurement or the using department will obtain from the Vendor a letter (on his/her letterhead) verifying the items to be added. The letter shall include the complete description of the item, the location (if applicable), the bid number, bid scheduled number, the price to the City and the applicable contract period; and upon receipt and approval by the Procurement Department shall automatically become part of the contract.

4.2 VENDOR RESPONSIBILITY

4.2.1 Contractor may deliver only vehicle(s) or equipment as authorized in the contract and only after receipt of a purchase order or other authorized document from the Procurement Department. All orders must be in writing. Contractor shall not accept verbal delivery requests until after receipt of purchase order or other authorizing document from Procurement.

4.2.2 Contractor may deliver only vehicle(s) or equipment at the prices quoted and the quantities reflected in the contract

4.2.3 In the event that the contractor receives an order for vehicle(s) or equipment not specifically priced and incorporated into the contract, they must:

(i) bring this to the immediate attention of the Procurement Dept., and

(ii) notify the ordering agency in writing and refuse to deliver.

4.2.4 Should vehicle(s) or equipment be delivered that are not specifically incorporated and priced into the contract, and/or be delivered without purchase order, the City shall have no obligation for payment.

4.2.5 For delivery of vehicle(s) or equipment, contractor shall honor and be paid for orders placed until the close of business of the date of purchase order expiration. Delivery of vehicle(s) or equipment may occur following purchase expiration, so long as the order was placed prior to the purchase order expiration date.

4.2.5.1 Liquidated Damages For Late Deliveries

These specifications shall be subject to the following contractual provisions:

(1) Time is an essential element of this agreement and Seller agrees that deliveries of items in condition satisfactory to the Procurement Commissioner shall be completed as provided on the day(s) specified pursuant to the delivery schedule contained in specifications.

(2) For each and every day that a vehicle is late, in accordance with the delivery schedule, the Procurement Commissioner may deduct from the monies due or becoming due Seller the sum per day per undelivered vehicle specified in the bid as liquidated damages to compensate Buyer for its damages arising out of delay in delivery. The number of days of default shall be computed as including the day of default through to but not inclusive of the day when delivery is made. Provided, however, as to item delivered but rejected, the item shall be considered as non-delivered from the date on which the vendor is notified of rejection until the date the item is re-delivered.

(3) The term “vehicle” as used above shall refer to each vehicle, vehicle body, chassis, or other unit of equipment awarded to the bidder.

(4) Notwithstanding the above provisions Seller shall not be liable for liquidated damages for delays in delivery caused by Acts of God, acts of public enemy, acts of government, quarantine restrictions and general strikes throughout the industry or freight embargoes not caused by or participated in by Seller.

(5) Resort to liquidated damages provision by Buyer shall not preclude by Buyer from resorting to other available remedies for subsequent or continuing breaches by Seller.

(6) Liquidated damages will be in the amount of $50.00 per calendar day per vehicle that delivery of each vehicle exceeds the delivery schedule stated.

4.2.6 Successful bidder(s) will invoice after delivery and acceptance of vehicle(s) or equipment by the City to the address shown on purchase order.

4.2.7 Escalation Price

Vendor shall provide current model year vehicles at the prices set forth in Section 5. For subsequent model years, the vendor may increase or decrease the price provided that:

Next model year vehicle and optional pricing will be based on the percentage difference between the new dealer cost sheet and pricing level and the dealer cost sheet and pricing level effective on the date of the bid opening. This proportional (percentage) increase or decrease will be applicable to the contract price for the current model year vehicle and/or option, thus establishing the new price next model year vehicle and options.

Notice of any price changes in the dealer cost sheet and pricing level established by the Manufacturer shall be given in writing to the Procurement Department, Department of Finance and the Controller Office. This notice must be accompanied by the notice from the manufacturer to the vendor showing the price changes. The City reserve the right to review the propriety of the price rise and cancel the contract at its discretion.

In no event shall the increased prices exceed the dealer's cost sheet and pricing level for vehicles under similar terms and conditions.

4.2.8 At the conclusion of this contract, Contractor agrees to cooperate with any incoming vendor on a transition plan to ensure an orderly changeover of responsibilities.

4.3 VENDOR ACCEPTANCES - IN SUBMITTING AN EXECUTED BID, THE BIDDER AGREES TO THE CONTRACT MANAGEMENT PROCEDURES IN THIS SECTION.

PRICING SCHEDULE SPEC CODE 32846B.13

PROJECTED PURCHASES OVER FIRST YEAR 1 UNITS

REQUIREMENTS CONTRACT WITH OPTIONS FOR TWO (2), ONE (1) YEAR RENEWALS.

SECTION 5.1

5.1 UNIT AS PER SPECIFICATION
OMIT SECTION 19.0, PRE-PRODUCTION INSPECTIONS $_____

OPTIONS

5.2 ITEM 19.1, PRECONSTRUCTION $_____

5.3 ITEM 19.2, INSPECTION COMPLETED CHASSIS $_____

5.4 ITEM 19.3, INSPECTION PRE PAINT $_____

5.5 ITEM 19.4, INSPECTION, FINAL, COMPLETION $_____

ALL ITEMS IN SECTION 5.1 MUST BE BID

“BASIS OF AWARD FOR SECTION 5.1 WILL BE ON THE UNIT PRICE, THE COST OF ITEM 5.2 THROUGH 5.5, PRE-PRODUCTION INSPECTION TRIPS, SHALL NOT BE CONSIDERED FOR BASIS OF AWARD”

CITY OF PHILADELPHIA

BID BOND

FOR CITY OF PHILADELPHIA BID NUMBER: _____
(Please Fill In)

KNOW ALL MEN BY THESE PRESENTS, THAT WE _____
_____ as Principal
(hereinafter called the "Principal Obligor"), and
_____
(as Surety) are jointly and severally held and firmly bound unto The City of Philadelphia, in the sum of **TEN PERCENT (10%) OF THE GROSS AMOUNT OF THE BID** lawful money of the United States of America, to be paid to the said City of Philadelphia, its successors and assigns; to which payment, well and truly to be made we do bind ourselves and each of us, our and each of our successors and assigns, jointly and severally, firmly by these presents.

Sealed with our seals and dated the _____ day of _____two-thousand and seven(2007).

WHEREAS the above bounded Principal Obligor, submitted a bid pursuant to the above-referenced bid number to provide certain goods, services, or equipment to the City of Philadelphia.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH, That if the City of Philadelphia shall accept the bid of the Principal Obligor and the Principal Obligor shall enter into a contract with the City in accordance with the terms of such bid, and furnish such bond or bonds as are specified in the bid documents with good and sufficient surety, for the faithful performance of the contract; or in the event of the failure or refusal of the Principal Obligor to enter into such contract and give such bond or bonds, if the Principal Obligor shall pay to the City the difference between the amount specified in said bid and such larger amount for which the City may legally contract with another party to provide the goods, services, or equipment required by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

And for the doing of these acts this instrument or a copy thereof attested as aforesaid shall be full warrant and authority.

CORPORATE SEAL: **PRINCIPAL OBLIGOR:**

_____ **(SEAL)**
President/Vice-President

_____ **(SEAL)**
Secretary/Treasurer

SURETY SEAL: **SURETY:**

_____ **(SEAL)**
Attorney-In-Fact

INSTRUCTIONS:

(1) ALL VENDORS MUST UTILIZE THIS BID BOND FORM WHEN SUBMITTING A BID TO THE CITY.

(2) IF PRINCIPAL OBLIGOR IS AN INDIVIDUAL OR PARTNERSHIP, BID BOND SHOULD BE SIGNED BY OWNER OR AUTHORIZED GENERAL PARTNER. PLEASE IDENTIFY ON THE BID BOND THE TYPE OF BUSINESS (E.G. INDIVIDUAL PROPRIETORSHIP OR PARTNERSHIP) AND TITLE OF PARTY EXECUTING THE BID BOND.

(3) BID BOND MUST BE EXECUTED BY A SURETY COMPANY DULY AUTHORIZED AND LICENSED TO ACT AS SURETY BY THE PENNSYLVANIA INSURANCE COMMISSIONER PURSUANT TO THE LAWS OF THE COMMONWEALTH OF PENNSYLVANIA.

BID No.	ITEM No.	QUANTITY

CHASSIS

MAKE	MODEL NO.	WHEELBASE

ENGINE

MAKE	MODEL	DISPL. (CU. IN.)	NO. CYL	MAXIMUM NET H.P.	GOgoverned RPM

TRANSMISSION

MAKE	MODEL NO.	TYPE

SPEED RATIOS						NO. PTO OPENINGS

CLUTCH

MAKE	NOMINAL DIAMETER	TYPE
		☐ Single Disk ☐ Twin Disk

AXLES

	MAKE	MODEL NO.	CAPACITY AT GROUND
FRONT			Lbs.
REAR	MAKE	MODEL NO. RATIO	CAPACITY AT GROUND Lbs.

FRAME

SECTION MODULS	MAX.RESISTING MOMENT	YIELD STRENGTH.MIN
	Inch-Lbs.	Lbs./Sq.In.

SIDE RAIL DIMENSIONS

STEERING

TURNING RADIUS	POWER (MAKE) (MODEL)
FT.	☐ NO ☐ YES

WHEELS

FRONT-MAKE AND RIM SIZE	REAR-MAKE AND RIM SIZE

TIRES

	NO.	SIZE	PLY RATING	CAPACITY	TYPE	CORD MATERIAL
FRONT				Lbs.@ Psi.	☐ Tube ☐ Tubeless	
REAR	NO.	SIZE	PLY RATING	CAPACITY Lbs.@ Psi.	TYPE ☐ Tube ☐ Tubeless	CORD MATERIAL

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LADDER TOWER

Modifications to the Standard Specification 41-V-20M:86 for Specification 32846b.13

TYPE	**95 - 100’ Ladder Tower**
GVWR	**73,000 lbs. (Approx.)**
SPEC. CODE	**32846b.13**
REF. PURCH. DESCRIPTION	**4-V-20M:86**
VOCATION:	**Emergency Fire Fighting Response**

Intent of Specifications

It is the intent of these specifications to cover the furnishing and delivery to the Purchaser of a complete new, current year, latest model, top of the line aerial fire apparatus equipped as hereinafter specified. With a view to obtaining the best results and the most acceptable apparatus for service in the Fire Department, these specifications cover only the general requirements as to the type of construction and tests to which the apparatus must conform, together with certain details as to finish, equipment, and appliances with which the successful Bidder must conform. Minor details in construction and materials where not otherwise specified are left to the discretion of the manufacturer, who will be solely responsible for the design and construction of all features.

Bids will only be considered from manufacturers who have an established reputation in the field of fire apparatus construction. Each bidder will furnish satisfactory evidence of his ability to construct the apparatus specified, and will state the location of the factory where the apparatus is to be built. He will also show he is in a position to render prompt service and to furnish replacement parts for said apparatus. No bid will be considered from a firm, which has not been continuously engaged in the manufacture of aerial fire apparatus for a period of at least five (5) years.

Appurtenances and/or accessories not herein mentioned but necessary to furnish a complete unit ready for immediate use upon delivery shall be included and conform to the best practices known in strength, quality, material and workmanship and be subject to these specifications in full. Should the manufacturer's current published data or specifications exceed these, they shall be considered minimum and be furnished. This unit must be supply as a minimum all standard equipment of the reference model (s) listed in this specification.

All wiring shall be color or number coded and include circuit labeling throughout. Circuit breakers or fuses shall protect all electrical circuits. All chassis-to-body wiring shall be of the **DIN / WEATHERPACK** type connections. All wiring connections shall be crimped and soldered and covered with heat shrink tube.

All wiring and non hydraulic hoses and tubing throughout, shall be protected by convoluted plastic split loom. All hydraulic hoses and tubing shall be protected by a nylon abrasion sleeve covering or fastened utilizing the Hycon Clamping system or approved equal. Rubber grommets shall be supplied on all wiring and hoses when passing through any bulkheads, body panels, etc.

It should be noted that the specific requirements, as outlined below, supersede and/or modify the corresponding paragraphs in the standard reference purchase description specification. It also should be noted that any deviation of a line item must be addressed in letterform and included in the bid package.

This specification is **not meant to be restrictive. It is recognized that manufacturers may have used different methods to insure integrity if their system. Bidders may substitute, for evaluation, alternate systems and the testing programs or protocols they have conducted to demonstrate compliance of their product. (AOr Approved Equal@ Clause)**

"OR APPROVED EQUAL"

The mention in the specifications of apparatus, equipment or material by brand name or by such specified description of the same as is hereby made, is intended to convey to the bidder's understanding, the degree of excellence required. Any article, equipment, or material which will conform to the standards and excellence so established, and is of equal merit, strength, durability and appearance to perform the desired function, and are in service with other major municipalities in the United States. The Bidder is deemed eligible for offer as a substitute. The qualifications of the offering will be judged as to their conformance with these specifications. Any equipment offered other than herein specified will be subject to a competitive demonstration and evaluation by the using department. This demonstration is to be provided on request within ten (10) working days after the receipt of bids. The result of that demonstration and evaluation will be of prime importance in the recommendation to the governing body for the final contract award.

Single-Line Responsibility

Since it is the Purchaser's desire to eliminate divided responsibility on the part of the manufacturers, the apparatus that is bid must be from manufacturers who build their own apparatus chassis, aerial devices and bodies. The apparatus that is bid must have its chassis, aerial device and body built by the bidding manufacturer of record. It is expected that the bid unit will be the bidders top of the line cab and chassis. At least ten (10) similar aerial units must have been sold and delivered of the type described herein. The apparatus chassis, body, and aerial device **MUST** be manufactured in the United States of America.

1.0 General Information

Information Required with Bid

Each Bidder will provide with his bid:

a. These General Instructions, Requirements, and Specifications sheets as a part of the Bidder's bid proposal. All questions and fill-in blanks MUST be filled out completely. FAILURE TO DO SO WILL CAUSE IMMEDIATE REJECTION OF THE PROPOSAL AT TIME OF OPENING.

These specifications will indicate size, type, model, and make of all parts, components, and equipment.

b. A list of exceptions to the Purchaser's specifications, under the following rules:

The following chassis, aerial and body specifications will be strictly adhered to. Exceptions will only be allowed if they are equal or superior to that specified, in the sole opinion of the Purchaser, and provided they are listed and fully explained on a separate page entitled: "EXCEPTIONS TO SPECIFICATIONS." The Bidder's exception list will refer to the Purchaser's specifications by page and paragraph to prevent misinterpretation. Any deviation from the following specification should be considered as an "exception" and listed as such. All exceptions not taken will be assumed by the Purchaser to be included in the Bidder's proposal, and the Bidder will conform to the Purchaser's specifications, regardless of cost to the Bidder.

PROPOSALS TAKING "TOTAL EXCEPTION" TO THE PURCHASER'S SPECIFICATIONS WILL NOT BE ACCEPTED.

c. The number of calendar days required to deliver an apparatus from the time of contract acceptance.

d. State the time frame for which the Bidder's price will remain valid.

IMPORTANT NOTE:

Any Bidder who does not understand any of the specifications and/or requirements, or who wishes to present a question on the same, will do so in writing to the Purchaser. Verbal answers will not be binding.

Performance Tests and Requirements

A SCAAN Analysis of the proposed vehicle will be supplied by the bidder when the bid is submitted.

A road test will be conducted with each delivered apparatus fully loaded on a continuous run of ten (10) miles that will be made under all driving conditions, during which time the apparatus will show no loss of power or overheating. The transmission drive shaft or shafts, and rear axles will run quietly and be free from abnormal vibration or noise throughout the operating range of the apparatus. The successful Bidder will furnish a weight certificate showing weight on the front axle, rear axle and total weight for the completed apparatus at time of delivery.

The City will utilize NFPA 1901, 2003 or latest edition for all performance requirements except for the percentage of grade. The percentage of grade shall remain in point number seven. The City would prefer apparatus to meet the more robust requirements below, if possible:

1. The apparatus must be capable of accelerating to 35 MPH from a standing start within 25 seconds on a level highway without exceeding the maximum governed speed of the engine.

2. The apparatus must be capable of accelerating to 50 MPH from a standing start within 18.9 seconds on a level highway without exceeding the maximum governed speed of the engine.

3. The service brakes will be capable of stopping the fully loaded vehicle in 35 feet from a speed of 20 MPH on a level concrete highway.

4. The apparatus, fully loaded, will be capable of obtaining a speed of 55 MPH on a level concrete highway with the engine not exceeding its full load governed RPM.

5. The apparatus will be tested and approved by Underwriters Laboratories, Inc. in accordance with their standard practices.

6. The Manufacturer will furnish copies of the third party aerial testing certification, the engine manufacturer's current Certified Brake Horsepower curve, and the Manufacturer's Record of Construction Details when delivered.

7. Performance on a grade of not less than 9%, on a hard surfaced road, must meet the following criteria. Forty (40) mph will be the minimum acceptable speed for the uphill performance with the vehicle transmission in the normal "drive" position. Twenty (20) mph will be the maximum acceptable speed for the downhill performance test with the vehicle in no less than second gear with the Jake brake on the high setting.

8. Aerial performance test. The aerial ladder, with stabilizers set, shall be capable of being raised from the bedded position to maximum elevation and extension and rotated 90 degrees within 120 seconds. Two or more of these functions shall be permitted to be performed simultaneously.

Failure to Meet Tests

In the event the apparatus fails to meet the test requirements of these specifications on the first trials, second trials may be made at the option of the Bidder within 30 days of the date of the first trials. Such trials will be final and conclusive, and failure to comply with these requirements will be cause for rejection. Failure to comply with changes as the Purchaser may consider necessary to conform to any clause of the specifications within 30 days after notice is given to the Bidder of such changes will also be cause for the rejection of the apparatus.

Permission to keep or store the apparatus in any building owned or occupied by the Purchaser or its use by the Fire Department during the above specified period with the permission of the Bidder will not constitute acceptance.

Technical Evaluation

Technical evaluation will be based upon the ability of the Bidder to meet or exceed the minimum requirements set forth in the specifications during the expected life of the apparatus bid. Estimates concerning the ability of the fire apparatus to perform accordingly will be made by the Purchaser.

1. Quality of workmanship, materials, and components that are used in construction of fire apparatus.

2. Functional design of fire apparatus.

3. Warranties.

4. Any other factors the Purchaser deems to be relevant.

Addenda and Interpretations

No interpretation of the meaning of the specifications or other contract documents will be made to any Bidder verbally. Every request for such interpretation will be in writing and addressed to the Purchaser, and must be received at least ten (10) days prior to the date fixed for the opening of the bids to be given consideration. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be mailed by certified mail to all prospective Bidders not later than five (5) days prior to the date fixed for the opening of bids. Failure of any Bidder to receive any such addendum or interpretation will not relieve any Bidder from any obligation under his bid as submitted. All addenda so issued will become a part of the contract documents.

User's List

The Bidder will provide the Name, Address, and Telephone Number of at least ten (10) similar aerial units that have been manufactured and delivered to Fire Departments in the United States. The Bidder will also indicate the full name of a responsible person to contact at each Fire Department.

MODIFICATION TO STANDARD SPECIFICATION

2.0 APPLICABLE SPECIFICATIONS

All line set ticket (actual part numbers and descriptions used in manufacturing), service, parts, operator, and preventive maintenance manuals will be provided in a computer readable media. Acceptable file formats are: ASCII, Word Perfect 6.X, Microsoft Word 7.X, Microsoft Excel, and Lotus 5.X (or previous versions of these programs), if available.

2.1 Provide two (2) line set tickets for each unit delivered.

2.2 Criteria and Code Conformance

The aerial apparatus will be designed to conform to the intent of the City of Philadelphia **Procurement Department Specification**, **41V-20M:86** or latest edition and NFPA 1901 Standard for Automotive Fire Apparatus, latest edition.

The following additional design criteria will be applicable to this specification to the extent specified herein:

American Society for Testing and Materials (ASTM) A-36 Specification for Structural Steel

Society of Automotive Engineers, Inc.(SAE) SAE Handbook

American Welding Society (AWS) AWS014.4-77 Classification and Application of Welded Joints for Machinery and Equipment

American Society of Non-Destructive Testing (ASNT)ASNT Guidelines; Procedure SNT-TC-1A.

The aerial device will be designed, fabricated, and tested in accordance with these codes and specifications.

The apparatus will comply with all applicable requirements of the Federal Motor Vehicle Safety Standards in effect at the time the contract is awarded.

3.0 CAB AND CHASSIS

3.1 CUSTOM CAB, FOUR-DOOR ALUMINUM

The cab shall be designed and engineered specifically for the rigors and ergonomics of emergency response. The cab and chassis shall be designed, engineered and assembled as a premium quality, integrated unit which provides for safe and comfortable entry and egress of firefighters properly clothed in full protective gear. Safe and comfortable transport shall be afforded each occupant who is properly seated and restrained.

The interior trim shall be tooled to facilitate serviceable component access. Interior surfaces shall be comfortable, easy to clean and long lasting under the rigors of contact with firefighter's clothing and personal safety equipment.

The cab and chassis, defined as an "incomplete vehicle", shall meet and/or exceed all applicable FMVSS and FMCSR, Title #49, U.S. Code Requirements for vehicles domiciled in the United States and all applicable CMVSS and Canada Transport Regulations for vehicles domiciled in Canada.

3.1.1 CAB CONSTRUCTION AND DIMENSIONS

The cab shall be an all aluminum structure utilizing tooled stampings in all contoured areas to prevent large zones of heat-affected metal adjacent to welds. All metal joints shall be caulked. The cab design shall not require the use of body fillers to achieve smooth contours or flat surfaces.

The maximum cab outer skin dimension shall be 98". With appurtenances including door hinges, fenders, cab trim, hand rails and warning lamps, the outer dimension shall not exceed 102" without mirrors and 119" overall width including mirrors.

The cab design shall be for six (6) firefighters, width and length shall permit installation of two (2) seats in the front portion and up to four (4) seats in the rear portion. The rear cab section roof shall provide a minimum of 62” of clear standing room. The cab will be of the fully open design with no divider wall or window separating front and rear cab sections. The entire roof shall be free of indentations.

The cab shall be completely insulated against heat and sound intrusion. The cab roof, side and front walls shall be covered with closed cell foam insulation. The cab floor shall be completely covered by a heavy ribbed vinyl floor mat or a pebble textured flooring. The floor shall be insulated to minimize exterior noise intrusion while maximizing control of cab interior temperature, with optimal glass area. Cab interior noise shall not exceed 90 db at 45 mph when the engine fan is not engaged.

Provide brushed Stainless steel kick plate approximately 8” high inside rear cab area on back wall or in areas of high traffic. Provide brushed stainless steel protection to be formed at outside rear cab corners from base of door to paint line.

3.1.2 CAB DOORS AND STEPS

The cab doors will be equipped with heavy-duty door latching hardware, which comply with FMVSS 206. The mechanics of the door operation will use rod linkage for positive operation. Interior and exterior paddle-type latch handles will be provided when available. Provide door opening limiting straps.

The doors shall have the capability of being lockable from the interior by means of a push-pull tab only when the door is closed.

The cab doors will be of the “barrier” style.

All front and rear doors will be equipped with operating windows, mechanical or electric, and when open no glass may protrude the door trim. Front doors must open full length of window, rear door window glass in down position may have a protection device.

A molded grab handle will be provided on the interior of each cab door to assist in cab entry.

Polished stainless steel scuff plates will be installed on the inside of all doors extending from the bottom of the door to the middle of the door or higher.

The cab shall be equipped with a bolt-on, expanded metal first step mounted under each cab door. The steps shall be contoured to the radius of the cab fender and shall protrude from the cab the same distance as the fender. The steps shall have exposed, safety grate. An enclosed second step shall be provided below the cab floor level. The first step shall be Approx. 8.5" deep x 25" wide and 20.75" from ground. The second step shall be Approx. 8.25" deep x 25" wide and 11.5" above the first step and 8.5" below the floor of the cab.

3.1.3 FRONT CAB SECTION

The windshield slope in combination with its proximity to driver and officer seating positions shall provide optimal upward visibility to identify overhead obstructions at scene locations.

Additionally the officer and driver shall be able to see the ground surface approximately 11.5 feet in front of the cab.

3.1.4 CAB GLASS

Tinted, laminated safety glass will be provided for the cab's fixed windows. Tinted, tempered safety glass will be provided for the cab's door windows.

The side windows of the cab/canopy between the front and rear cab doors will be of the sliding type for additional ventilation.

The cab will be equipped with two non-opening rear windows, one on each side of the apparatus, positioned to allow the rear cab occupants to check for traffic before opening the rear doors.

The windshield shall be a two (2) piece design.

3.1.5 CAB ACCENT MOLDING

The cab shall have accent molding on the front, rear and sides of the cab below the windows and windshield.

3.1.6 CAB INTERIOR

The interior will provide a work environment that provides safety, comfort and ease of communication. It will be engineered to meet the NFPA standards for noise levels, control accessibility, and visibility.

The cab will be insulated with noise barrier material in the roof, rear cab and cab doors.

A removable headliner will be provided in the front and rear cab sections.

An aluminum tread plate floor covering material will be provided in the crew section of the cab. The floor covering will have an acoustical backing.

The cab entrance step well areas will be covered with a 1/8-inch bright aluminum tread plate, with a grip strip type aluminum extrusion material used to trim around each step well where the pebble grain flooring and aluminum tread plate join.

The cab interior will be fully protected with a durable covering, including walls, doors, engine cover and the dashboard. The interior cab trim and upholstery will be of high-grade padded 40 oz. vinyl, charcoal in color or a high quality composite material of the same color shall be acceptable

A brushed aluminum storage bin, with knock trim on edge large enough to hold and include a mechanism to secure four (4) 3” thick x 11” wide x 12” high 3-ring binders will be provided in the cab.

An aluminum clipboard will be provided.

A certified bracket for one (1) halligan tool will be installed on the lower rear wall inside the cab. Location TBD at pilot inspection (ref. **Ziamatic**).

A certified bracket for two (2) pick head style fire axes (6 lbs.) to be installed on the rear wall opposite the halligan mount.

3.1.7 ENGINE ENCLOSURE

The enclosure will be covered in a composite material to match the rest of the cab interior. The engine compartment side of the enclosure will be insulated to reduce noise and heat from the engine compartment from penetrating into the cab interior.

The engine enclosure will have access doors that will permit daily fluid checks and filling from within the cab interior, without requiring the cab to be tilted.

3.1.8 SWITCH PANEL

The cab shall have a switch panel with one (1) master and ten (10) rocker switches

locations as required. The panel shall be mounted within easy reach of both front seats. If cab design does not allow for this a split design may be offered, however final decision will be made by the City if the design conforms to the Fire Departments needs.

The panel shall include "Compartment Door Ajar" warning lamps one (1) amber for body and one (1) red for cab. The warning lamp and buzzer shall be activated when the engine is running and parking brake released.

3.1.9 DARK CHARCOAL COLOR INTERIOR

The cab interior shall be a "Dark Charcoal" color. Accent trim shall also be dark charcoal. The following interior components shall be consistent in material and color:

1. HEADLINER : Dark charcoal padded vinyl

2. ENGINE TUNNEL: Dark charcoal composite material

3. DOORS: Dark charcoal composite material, upper panel and brushed stainless steel/aluminum for ¾ door

4. SEAT UPHOLSTERY: Color coordinated 44-ounce vinyl bolster and headrest – Dura-wear

5. VISORS: Black padded vinyl

6. GAUGE PANEL: Color coordinated

7. OVERHEAD CONSOLE: Dark charcoal molded composite

8. FLOOR MATS: Officer/Driver: Black ribbed vinyl mats or pebble textured flooring

9. REAR INTERIOR WALL BACK OF CAB : brushed aluminum

3.1.10 DRIVER'S SEAT

The driver seat shall be an H.O. Bostrom FireFighter Sierra high back air 150 FX with lumbar support. The seat shall be readily adjustable by the driver in accordance with SAE J1517.

3.1.11 OFFICER SEAT

The officer seat shall be an H. O. Bostrom "Firefighter Tanker" 450 high back, non-suspension SCBA seat with a full seat cushion and 6" of fore/aft travel. The seat base shall be large enough to contain a two-way radio power unit and it shall be equipped with a bottom-hinged door, complete with a twist-to-lock latch.

3.1.12 CREW SEATS, REAR FACING

The rear cab area shall contain two (2), one each side, H. O. Bostrom "Firefighter Tanker" 450 SCBA high back non-suspension rear facing seats. They shall be mounted behind the driver and officer seats. A minimum of 40 inches overall height is required above each seat.

3.1.13 CREW SEATS, FORWARD FACING

The rear cab area shall contain two (2) H.O. Bostrom "Firefighter Res-Q-Back" 450 SCBA forward facing high back non-suspension seats. The two (2) seats shall be mounted at the center of the back wall on an aluminum storage riser.

3.1.14 VINYL SEAT COVERS

All seats all positions shall be covered with solid color flat finish 44 ounce flat vinyl, dark charcoal. Dura-ware

3.1.15 CAB TILT MECHANISM

The entire cab shall tilt up, 35 to 50 degrees, providing access to the drive train for maintenance and repair. The cab shall pivot at the front, raised by dual hydraulic cylinders with a mechanical lock and a push button control with plug-in tether cable, minimum 8ft.

The hydraulic cylinders will be equipped with a velocity fuse that protects the cab from accidentally descending when the control is located in the tilt position.

The cab lift system will be interlocked to the parking brake. The cab tilt mechanism will be active only when the parking brake is set. If the parking brake is released the cab tilt mechanism will be disabled. Power will not be supplied directly to the operating solenoid, but will go through a switched relay in order to prevent uncontrolled raising of the cab. A remote cylinder lock release shall be located in the left hand front door step well. The tether cable shall allow the operator to have a view of the area around the cab while the cab is in motion.

A 12-volt motor driven pump with a self-contained hydraulic oil reservoir and a manual back-up pump shall be provided. A monitor light shall warn the driver if the cab is not latched.

Provide an audible alarm when either raising or lowering cab.

3.1.16 CAB FENDERS AND WHEEL WELL LINERS

The cab shall be equipped with polished stainless steel fender extensions that fit into the radius of the cab fender well. Aluminum bolt on wheel well liners shall be provided. The fenders shall provide protection against water and mud spray onto the cab from the front tires.

3.1.17 SLIDING SIDE WINDOWS

The cab shall have sliding side windows, one (1) each side between the front and rear doors. Both windows shall be sliding glass type that can be operated from the crew section. They shall be tinted and include solar management treatment.

3.1.18 WINDOW CONTROLS

The four (4) cab doors shall be equipped with manual roll-up windows. Each window shall be operated by an automotive type handle, positioned within easy reach of personnel.

3.1.19 FIXED REAR WINDOWS

There shall be two (2) 12" wide x 7" high fixed windows mounted one (1) each side of the rear cab wall. The windows shall be tinted and include solar management treatment.

3.2 APPARATUS DIMENSIONS

The intent of this specification is to procure a maneuverable and compact aerial apparatus. With this in mind, the apparatus proposed may be smaller but will not exceed the following maximum dimensions:

Overall Height:	11 ft. MAX.
Overall Length:	48 ft. MAX
Overall Width: (see 3.1.1 also)	102 in. MAX
Est. Weight at time of delivery:	70,000 lbs., approx.
Outrigger Spread	18 ft. MAX

3.2.1 WHEELBASE

The chassis wheelbase shall be approximately 240 - 250 inches.

3.3 PAINT AND FINISH SPECIFICATIONS

The PPG Delta, Low V.O.C., polyurethane finishing system, or equal, will be utilized on entire apparatus. Paint numbers provided will also be utilized on entire apparatus.

All exposed welds will be ground smooth for final finishing of areas to be painted. All removable items, such as brackets, compartment doors, etc. will be painted separately to insure finish paint behind mounted items. All compartment-unwelded seams exposed to high moisture environments will be sealed using permanent pliable caulking prior to finish paint.

The inside and underside areas of the complete body assembly will be painted job color prior to the installation of the body on the chassis.

The interior of the compartments will be finish painted white with black splatter color a scuff resistant webbing type paint of a contrasting color applied over the painted surfaces.

The chassis frame rails, suspension and axles will be painted job color with a Polyurethane base paint prior to installation of any air lines or electric systems to ensure proper serviceability.

The body will be finish sanded and prepared for final paint. Upon completion of final preparation, the cab exterior and body will be painted utilizing the highest quality, state of the art, low V.O.C., polyurethane base paint. Finish paint will be applied in multiple coats to ensure proper paint coverage with a high gloss finish.

The cab exterior will be finish painted by the chassis manufacturer to match the customer requested color.

3.3.1 TWO TONE CAB PAINT

The cab shall be painted two (2) colors. The paint break line shall be approximately 3” below the window line. The break line shall be trimmed with a one-inch (1") wide bright chrome finish trim strip mounted on a heavy wall vinyl backing. The trim strip shall encircle the entire cab. Cab paint shall be PPG base coat-clear coat system.

Upper Color: WHITE
Number: FTB91776

Lower Color: RED (Vermillion)
Number: FTB75377

One (1) pint of each exterior color paint for touch-up purposes will be supplied when the apparatus is delivered to the end user.

3.3.2 LETTERING AND STRIPING

SCOTCHLITE LETTERING

Lettering and striping will be computer generated 3M "ScotchLite", reflective acrylic vinyl appliqué with a black drop shadow. Lettering shall match existing PFD Aerial apparatus.

Computer generated lettering and striping configuration have been developed to ensure symmetrical layout design and durability, which exceeds current hand applied gold leaf standards and provides economical replacement costs.

Up to sixty (60), three (3) inch computer generated gold vinyl letters with 1/8 inch black outline will be provided to coincide with the Fire Departments existing lettering.

Up to forty (40) computer generated ten (10) inch gold vinyl letter with black outlines will be provided on each side of the aerial base section for the City's name. Fire Department shall provide photos of lettering style.

Two (2) Philadelphia Fire Department seals will be affixed to the cab's front doors. City shall provide.

UNIT NUMBERING

Up to four (4) 12" white **Scotchlite** numerals will be provided to affix to the cab sides.

Up to four (4) 12" aluminum numerals painted yellow outlined in black will be provided to be affixed to the front bumper and the rear of the apparatus. Due to engine airflow requirements Scotchlite lettering may be affixed to cab grille in place of aluminum plate.

SCOTCHLITE STRIPE

A six (6") inch high gold "ScotchLite" stripe will be provided. The stripe will be applied on a minimum of 60 percent of each side of the unit, 60 percent on the rear of the unit and 40 percent on the front of the unit. The ScotchLite stripe layout will be determined by the fire department.

3.4 VOGEL LUBRICATION SYSTEM

The chassis and superstructure shall be equipped with an automatic centralized chassis lubrication system, which must meet or exceed the following specifications:

A 12 volt DC driven pump, shall deliver the lubricant over reinforced, abrasion resistant flexible lines to spring loaded pistons as distributors (where applicable) to fittings. Cab located warning lights shall indicate non-performing trunk lines. The pump/reservoir, 6-liter capacity, shall be in an inconspicuous but accessible location, protected from inclement weather and road splash.

The distributor shall be capable of dispensing a metered amount of lubricant in the off - time of the lube cycle. There shall be an interlock which will allow chassis Vogel operation only when parking brake is released.

Rubber reinforced lines must be used throughout from pump to distributors, no steel. Provide plastic lines from distributor to grease fitting.

Ref: VOGEL MODEL KFU 6
or approved equal.

4.0 BODY AND COMPARTMENT SPECIFICATIONS

4.1 GENERAL APPARATUS BODY DESIGN CONSTRUCTION

The body side and compartment assemblies will be designed and assembled to provide maximum strength and durability under all operating conditions.

Special attention will be taken to minimize rust or corrosion on all fabricated parts and structural members of the body. All bolt on components will be provided with a dissimilar metals isolation barrier to prevent electric corrosion. All tread plate overlays will be sealed with a silicone base caulking around perimeter after installation. The body design will also incorporate removable panels to access spring hangers, rear body mounts, and fuel tank sending units.

The body assembly will be an all-welded configuration, utilizing 2" (+ or – ¼") vertical body corner radius. The body will be completely isolated from the cab module structure.

4.2 BODY FABRICATION

Each body assembly shall be manufactured from 1/8" and 3/16" aluminum using modern sheet metal fabrication techniques to ensure maximum longevity.

All enclosed compartments shall be ventilated through the use of punched louvers to allow exterior/interior air circulation.

All compartment floors shall be one-piece design with a lower door opening flange bent to produce a sweep out design. A step up flange at the door opening shall not be acceptable, due to difficulties in cleaning and entrapping water in the recessed area.

The top surface of all side compartment assemblies shall be fully enclosed with the compartment base material prior to the installation of any protection panels. Aluminum treadplate protection panels that are used as the primary compartment tops shall be unacceptable and rejected.

4.3 HARDWARE

All exterior hardware used for holding panels or tread plate will be stainless steel. All fasteners will be equipped with a lock nut or lock washer and will also be coated with "Lock-Tight" material.

NOTE: The use of aluminum pop rivets or self-tapping screws as a trim fastener will not be acceptable.

4.4 COMPARTMENTS

All compartment floors will be one-piece design and designed with the lower door opening flange bent down to produce a sweep out compartment design. Each lower compartment floor will be reinforced by a formed channel (matching the body material) welded to the underside of the compartment floor to provide maximum strength.

Compartment interiors will have a splatter paint finish.

Access panels will be provided in the rear wall of the compartments for access to hydraulic components as required.

Compartments will have louvers in the rear wall of each compartment for proper compartment ventilation.

Dri-deck or other approved floor grids will be provided to protect each compartment and shelf floor.

ALL COMPARTMENTS WILL BE SIZED SO AS TO MAXIMIZE THE AVAILABLE SPACE.

Compartments will be located and numbered as follows:

"1" compartment:	Enclosed transverse compartment across the body just rearward of the turntable and above the outrigger controls. Accessible from both sides of apparatus. This will be designed to carry a stokes basket and equipment (ropes, straps, etc.) contained in the basket.
"2" compartment:	Ahead of rear axle, left side.
"3" compartment:	Ahead of rear axle, right side.
"4" compartment:	Above front wheelwell area, left side.
"5" compartment:	Above front wheelwell area, right side.
"6" compartment:	Above rear wheelwell area, left side.
"7" compartment:	Above rear wheelwell area, right side.
"8" compartment:	Behind rear axle, left side.
"9" compartment:	Behind rear axle, right side.
"10" compartment:	Rear of body/platform access ladder, left side
"11" compartment:	Rear of body/platform access ladder, right side
"12" compartment:	Rear of body, ladder and Pike pole storage
"13" compartment:	Rear of body, single drop down door of aluminum diamond plate.

Compartments “2” through “11” will be designed to be of uniform width and maximum available depth to allow shelving and door hardware to be interchangeable.

Compartments “8” & “9” will be full height compartments.

4.5 HURST POWER UNIT INSTALLATION

Provisions will be made to mount one electric Hurst Power Unit and a 100' hydraulic hose reel. The Hurst fittings on the hose reel will be compatible with the below Hurst system. The location of the power unit & reel will be determined at the pre-construction. Provisions will also be made to provide and mount one portable Hurst Power Unit. Items that will be provided are:

1 – Light Weight Spreader	# ML-32	3 – 16’ Hoses	# JL-16FT
1 – Light Weight Cutter	# ML-75	1 – 30’ Hose	# JL-30FT
1 – Medium Size Ram	# JL-30B		
1 – Power Unit	# JL-4GBS		
1 – Manifold Block	# JL-Manifold		

4.6 ADJUSTABLE SHELVING

Compartment shelves will consist of 3/16" brushed finish aluminum, with a 2" lip on all four (4) sides. Shelves will be vertically adjustable by mounting in heavy duty aluminum uni-strut "C" channel tracking material, securely fastened to the compartment walls. Shelves will be located as follows:

- Ten (10) adjustable shelves will be provided and mounted as directed by the fire department.

- Rollout trays will consist of 3/16" brushed finish aluminum, with a 2" lip on all four (4) sides. All roll out trays will be equipped with a locking mechanism to lock the trays in the stowed and full-out positions. These locks will be easily operated by a gloved firefighter. Trays will be mounted with roller bearing, locking, slide tracks to heavy-duty angles, securely fastened to the compartment floors. Floor mounted roll-out trays will be located as follows:

- Six (6) roll out trays will be provided and mounted as directed by the fire department. 500# capacity.

4.7 ROLL-UP DOORS

Roll-up doors will be provided on all compartments in lieu of hinged compartment door, except where clear opening space will be severely limited. The roll-up doors will be constructed from aluminum-extruded slats, which will have a flexible seal between each slat for proper sealing of the door. Doors shall not be painted.

A synthetic rubber seal will be provided at each side, top and bottom edge of the door to prevent entry of dirt into the compartment.

The door will be equipped with a lift bar style mechanism, which will latch at the bottom of the door mounting extrusion.

The roll-up door assembly will be furnished with a spring-loaded, counter balance assembly to assist in door actuation.

The roll-up doors will be Rom brand roll-up doors.

4.8 COMPARTMENT FLOORS

The compartment floors will be flush with door opening to provide a sweep-out design, also to provide an unobstructed door opening and permit easy cleaning of each compartment.

Compartments designed to set on running boards or with a lip at bottom of door opening, will not be acceptable. All compartment floors will be covered with an approved rubber material. Dri-Dek or approved equal.

4.9 COMPARTMENT TOPS

Compartment tops will be covered with 1/8" polished aluminum tread plate on both sides of the body. The aluminum tread plate will have a flange downward, over the top of compartments to serve as a drip rail above the compartment doors.

4.10 ACCESS PANELS

Removable access panels will be provided in all compartments where access to hydraulic components, electrical harnesses, rear body mounts, and other components that will need to be serviced.

All access panels will be equipped with the same finish the compartment interiors will be required to have.

4.11 COMPARTMENT LOUVERS

Machine stamped ventilating louvers will be furnished in each compartment, and so located that water cannot normally enter the compartment.

4.12 DRIP MOLDING

Compartment tops over all side compartments will be equipped with a flanged edge to provide protection against water run-off. A secondary polished extruded aluminum drip molding will be provided between lower compartments and auxiliary high side compartments.

4.13 BODY TRIM

All aluminum tread plate installed on the apparatus body shall be "bright finish" with a minimum 0.125" thickness. For corrosion resistance, aluminum tread plate shall not be installed prior to paint as described in the painting section of this specification.

Aluminum tread plate shall be installed on the entire rear surface of the apparatus, front wall of the forward body compartments and the top of the side compartment assemblies, flanged out 60 degrees to form a drip edge over the compartment doors.

4.19 REAR BODY PANEL

The rear body panel support structure shall be fabricated from structural members.

A .125 inch thick aluminum tread plate platform shall be provided across the top rear of the body to enable access to the tower platform.

Two (2) 1/8" aluminum tread plate vertically hinged access doors with 12 gauge stainless steel flat panel liners shall be provided at the rear of the apparatus. The doors shall assist in keeping dirt from drafting into the rear ground ladder storage area and restrict ground ladder movement.

4.20 GROUND LADDER STORAGE

Ground ladders shall be stored in the center of the apparatus body through the structure of the aerial device, unless otherwise noted. The ladders shall be stored within the body in the rear ground ladder storage area. The ladders shall be stored in either the vertical or horizontal position on fiberglass slides with access from the rear of the apparatus.

4.21 LADDER STORAGE

The following Duo-Safety ground ladder compliment will be provided. Provide storage locations for the following:

1 - 45' three section 1525-A
1 - 35' two (2) Section 500C
1 - 28' two (2) Section 500C
2 - 16' wall w/prong feet on both ends 550C
1 - 20' wall w/prong feet on both ends 550C
1 - 12' Folding 585A
1 – 12’ Roof Ladder 575C

4.22 OUTRIGGER COVER PANELS

Highly polished stainless steel outrigger covers shall be provided. The outrigger covers shall be no wider than 15 inches so as not to prohibit extension of the outrigger between parked cars.

4.23 RUB RAILS

Protective rub rails shall be provided on each side of the apparatus, along the lower edges of the body below the compartment doors. The rub rails shall be fabricated of highly polished aluminum extrusion. The rub rails shall be attached to the body and shall protrude beyond the outer surface of the apparatus body to protect it while loading and unloading fire fighting equipment.

4.24 PLATFORM AND TURNTABLE ACCESS LADDERS

Four (4) "A" frame type access ladder arrangements shall be provided, two (2) at the front of the body for access to the turntable, one (1) each side and two (2) at the rear side of the body for access to the platform, one (1) each side. The step assemblies shall feature open grate steps constructed of aluminum material. The step assembly shall be approximately 17" wide. The steps will provide unobstructed access or egress to and from the top of the aerial body or turntable for safety of fire fighting personnel.

4.25 DROP DOWN STEP – ADDITION (S)

A drop down step shall be built into the body below each A-frame stairway. The step shall serve to provide easier access when the unit is raised upon its outriggers. An over center design assembly shall be provided to hold the step in the stowed position.

The steps shall be wired
to the "compartment open" light in the cab to indicate when the step is not stowed.

4.26 HANDRAILS

The handrails shall be constructed of 1-1/4" diameter heavy duty polished extruded aluminum tubing with three (3) fully replaceable rubber grip inserts with polished chrome-plated cast mounting brackets.

Two (2) looped handrails shall be installed on the A-frame type stairways at the front of the apparatus body, one (1) each side for access to the turntable.

Two (2) straight handrails shall be installed on the A-frame type stairways at the front of the apparatus body, one (1) each side for access to the turntable.

Four (4) looped handrails shall be installed on the A-frame type stairways at the rear side of the apparatus body, two (2) each side for access to the platform.

4.27 FENDER LINERS AND FENDERETTES

Fully removable, bolt-in, 12 gauge aluminum fender liners, front (cab) and rear, which extend into the truck frame and have vertical splash shields, inward of the wheels, will be provided. The completely washable fender liners are designed to protect the front and rear compartments and main body supports from road salts, dirt accumulation and corrosion.

The rear wheel wells will be trimmed with bolt-in, replaceable type, polished, stainless steel fenderettes.

4.28 AIR BOTTLE STORAGE COMPARTMENTS

A total of six (6) S.C.B.A. air bottle storage compartments (8" high x 8" wide x 24" deep) will be inserted into the body fender area on a 5 degree pitch. The compartments will be located with two (2) between the center of the tandem axles and one (1) at the front of each side body fender panels. The compartments will be completely rubber lined to absorb shock and help secure the bottle.

If manufactures design doesn't allow for all six bottles stored at the specified location bidder must provide a location as close to specified location as possible. City reserves right to approve or disapprove alternate locations.

Each storage compartment will be equipped with a polished aluminum door.

4.31 STORAGE AREA

A storage area will be provided in the upper section of the body below the aerial device. The entire storage area including the walls and floor will be lined with 1/8" polished aluminum tread plate. The floor will be removable to provide access to inner body framework.

5.0 CAB AND BODY EQUIPMENT

5.1.1 HEATER, DEFROSTER AND AIR CONDITIONING

Two (2) heavy duty 6" diameter defogger fans with metal blade and protective metal guards will be installed on the cab ceiling, one (1) on each side of the windshield center post area. The fans will be installed on swivel style base assemblies, which allow rotation of the fan. A three-position switch on the fan's base will control each fan, the switch will allow for "Low", "High" and "Off" settings.

The chassis will be equipped with a dual function heavy-duty heater/defroster unit rated at a minimum of 57,000 BTU/hr. and a rated airflow of 430 cfm. The unit will be equipped to re-circulate interior cab air for quick cab warm-up and defrost, or to draw outside fresh air.

Provisions will be made to provide and position heating/defrosting vents to adequately defrost the window areas as well as to evenly distribute heat throughout the cab including the front and rear foot well areas. Under seat heaters are allowed to meet heat at foot well areas in both front and rear sections.. A distribution manifold shall be provided to feed all heaters. A loop system is unacceptable.

Integral dash mounted heater controls will be provided and located in front of and to the right of the driver within easy reach. The controls will consist of a three-position blower control switch with high, low and off positions, a heat/defrost selector switch and an infinite temperature control switch with a range from hot to cold.

A "flow-thru design cab ventilation must be provided. If not available then powered ventilation must be provided.

The air conditioning system will have a <u>pad mounted</u> air compressor which shall provide a minimum cooling capacity of 66,000 BTU/hr. and a rated airflow of 650 cfm. An adequate number of vents will be provided and located to evenly cool the cab area. The controls for the rear unit will be accessible to the rear cab occupants, and be installed in a manner that will prevent damage to the control unit.

Controls for the front unit will be dash-mounted, next to the heat/defrost controls. Rear A/C switches should be installed overhead to protect from damage.

5.1.2 CAB INSTRUMENTS, GAUGES AND CONTROLS

These instruments and warning lights shall be installed in the dashboard, driver's side. Gauges and warning lights shall be of the backlit design and labeled.

Electric speedometer with odometer
Electric tachometer with hour meter
Oil Pressure gauge with warning light and alarm
Engine Coolant temperature with warning light and alarm
Voltmeter with warning light and alarm
Transmission temperature gauge with warning light and alarm
Transmission "check trans" light (electronic trans indicator)
Dual needle air pressure gauge with low air warning light and alarm
ABS and ATC warning lights, retarder warning light when specified
Jake Brake control (2 switches one on/off and a second for low/med/high)
Parking brake indicator
An electronic fuel gauge shall be provided
Low fuel level and water in fuel/water separator warning lights
Cab unlatched warning light
Alternator warning light
Low coolant warning light
Turn signal indicators
High beam indicator
Engine air filter restriction indicator light
Stop engine warning light
Check engine warning light
6" Monitor for Intec camera System, see Section 17
Two (2) 12 volt power point plug-in with cover
Ladder Power PTO Switch with indicator light
Generator Switch and indicator light
Outrigger deployed lights (1) one each outrigger
12-volt battery-on indicator

A vehicle sign/decal indicating maximum height clearance, total length and Gross Vehicle Weight. Must be dashed mounted in view of officer and driver.

5.1.3 WINDSHIELD WIPERS

The chassis shall have dual heavy-duty bus pantograph type wet arm windshield wipers, driven by electric motor(s). The wipers shall have a dash-mounted switch, which provides two speeds and for a delay function on the wipers in the event of light rain, fog or mist.

5.1.4 SUN VISORS

Up to three (3) padded sun visors will be mounted on the cab ceiling, forward of the driver's and officer's seat positions, one (1) each side. Visors must cover entire windshield space
across cab.

5.1.5 INTERIOR CAB LIGHTING

Provide one (1) dash-mounted heavy duty, adjustable stalk type map light for the officer's position.

Four (4) flush-mounted courtesy lights, with stainless steel bezels and automatic door switches, will be provided, one (1) at each step or door entrance, to illuminate upon opening any cab door.

Four (4) flush-mounted dome lights with individual switches will be located in the cab, one (1) between each rearward and forward facing seating area and one (1) next to both the driver' position and the officer's position. They will be capable of either providing red light for night vision or clear for maximum brightness. The lights will able to be controlled by a switch on each base and also by the cab door switches. White or clear lights must operate when doors are opened.

A red courtesy light mounted under the dash at the driver and officer positions shall be controlled by a rocker switch mounted on the driver's instrument panel.

5.1.6 CAB GRAB HANDLES

Three (3) interior grab rails will be provided to assist in cab entry. One (1) will be mounted on the forward door post on the officer's side and one (1) will be mounted on each rear crew cab door.

5.1.7 OCCUPANT SEAT BELTS

All seating positions shall be equipped with three-point seat belts. Driver and Officer seats shall have 7" travel vertical adjusters, if available.

5.1.8 CAB MIRRORS

The mirrors will be **Velvac** or approved equal. One (1) **Model 2010**, and one (1) 6.00" by 6.50" convex mirror will be installed on each side. The mirrors will be heated and electrically operated.

The mirrors will be positioned in a manner that will minimize "blind spots" in the driver's forward and side vision.

Where an extended bumper is required a cab-over mirror with an 8” wide view convex lens shall be mounted on the front right cab roof.

5.1.9 RUSTPROOFING

The entire unit will be thoroughly rust proofed utilizing rustproof and sound deadening materials developed and field tested by Corrosion Consultants, Inc. and applied to all of the manufacturer recommended application procedures.

The rust proofing application will provide the unit with a ten-year anti-corrosion warranty (underwritten by a third party insurance company) licensed in all 50 states.

Rust proofing will be applied during the assembly process and upon completion to insure proper coverage in all critical areas on the unit.

The following areas on the unit will be thoroughly rust proofed as a minimum:

A. The entire underside area of the cab
B. Internal areas of the cab support structure
C. Internal areas of cab sheet metal reinforcements
D. Internal areas of cab doors
E. Entire underside of fire body
F. All internal body areas, which are not finished painted
G. Between overlaid dissimilar metals
H. Special attention to internal body and cab fender areas
I. Underside of rear step and side running boards

5.1.10 EXTERIOR GRAB HANDLES

There shall be four (4) exterior grab handles, one (1) at each door opening. The grab handles shall be approx. 18” to 23-1/4" long, bright aluminum extrusion with rubber insert. The grab handles shall be in compliance with NFPA 1901, latest Edition.

5.1.11 AUXILIARY 12 VOLT OUTLETS

There shall be two (2) automotive type 12 volt auxiliary electrical outlets with covers mounted on the central dash panel for accessory items. Automatic self-resetting circuit breakers shall also be provided.

5.1.12 ADDITIONAL SWITCH

Two additional dash mounted rocker switch(s) shall be installed for additional electrical requirements, by the chassis manufacturer.

5.1.13 FLUID LEVELS

A permanent plate must be mounted in the driver's compartment, which specifies the quantity and type of fluids required including engine oil, engine coolant, transmission fluid, drive axle oil, power steering fluid, hydraulic fluid A/C type oil and refrigerant and cab tilt mechanism oil.

6.0 FRAME

The frame will be constructed to withstand the heavy requirements of the fire service and will carry a lifetime warranty.

The frame will be constructed of ASTM A-514 steel channel with a 110,000 psi (minimum) yield strength. No bracket, hanger, cross member or any other part will be welded to the frame rails.

Full-height cross members will be bolted in place using Huck-Bolt fasteners or Body bound Grade 8 nuts and bolts. The top flange will be free of bolt heads and other mounting obstructions.

To protect the strength and integrity of the frame, no notching or welding will be permitted on the upper or lower flanges of the frame rails.

The frame rails will be guaranteed for the life of the vehicle against cracks and failure.

All structural frame fasteners will be made in the USA Foreign or off-shore fasteners will not be acceptable.

Crossmembers shall be formed steel and reinforced. Crossmember spacing shall sustain the chosen Gross Vehicle Weight Rating, permit properly engineered installation of chosen chassis components and support a lifetime warranty against cracking of either rail in emergency vehicle service.

OR

The frame will be constructed to withstand the heavy requirements of the fire service and will carry a lifetime warranty.

The chassis frame shall utilize an integral dual torque tube type design. The integral torque tubes shall combine the chassis frame and the aerial torque box into a single structure. The dual torque tubes shall be fabricated of 50,000 PSI minimum yield high strength, low alloy steel. The resistance to bending moment (RBM) of the chassis frame behind the dual torque tubes shall be 13,900,000 in. lbs.

6.2 FRONT TOW HOOKS

Two (2) chrome plated eyes shall be mounted to the front frame rail extension by the chassis manufacturer at a position, which maintains an angle of approach compliant to NFPA 1901, 2003 edition.

REAR TOW EYES

Two (2) 1" thick rear tow plates with 3" diameter holes will be bolted to the frame, one (1) on each side. The tow plates will be painted red. Stainless steel trim plates will be installed around the rear tow plates.

6.3 FRAME LINER (C Channel)

A full frame liner "C" channel inner frame reinforcement shall be provided and installed. The inner liner shall be formed to a "C" channel shape to fit the contours of the mainframe rail without exceeding the flange width.

Combined, the section modulus for the 7/16" frame shall be 31.18 cubic inches, per rail, and the RBM shall be 3,432,000 pounds/foot per inch, per rail, with yield strength of 110,000 psi, per rail.

6.4 REAR FRAME OVERHANG

The chassis frame rail shave have an integral, rear frame overhang of no more than two hundred and eleven (211) inches from the centerline of the rear drive axle.

6.5 TORQUE BOX FRAME ASSEMBLY

The chassis frame to the rear of the cab shall feature a torque box type frame assembly. The torque box frame shall be constructed to withstand the heavy requirements of the fire service vocation.

The forward frame rails under the chassis cab shall be a 7/16" material formed to a "C" channel shape with 3-11/16" flanges x 11-1/8" web and "C" channel inner frame reinforcement shall be provided. These rails shall have an overall width of thirty-five (35") inches at the front suspension to provide vehicle stability. All structural frame fasteners shall be made in North America, with the top of the frame free of fasteners. The front section of the frame shall be designed to support a set of stabilizers for use with the aerial device without damage or twisting of the frame rails.

The Resisting Bending Moment (RBM) shall be 10,055,000 inch pounds,

calculated at the center of the frame. The Section Modulus (SM) of the torque box frame shall be a minimum of 201.11 cubic inches. The Section Modulus (SM) and Resisting Bending Moment (RBM) of the frame rails shall be calculated using the "Radius Method" to provide geometrically accurate frame strength data.

7.0 AXLES AND SUSPENSION SYSTEM

7.1 FRONT SUSPENSION WITH SHOCK ABSORBERS

The front suspension shall have a minimum capacity of 21,500 pounds using tapered leaf springs. Front spring bushings shall be graphite impregnated bronze spring pin with grease seals.

REAR SUSPENSION

The rear suspension shall be air ride ref. Neway. The suspension system shall have a minimum capacity of up to 52,000 pounds.

7.2 SHOCK ABSORBERS

Heavy duty, double acting shock absorbers shall be provided front & rear.

7.3 As per 41-V-20M:86

7.4 FRONT AXLE

The front axle shall be a Meritor MFS133A for reference with a minimum beam and spindle capacity of 21,500 pounds. It shall be provided with grease packed wheel bearings and seals. The axle shall provide a 45-degree cramp angle while maintaining the Ackerman principle of steering geometry.

7.4.1 FRONT AXLE HUBS

The front axle shall be equipped with Meritor cast iron hubs.

7.5 REAR AXLE

The rear axle shall be a Meritor model RT-52-185 with a fire/emergency rating of 52,000 pounds. The axle set shall include single reduction hypoid gearing and oil lubricated wheel bearings. An air operated inter-axle lock with driver-operated control and engagement light shall be provided.

7.5.1 REAR AXLE SEALS

The rear axle shall be equipped with Chicago "Rawhide" extended life oil seals.

7.5.2 REAR AXLE RATIO

A gear ratio shall be selected for the specified drive train components to provide a road speed of 65 miles per hour (+/- 2 mph).

8.0 BRAKES

8.3 AIR BRAKE SYSTEM

A dual circuit, air operated braking system, meeting the design and performance requirements of FMVSS-121 and the operating test requirements of NFPA 1901, 2003 or latest edition shall be installed. The system shall be powered by an engine mounted, gear driven air compressor protected by a heated air dryer.

The air system shall be plumbed with reinforced, color coded nylon air brake tubing in conformance to SAE J844-94, Type B and U.S.D.O.T. standards. The compressor discharge shall be plumbed with stainless steel braided hose lines with a Teflon lining.

Nylon air lines shall be enclosed in high temperature convoluted loom run along the inside frame rails, secured with non-conductive, corrosion resistant strapping mounted with stand-off fasteners. Cord reinforced rubber hose lines with brass fittings shall be installed from frame rail to axle mounted air connections. No push-on type connectors for airbrake system and/or accessories will be accepted.

The air system shall provide a rapid air build-up feature and low pressure protection valve with light and buzzer, designed to meet the requirements of N.F.P.A. 1901, 8-3.1.4, 2003 or latest edition.

No push-on type fittings shall be installed or supplied on the chassis or cab.

8.3.1 AIR TANK DRAIN VALVES

A heated automatic drain valve shall be installed on the wet tank. All other tanks shall be equipped with manual drain valves operated by stainless steel pull cables.

8.4 AIR DRYER

A Bendix model AD-IP air dryer with spin-on cartridge and heater shall be installed inside the frame rails under the cab.

8.5 ABS BRAKING SYSTEM

A Meritor Wabco, 4-channel Anti-Lock Braking System w/Traction control with six (6) wheel sensors and six (6) modulators to control and compensate braking force at each wheel shall be installed. A dash-mounted diagnostic light shall be installed.

The system shall prevent wheel lock-up during braking thereby allowing the vehicle to accomplish a controlled stop while remaining substantially in the direction of travel at the time of brake application.

Air pressure loss in the system with the parking brake applied and the engine not running will not exceed 10 PSI per hour.

Spring actuated emergency / parking brakes will be installed on the rear axle. The parking brake system must be capable of holding the fully loaded apparatus on a 20 percent grade.

The parking brake release point will be set at 60-65 PSI.

All air lines in the frame will be color-coded, reinforced nylon tubing that terminate in brass fittings. .

A provision for an air inlet will be provided in the driver's doorstep well to facilitate the charging of the vehicle air system. A 3/8" N.P.T. female bulkhead fitting will be provided for the installation of a customer-supplied quick disconnect fitting. The port will be properly labeled as to its function. A shut-off valve will be provided for the air inlet. The valve will be properly labeled.

8.6 REAR BRAKES

The rear brakes shall be heavy duty Meritor "Q-Plus" 16.5 x 7" cam type. Ferodo or equal non-asbestos brake shoe linings, specifically designed for fire and emergency severe service shall be supplied.

SLACK ADJUSTERS FOR REAR BRAKES

The rear brakes shall be equipped with HALDEX automatic slack adjusters.

PARKING BRAKE CONTROL

The control shall be a yellow push/pull air valve mounted on the central dash panel where it shall be within easy reach of both the driver and the officer.

REAR BRAKE CHAMBERS

The rear brake chambers shall be "30/30" spring brake chambers mounted on the forward side of the single drive rear axle or rearward on the rear axle of tandem drive.

8.7 FRONT BRAKES

The front brakes shall be Meritor "EX225-17" Disk type with Ferodo or equal fire & emergency severe service caliper pads.

SLACK ADJUSTERS FOR FRONT BRAKES

The front brakes when supplied as Meritor "EX225-17 does not need slack adjusters.

8.8 ACCESSORY AIR SYSTEM

An accessory air tank of steel construction will be supplied for use with the air horns and other vehicle accessories. The accessory tank will be charged through a pressure protection valve to protect the air brake system from being drained below 80 psi by the accessories.

A provision for an air outlet will be provided in the driver's door step well to facilitate the use of the vehicle's air system to supply air to accessories outside the apparatus. The air outlet will be plumbed through a pressure protection valve to eliminate the chance of undesired air pressure loss to the air brake system. A 3/8" N.P.T. female bulkhead fitting will be provided for the installation of a quick disconnect fitting. The port will be properly labeled as to its function. An air hose long enough to reach all of the tires, with a tire inflation valve on one end, will be supplied. A gate valve shut off will be provided behind the panel for emergency shut off of this line

8.9 AIR COMPRESSOR

The engine driven air compressor shall be a Bendix "BA-921" rated at 15.9 cfm airflow. The air compressor discharge line shall be stainless steel braid reinforced Teflon hose.

A pressure protection valve shall be installed to prevent the use of air horns or other air operated devices should the air system pressure drop below 80 psi (552 kPa).

The chassis air system shall meet NFPA 1901, 2003 or latest edition for rapid air pressure build-up within thirty (30) seconds from a completely discharged air system. This system shall provide sufficient air pressure so that the apparatus has no brake drag and is able to stop under the intended operating conditions following the sixty (60) seconds build-up time.

8.10 AIR COMPRESSOR COMPENSATOR

Provide a Kussmall air compressor which shall be a 120VAC Auto Pump HP model #091-9HP with output of .30 scfm at 80 psi and .35 scfm at 60 psi. This shall be connected to the shore line for operation.

9.0 ENGINE

9.2 The engine shall be an electronically controlled, turbocharged, six (6) cylinder (four-cycle) Detroit Diesel Series 60 engine developing 515 bhp at 1800 rpm. The engine will be governed at 2100 rpm. Peak engine torque shall be 1550 lb-ft at 1200 rpm.

The engine shall be 855 cubic inches (14.0 liter) displacement with bore and stroke of 5.24 inches x 6.61 inches and shall have a compression ratio of 15:1. The engine shall weigh dry 2,680 pounds without additional equipment.

The engine fuel delivery system shall consist of six (6) electronic unit injectors (EUI's), one (1) for each cylinder. Each EUI shall be capable of providing fuel injector pressure up to 28,000 psi for complete and clean combustion. The engine shall utilize Detroit Diesel Electronic Controls for engine management.

10.0 ENGINE EQUIPMENT

10.1 FULL FLOW OIL FILTERS

Engine oil filters shall be engine manufacturer branded or approved. Engine oil filters shall be accessible and easily serviced or replaced.

10.4 ENGINE GOVERNOR

Top governed speed will be 65 MPH in sixth gear.

10.5 AIR CLEANER

The engine air cleaner shall be the size recommended by the engine manufacturer and shall be manufactured by Donaldson. The air cleaner element shall be dry type, resistant to flaming embers and easily replaced by tilting the cab.

It shall have a sealed system designed to prevent water and embers from entering the intake pipe or air cleaner, especially standing water as a result of street flooding. The air intake pipe shall include a moisture evacuator to allow discharge of condensation from the intake system.

A mechanical air inlet restriction gauge shall be visible through the service access door and it shall trigger a dash mounted warning light in the event of an air inlet restriction.

10.6 ENGINE PROTECTION ALARMS

The engine shall be equipped with an alarm system for low oil pressure, high coolant temperature, and low coolant level. The system shall warn the driver of a potentially damaging engine operating condition. This warning system shall not shut down the engine or reduce power under any conditions.

10.7 ENGINE BLOCK HEATER

Provide Engine block heater, 1,000 watts minimum. Location of electrical receptacle shall be discussed at pre-build conference.

10.8 FAST IDLE

A preset fast idle set at 1400 rpm (or as otherwise required) shall be included with the electronic engine. A control switch mounted in the central dash panel shall activate the high idle feature. The high idle system will provide interlocks to prevent its activation when the apparatus is in Road gear or Parking brake is not applied.

10.9 ENGINE COMPARTMENT LIGHTS

Two (2) engine work lights shall be installed in the engine enclosure.

10.10 ENGINE STARTER

The engine starter shall be a Delco Remy 12 volt 42MT with over crank protection (OCP) and thermal protection, controlled by a dash mounted switches. The dash switches shall be as follows, one switch for battery “ON or OFF” and a second switch for Engine START and Engine OFF”.

10.11 ENGINE BRAKE

A **Jacobs Engine Brake** will be provided. A two-lever switch with On / Off and Low / Medium / High positions will be provided on the dash to control the retarder. All stages of the retarder will be activated upon let-up on the accelerator pedal. The engine brake will be interlocked to the vehicle parking brake so that it is automatically inhibited from engagement when the vehicle is in non-road operation. The engine brake will be wired in such a manner so as to illuminate the chassis brake lights when the engine brake is engaged and operating. The engine brake will interface with the ABS system to be disabled if wheel lock-up is detected.

10.12 MAGNETIC DRAIN PLUGS

The engine drain shall be equipped with a magnetic plug.

10.13 ENGINE STOP CONTROL

The vehicle shall be equipped with an ignition switch controlled engine stop.

10.14 EXHAUST

An aluminized steel muffler and .065" wall aluminized steel exhaust pipe will be provided.

All flex tubing, if utilized, will be constructed of stainless steel.

Proper insulation will be provided between the muffler, tailpipe and body.
The muffler will meet exhaust requirements of SAE J-3666 pass-by test and will be located under the frame on the right side of the apparatus.

The tail pipe will terminate on the right side of the apparatus, ahead of the rear axle, with a 30^{o} chrome extension. All exhaust piping shall be protected against damage from vibration, torque and frame flexing.

10.14.1 EXHAUST HEAT SHIELD

A heat shield shall be provided in an effort to minimize engine compartment temperatures.

11.0 TRANSMISSION

TRANSMISSION, ALLISON 4000 EVS

The chassis shall be equipped with an Allison 4000 EVS, six (6) speed automatic transmission, with mode switch for sixth gear, factory filled with Transynd fluid. It shall be equipped with ATEC operating controls and programmed for Fire Apparatus vocation, in concert with the specified engine.

An electronic oil level indicator shall be provided as well as a diagnostic reader port connection. A water to oil transmission cooler shall be provided. The transmission's sixth gear shall be an overdrive ratio, permitting the vehicle to reach its top speed at the engine's governed speed.

11.1 MAGNETIC DRAIN PLUGS

The engine, transmission and rear axle(s) fill and drain shall be equipped with magnetic plugs.

11.2 TRANSMISSION SHIFTER

An Allison "Touch Pad" electronic shift selector shall be located on the forward left side of the engine enclosure or right side of driver’s area of dash in close proximity to the power on/off, start switch and the park brake control.

The automatic transmission push-button control will be illuminated for night operation.

11.3 POWER TAKE OFF

The apparatus will be equipped with a power shift PTO driven by the chassis transmission. An indicator light will be located in the cab next to the PTO switch to show when the PTO is engaged. The PTO will only engage with the transmission in neutral and the parking brake is applied. The PTO will be a heavy-duty pressure lubricated and cooled unit for extended operations.

A converter driven PTO will be located at the manufacturers required position, top left side, of the transmission. Installation will include mounting the power take-off unit, wiring the unit and unit controls and mounting unit controls on the cab dash.

11.4 DRIVELINE

A Meritor model 18T drive line assembly utilizing half round yokes and retained needle bearings shall be dynamically balanced and installed between the transmission and rear axle.

The chassis will be provided with a drive line guard, the guard will be of the design that encircles the main drive line to the rear axle and shall attach to the frame, to contain the drive line in the event of a failure.

12.0 STEERING

12.1 STEERING GEAR

Steering gear will be the integral hydraulic type (ref.: **Sheppard** or approved equal). The system will allow for static steer in a fully loaded condition on a smooth surface while at idle. If hydraulic failure should occur, manual steering will be available, allowing the driver to control the apparatus.

A highly maneuverable apparatus is desired. The manufacturer will state the maximum that can be provided and also provide a blueprint of the proposed turning radius.

The steering system will be a closed loop system and will have no other hydraulic loads imposed on the system other than the apparatus steering and will not share hydraulic fluid with any other chassis function.

12.2 STEERING COLUMN

The steering column shall be a tilting and telescoping type, designed to collapse under impact. The steering column shall be capable of telescoping up to 2.90". It shall have infinite adjustment within its range of operation and shall be controlled by an air operated foot switch. The steering column shall have a self-canceling turn signal switch with a headlamp dimmer switch, windshield washer switch and hazard flasher controls located in the control stalk. A steering wheel minimum of 18 inches in diameter shall be provided.

12.3 POWER STEERING PUMP

The power steering pump shall be an EATON A 26 or approved equal.

12.4 POWER STEERING RESERVOIR

The power steering reservoir shall have a capacity of a minimum of (four) quarts of power steering fluid.

13.0 COOLING SYSTEM

The vehicle's cooling system will be specifically designed for a fire-service, high performance diesel engine. It will be able to provide adequate cooling during extended periods of full load operation in local ambient temperatures of -5^{0} F to 105^{0} F. It shall be extended life coolant with organic components with a typical life of 300,000 miles and can be extended to 600,000 miles with an extender.

13.1 RADIATOR

The chassis shall be equipped with a high capacity down flow 1200 square inch radiator. The radiator core shall be made of copper and brass. The radiator top and bottom tanks shall be bolt on or soldered metal tanks; non-corrosive high temperature composite not acceptable.

It will have a built in low coolant sight glass and an electronically controlled low coolant display mounted on the instrument panel.

The engine cooling system shall be capable of maintaining engine manufacturers recommended engine operating temperature during all load conditions.

The engine cooling system shall meet all test requirements for performance required by the respective engine manufacturer. The radiator core shall be compatible with all commercial antifreeze solutions.

13.1.1 RADIATOR DRAINCOCK

The radiator plumbing shall provide a draincock for coolant evacuation.

13.2 ENGINE COOLANT

Engine coolant shall be heavy-duty pre-mixed extended life ethylene glycol antifreeze. Engine coolant shall meet all requirements of engine manufacturer. Engine coolant shall provide anti-freeze protection to -30 degrees Fahrenheit.

13.3 FAN DRIVE

The radiator-cooling fan shall be an eleven-blade Kysor with a Horton Drivemaster fan clutch. The fan drive shall be rear aired. An automatic fan control shall be provided. The fan shall engage when the air conditioner system is on.

13.4 COOLANT HOSES

The chassis shall be equipped with Gates "Blue Stripe" EPDM coolant hoses. Hose construction shall provide a rubber outer wall combined with a silicone inner wall. The silicone inner wall shall prevent hose deterioration due to coolant contaminants and coolant cavitation. The rubber outer wall shall provide a superior durometer-clamping surface to prevent cold seepage. Constant torque hose clamps shall be provided for all coolant hoses of 1/4" diameter and greater.

13.5 HEATER HOSES

The chassis shall be equipped with flexible and formed hard line heater hoses to provide flow of coolant water to the front and rear heater cores. The heater hoses shall be insulated. Any heater type hose shall be of similar type as above.

14.0 ELECTRICAL SYSTEM

MULTI-PLEX WIRING SHALL BE SUPPLIED "WELDON V-MUX"

14.1 VEHICLE WIRING INTERFACE

The chassis manufacturer shall supply and install a vehicle-wiring interface for body builder wiring connections. The interface shall be mounted on the firewall. All wiring for the body must go through the interface.

The apparatus shall be equipped with a heavy-duty 12 volt wiring system. The system shall include all parts, components, switches, relays, and wiring to insure complete operation. All body module electrical equipment shall be served by circuits, separate and distinct from the vehicle chassis circuits.

The electrical system will provide ease of service with simple access to components for troubleshooting and repair. The cab design will incorporate wire runways for installation and protection of chassis and body manufacturer installed wiring harness and will provide removable panels for access.

All 12 volt wiring from the cab to the body shall be joined at a main terminal box in the body module. This panel shall allow the split of the cab and body wiring so the body module could be removed. This DC distribution panel board compartment assemble will be located in a compartment on the body and will be accessible through an access panel which will cover the panel enclosure assembly.

The panel board will provide DC electric to the electrical circuits associated with the apparatus body wiring. All body electrical circuits will be protected by correctly sized thermal circuit breakers located as close as possible to the power source.

All chassis wiring will be multi-conductor copper of a gauge rated to carry a minimum of 125 percent of the maximum current for which the circuit is protected, and will have high temperature (302 degrees F) insulation. Circuit number and function will be marked on the insulation in increments of no less than 3 inches and no greater than 6 inches.

All cables and harnesses will be neatly installed, covered with 250 degrees F (min.) flame retardant loom, and clipped with rubber protected steel clips. An independent braided sheath wiring harness enclosed in split loom plastic insulation will be provided for all electrical circuits on the body.

All wiring shall be color or number coded and include circuit labeling throughout. All chassis-to-body wiring shall be of the **DIN / WEATHERPACK** type connections. All wiring connections shall be crimped and soldered and covered with heat shrink tube.

Automatic remote thermal reset type circuit breakers will be used on all circuits. The headlight circuit breaker will be automatic reset FRYER type. The circuit protection will be located as close as possible to the power source in order to minimize unprotected runs of wiring. Each circuit breaker will be removable without having to remove brackets, buss bar, or other breaker structures.

All large terminals which have no insulation crimp will be soldered and include heat shrink tubing with sealant applied to relieve strain. To prevent short-circuiting, no metallic identification will be allowed. All terminal strips will be provided with a cover unless fully enclosed by other means.

All junction blocks will be No. 10 stud type. Printed schematic layout will be installed to identify each circuit stud=s function.

An amp draw report for the proposed vehicle will be provided with the bid. A detailed wiring diagram, which is specific to this vehicle as built, will be provided with the service manual.

A ten (10) place, constantly hot fuse panel and ground for STREAMLIGHT chargers shall be provided at the electrical distribution area. Radio suppression shall be sufficient to allow radio equipment operation without interference.

All electrical equipment switches will be mounted on a switch panel mounted in the cab, convenient to the driver. Light switches will be of the rocker type with integral indicator light to show when lights are energized. All switches will be appropriately identified by back-lighted panel mounted legend inserts.

The body wiring harness will be provided with two extra wires.

14.2 ELECTRICAL LOAD MANAGEMENT SYSTEM

A total system load manager will be installed. A LED indicator light will be installed in the console to indicate when the load shedding sequence is active. The Fire Department shall coordinate the programming of the shedding of electrical loads with the installer in accordance with NFPA requirements. An enclosed and protected power distribution relay board with selectable input polarity and load management input for the use of any load manager shall be provided. This relay board shall have visual diagnostic for negative and positive input as well as relay output. All connection terminals shall have protective covers where necessary.

The electrical package shall include: An indicating interlock module; A programmable load management device; A warning light power distribution module and an information display with system diagnostic capabilities.

14.3 ICC APPARATUS LIGHTING

Dual halogen rectangular headlights will be provided on the front of the cab, two each side, in a common bezel – one high beam the other low beam. The headlights will be equipped with an electronic “wig-wag” feature. A rocker switch in the control switch panel will activate the flashing system. All lights will be of the rubber shock mounted type where available.

All lights on the apparatus cab and body will be **LED with LED wiring harness** name brand or approved equal, activated by the headlight switch.

Two (2) amber directional turn signal arrows will be mounted on the front of the cab.

Two (2) amber directional signals will be mounted for visibility from side of vehicle of the cab.

Five (5) ICC amber marker lights will be provided above the windshield across the forward radius of the cab.

Six (6) amber clearance lights will be mounted on the lower body, three (3) each side.

Two (2) red clearance lights and two (2) red reflectors will be mounted at the lower rear side corner of the body, one (1) each per side.

Five (5) red clearance lights and two (2) red reflectors will be mounted on the lower rear surface of the body.

Polished bezels will be installed on the rear of the apparatus to group the following lights in a group of three (3) and to provide a pleasing appearance:
(final approval on rear lighting to be made by OFM and Fire Department)

a) Two (2) surface mounted largest possible diameter back-up lights will be provided on the rear of the apparatus, one (1) on each side.

b) Two (2) surface mounted largest possible diameter combination stop/tail lights will be provided on the rear of the apparatus, one (1) on each side.

c) Two (2) surface mounted largest possible diameter directional signals with amber arrow lenses will be provided on the rear of the apparatus, one (1) on each side.

14.4 INTERLOCK CONTROL AND MONITORING MODULE

The electrical package shall be equipped with an interlock module and monitoring system that can be readily configured to meet the interlock requirements of various PTO configurations, without wiring modifications from the pre-engineered harness and interconnect system. The module shall consolidate all interlock signals, relays and indicators and shall attach to the harness system through connectors. Independent relays dispersed about the apparatus for the purpose of aerial and throttle interlocks **shall not** be utilized.

The interlock module shall also control and indicate the following functions: Transmission lockup command, high idle control logic with adjustable speed potentiometer for electronic engines, engine run/starter lockout relay, cab and body "door ajar" indication with relay for "door open" alarm.

14.5 POWER DISTRIBUTION SYSTEM

The electrical package shall incorporate power distribution modules (PDM)s as an integral part of the electrical system to supply power to all loads controlled by the load management system, including all warning lights, the air conditioning system, and all interior lighting. Each PDM shall be able to switch current to circuits via plug-in replaceable relays. Plug-in automatic, self-resetting circuit breakers shall also be provided. To minimize failures and voltage drop, each PDM shall have no point-to-point wiring and shall include integral connectors so as to be a plug-in component in the electrical system.

14.6 DOOR AJAR/OPEN ALARM

In addition to a warning light in full vision of the driver and officer, a visual read out shall indicate the status and location of any cab door including tiller cab and / or compartment open or ajar.

14.7 ALTERNATOR

The alternator shall be a Leece-Neville 320 amp, pad mount, engine driven via a powerband and tensioned by a threaded rod or a belt tensioner. The alternator shall meet all applicable NFPA 1901, 2003 or latest edition requirements for performance.

14.8 BATTERIES

The battery system shall be a single system consisting of six (6) group 31, 12-volt DC heavy duty high cycle automotive batteries. The battery bank batteries shall have a group rating of 6450 cold cranking amperes (CCA) at zero. Do not isolate any batteries.

The battery group shall be transverse mounted across the frame rails or side mounted on frame in a rigid braced tray. Battery installation shall provide drainage for accumulated fluids and shall meet TMC (Truck Maintenance Council - American Trucking Association) recommended practice RP-125, for battery mounting.

A hinged access door will be installed in each canopy step rear riser for access to the batteries in case of an electrical failure to the tilt cab system.

Each battery storage tray assembly and adjacent metal parts, which may be subject to corrosion from battery leakage will be stainless steel with a flooring of dry-deck, no plywood. Ample battery ventilation and drainage will be provided.

Cables will be protected from abrasion wherever they pass through a metal compartment wall by means of looms and rubber grommets.

14.8.1 BATTERY CHARGER

The chassis shall be equipped with a Kussmaul "Auto Charge 1200" model # 091-52-12 remote battery charger with battery saver and air compressor. The charger shall charge all batteries.

The charger output shall be rated for 40 amps 12 volts DC for the battery bank. An additional 5 amp 12 volts DC battery saver circuit shall be provided to charge hand lights and other in-cab accessories. The charger shall provide remote voltage sensing to compensate the charger for voltage drops within the charging wires.

The charger shall operate on 120 volts DC, 50/60 Hz and draw a maximum of 10 amps. The charger shall have a single cab mounted bar graph charge level indicator to indicate the charger state of each battery circuit.

14.9 SUPER AUTO EJECT RECEPTACLE

Two Kussmaul "Super Auto Eject" 20 amp shoreline receptacles shall be provided. The auto eject receptacles shall be completely sealed preventing road dirt contamination and shall be mounted in the driver and officer step well below the door.

The electrical shoreline shall be automatically ejected when the engine starter circuit is engaged. A yellow spring-loaded weatherproof cover shall protect the receptacles.

14.10 12 VOLT BODY ELECTRICAL SYSTEM

All electrical lines in the body will be protected by automatic circuit breakers, conveniently located to permit ease of service. Flashers, heavy-duty solenoids and other major electrical controls will be located in a central area near the circuit breakers.

All lines will be color and function coded every 3", easy to identify, oversized for the intended loads and installed in accordance with a detailed diagram. A complete wiring diagram will be supplied with the apparatus.

Wiring will be carefully protected from weather elements and snagging. Heavy-duty loom will be used for the entire length. Grommets will be utilized where wiring passes through panels.

In order to minimize the risk of heat damage, wires run in the engine compartment area will be carefully installed and suitably protected by the installation of heat resistant shielded loom.

All electrical equipment will be installed to conform to the latest federal standards as outlined in **NFPA-1901.**

14.11 AERIAL ELECTRICAL JUNCTION COMPARTMENT

An electric junction compartment will be provided near the aerial turntable. This compartment will be recessed through the rear wall of the body to provide an easily accessible enclosure to house the entire **aerial device** wiring junction points, terminal strips, solenoids, etc. All wiring for the aerial device including outrigger, diverter valve, and swivel circuits will be enclosed in this compartment. The design of this compartment will not decrease the storage capacity area of the body in which it is located.

14.12 COMPARTMENT LIGHTS

Each exterior compartment will have One (1) Peterson #393 or equal dome light. Each light will come on automatically when the respective door is opened and the master battery switch is on.

14.13 STEP LIGHTS

Chrome plated, shielded step lights will be provided and controlled with marker light actuation and door open switch. Step lights will be located to properly illuminate all body and chassis access steps and walkway areas.

14.14 110/220 VOLT A.C. ELECTRICAL AND GENERATOR SECTION

14.14.1 110 VOLT ELECTRICAL SYSTEM

Provide a diesel driven 10 K generator, ONAN brand. Generator will have the capacity of 10,000 watts at 120/240 volt, 60Hz., single phase, must have A/C voltmeter. The generator shall be so wired that it can be activated from the electrical compartment, from the cab or independently. The power switches shall have the capability to activate the glow plugs preheat circuit, start, run and shut off. Provide Onan optional gauge display (oil, temp and volts) in electrical breaker box compartment. Provide FROG – D meter. This shall be a quad meter which monitors the generator output containing (1) voltmeter, (1) frequency meter, (1) hour meter, and (2) ammeters. Location to be discussed at preconstruction meeting.

14.14.2 OPERATIONAL TESTING

The apparatus manufacturer will perform the following operation test and will certify that the power source and any devices that are attached to the line voltage electrical systems are properly connected and in working order.

The generator will be tested in accordance with NFPA 1901 - 23.16.5

The generator when installed shall have a removable cover to protect the generator sides and from the top. This cover must allow airflow for generator operation

Generator shall be fueled from the apparatus fuel tank and must be able to draw fuel until tank is at ¼ level from empty.

Provide Load center in one of the compartments. Provide a master breaker and one breaker per circuit. Decision shall be made at pre-construction.

14.14.3 CORD REELS

Two (2) cord reels (Ref. **Hannay**), each capable of holding 200' of 10/3, 50 type-600V High Visibility yellow electrical cord will be mounted on each side of the apparatus (location TBD @ Pre-Construction Mtg.). Each cord reel will be connected to the on-board generator. An electrical receptacle box, PF5IG-3 , high visibility yellow, will be installed on the end of each cord reel. Each cord reel retraction motor shall be weather proof or enclosed in a weather proof cover.

14.14.4 ELECTRICAL RECEPTACLES

The following properly labeled GFI electrical receptacles with weatherproof spring loaded covers will be installed on the apparatus, one (1) on each side of the body in the rear fender panel.
Exact location TBD @ Pre-Con. Mtg.

Two (2) NEMA L5-15 125V 15amp

Note: spec GFI circuit breakers or receptacles.
GENERATOR CONTROL PANEL

The wiring from the generator to the breaker box will be THW stranded copper wire enclosed in nonmetallic liquid tight flexible conduit.

14.14.5 AERIAL ELECTRICAL SYSTEM COMPONENTS

Electrical power for the aerial device will be drawn from the chassis electrical system and routed into an electric collector ring assembly. One circuit will provide power for the aerial device controls, indicators, and interlocks; the other circuit will power auxiliary equipment such as lights, intercom, etc.

The electric collector ring assembly will provide power for electrical ground, ladder control functions, 12 volt, and 120-volt system. The collector rings will be enclosed in a sealed, weatherproof housing to prevent corrosion.

All aerial device wiring will be multi-conductor, copper 16Ga. (minimum), color-coded, with thermosetting cross-linked polyethylene insulation. All aerial device wiring will be in harnesses with each circuit identified by number and color code. Harness interconnections will be through locking, weatherproof, guided pin connectors.

14.14.6 ENGINE FAST IDLE ACTUATOR

A fast idle actuator system will be provided to raise the engine RPM to a pre-set level for proper aerial operation. The fast idle system will not activate unless the interlock systems have been applied, the chassis spring brake is set, and the transmission is in neutral.

The aerial device will not be dependent upon the fast idle circuit to perform any rated task.

14.15 Spotlight & Hand-light Installation

A 300,000 candlepower **Collins** hand-held spotlight will be provided and mounted to the cab dash on the officer's side. The spotlight will be wired directly to the cab electrical system.

Four (4) **SL-45X Streamlight hand lights, Model 45108**, Philadelphia specs only, yellow in color, and four (4) **Streamlight Model 45074 battery chargers** will be provided. Installation locations will be determined at the pre-construction conference.

Four (4) **SL-90X Streamlight Survivor hand-lights, Model 90225**, Philadelphia specs only, yellow in color, and four (4) **Streamlight Survivor DC#2 Fast Charger, Model 90013** battery chargers will be provided. Installation locations will be determined at the pre-construction conference.

14.16 CRADLE ILLUMINATION LIGHTS

Two (2) 12-volt lights will be mounted near the ladder travel support to illuminate this area during nighttime operation. The lights will be wired and activated be the ladder power circuit.

14.17 NON-WARNING LIGHTS - CAB

Two (2) **Kwik-Raze Magnifier 3000 KR 236 series** 120 Vac 750 watt quartz lights with telescopic poles, will be installed on the cab, one (1) at each rear corner. Each light will be wired to its own receptacle and controlled by a separate breaker on the circuit breaker panel. The lights will be installed in a manner so that when the telescoping poles are retracted, the lights will not protrude above or to the side of the cab body.

14.18 NON-WARNING LIGHTS – BODY

Two (2) **Unity** #AG six-inch diameter floodlights will be installed on the top of the apparatus to illuminate the equipment storage area on top of the body. The lights will rotate 360 degrees.

The steps to the turntable and platform will be provided with adequate lighting.

14.19 WARNING LIGHTS AND DEVICES - APPARATUS

A Code 3 MX 7000 series **LED** light bar or approved equal, will be installed on the cab roof. All other warning lights will be configured to comply with the NFPA 1901 lighting standard. Exact placement locations shall be discussed at Pre-construction.

Dual red LED rectangular lights will be provided on the front of the cab above the headlights, two (2) each side in a common bezel matching the headlight bezel. They shall be of the flashing type with lexan lens.

The light bar will be installed on the cab roof, and will be controlled by a properly labeled switch in the cab. The color of the lenses will be 4 red and 3 white.

Two Whelan L31H Super LED beacons lights will be installed on the upper rear of the body. One each side with one amber lens, right side and red lens left side.

Each side of the front bumper shall have a Whelan # 52. or approved equal, LED light with a white or clear lens recessed mounted. These lights shall be activated by the turn signal to illuminate passage though a turn.

A directional warning light (ref.: Code III – 28" Model AS-35P) will be installed on the rear of the apparatus. This light will be controlled by a control box in the cab.

15.0 TIRES & WHEELS

15.2 FRONT TIRES

The front tires shall be Goodyear "super single" G286 SS severe service radial tires with all position tread. The tires shall be 425/65R 22.5 18 ply and shall have a GAWR rating of 22,470 pounds.

Front wheels shall be Alcoa 823670 10-bolt, hub piloted aluminum disc, 22.5" x 12.25" with a maximum capacity of 21,500 pounds.

15.3 REAR TIRES

Eight rear tires shall be Goodyear G286 severe service radial tires with all position tread. The tires shall be 12R 22.5 16 ply, and shall have a tandem GAWR of 57,760 pounds.

15.3.1 REAR WHEELS

Eight rear wheels shall be Alcoa 893600 aluminum 10-bolt, hub piloted disc, 22.5" x 9.00" with a maximum capacity of 72,000 pounds.

15.4 SPARES

One additional front aluminum wheel with a mounted tire and two addition aluminum rear wheels with mounted tires will be supplied per apparatus.

15.5 POLISHED FRONT WHEELS

Each outer front wheel, outer surface, shall be polished.

15.6 POLISHED REAR WHEELS

All wheels, inner and outer surface, shall be polished.

Chrome-plated hub and nut covers will be provided on each axle.

15.7 CHAINS

Four complete sets of single tire chains will be provided.

15.8 AUTOMATIC TIRE CHAINS

ONSPOT automatic tire chains will be provided at each rear inside dual tire. The system will be electric over air operation with the fully labeled switch on the cab instrument panel. The system will be operable at speeds up to 35 MPH. A pressure protection valve will be installed according to **ONSPOT** installation instructions.

15.9 WHEEL CHOCKS

Four (4) **Ziamatic** SAC-44 folding aluminum wheel chocks will be installed beneath the left and right side of the body utilizing QCH-2 zinc-plated 16 gauge steel horizontal holders.

15.10 MUDGUARDS

Heavy duty black rubber mud guards will be provided behind the front and rear wheels.

16.0 FUEL SYSTEM

The fuel tank will be constructed of steel with anti-surge baffle and will conform to Federal Highway Administration Title 49 No. 393.67 for liquid fuel tanks.

16.1 FUEL TANK

The chassis shall be equipped with a 56-gallon fuel tank that shall be constructed of steel. It shall provide a minimum 56-gallon (204 liter) "draw" capacity on an incline in any direction up to 8 degrees. The fuel tank shall be certified to meet FMCSR 393.67 tests.

16.2 FUEL FILL

The fuel tank shall be equipped with a 2.5" filler neck assembly with a .75" vent located on the left hand side of the tank. A fuel fill cap attached with a lanyard shall be supplied. Magnetic ¾ plug to be used for draining shall be supplied.

16.3 FUEL COOLER

The chassis shall be equipped with a Hayden air-to-fuel cooler to prevent loss of engine horsepower from rising fuel temperature or approved equal.

16.4 REINFORCED FUEL LINES

The fuel lines shall be wire braid reinforced fuel hose with crimped brass fittings. The lines shall be carefully routed along the inside of the frame rails, protected against chaffing by non-conductive frame mounted stand off fasteners.

16.5 FUEL PRIMER PUMP

Single suction and return fuel lines shall be provided with an auxiliary 12-volt electric fuel re-primer pump. A momentary rocker switch, mounted on the cab dash, shall activate the system.

16.6 FUEL/WATER SEPARATOR

A Detroit Diesel Fuel Pro 382 fuel / water separator filter with thermostatically controlled heat and spin-on filter element with manual primer pump shall be installed in fuel system in place of the primary fuel filter supplied with the engine.
Final installation shall allow for total access.

17.0 SAFETY EQUIPMENT

17.2 BACK-UP ALARM

An automatic self-adjusting electronic back-up alarm producing 87 - 112 db shall be installed at the rear between the frame rails. It shall operate whenever the transmission's reverse gear is selected.

REF: ECCO 907, PRECCO 1040 or approved equal.

17.4 DUAL ELECTRIC HORNS

Dual electric horns rated at 400hz/500hz shall be installed under the cab and controlled through the horn ring on the center of the steering column.

17.5 AIR HORNS

Two (2) bright finished, 21" air horns shall be mounted through the center of the front bumper. Horns are to be activated by a foot switch located on both the drivers side (Left side of floor) and the Officers side (Right side of floor).

17.6 SIREN

A Federal Q2B mechanical siren will be mounted in the center of the front bumper. The siren will be controlled with one (1) foot switch on the officer's side. An electric siren brake switch shall be located on the switch panel. Foot pedal must be placed on right hand side of Officers' position.

17.7 OPERATOR INSTRUCTION, CAUTION, AND WARNING SIGNS

The manufacturer will supply and affix various operator instructions, caution, and warning signs to the front, sides, rear and inside of the apparatus. They will be in general compliance with **ANSI** Z35.1 (Specification for Accident Prevent Signs).

Caution and warning signs will include, but not be limited to, the following:

Electrocution Hazard
Personnel seated/belted while vehicle in motion
Vehicle equipped with seat belts
Moving Outrigger Warning
Hazardous Voltage
Vertical Clearance

A warning label will be installed at each seating position stating the following:

"Occupant must be seated and belted when apparatus is in motion"

WARNING DECALS

Warning decals will be provided in appropriate locations to alert the operator of potential hazards and operating instructions. All warning labels will be in general compliance with A.N.S.I. Z34.1 recommendations.

17.8 INTEC CAMERA SYSTEM

An Intec Video Systems, Inc. Rear vision camera system (or approved equal) will be provided to allow the driver to visually see the rear of the apparatus while in the cab. The system automatically switches to the side view when the apparatus is placed in drive. The system will include an Intec model #CVM600 monitor mount adjacent to the driver and an Intec, model #CVC320XSL camera that will be mounted at the rear of the vehicle.

An addition camera, model # CVC210 shall be provided on the curbside of the apparatus for viewing the right side of apparatus while in motion. Provide branch shield.

In addition the monitor will have a control to switch back and forth between views and the monitor shall be mounted on a rotational base to be viewed by both driver and officer. Placement TBD at pilot inspection.

ADDITIONAL ITEMS SUPPLIED WITH THE VEHICLE

1 - Pint of touch up paint for each color
1 -Bag of assorted stainless steel nuts and bolts
1 - Complete set of hydraulic filters for the pressure filter and the return line filter
2 - Complete sets of aerial override keys

18.0 WARRANTIES (100% parts, Labor, and Travel Time with No deductible)

Engine	5 years	150,000 miles
Transmission and Differential	5 years	150,000 miles
Complete Drive Train	5 years	100,000 miles
Cab & Chassis	2 years	Unlimited miles

All components i.e.: utilized in starting, charging, accessory systems including harness, sensors, modules cranking motors, alternator, regulators etc.

Cab & Chassis Structural	10 years	Unlimited miles
Body (Aerial Superstructure)	10 years	Unlimited miles
Aerial Device	5 years	Unlimited miles

Hydraulic System and components	5 years	Unlimited miles
Warning Devices (Electronic lights, sirens)	5 years	Unlimited miles
Paint	7 years	Unlimited miles

NOTE: All minor repairs (less than four (4) labor hours) shall be performed within 1 working day, Sundays excluded.

All minor repairs (over four (4) labor hours) shall be performed within 2 working days, Sundays excluded.

All major repairs shall be performed within 7 working days, Sundays excluded.

If the time intervals for minor and major repairs are exceeded, **the City of Philadelphia reserves the right to perform warranty work with direct invoicing to the successful bidder not the manufacturer.**

All warranty work performed by City forces will be billed at the rate of $52.00/hour

Transportation to and from the vendor's site, if required, is the successful bidders responsibility. Transportation to and from the vendor's site, performed by City forces it will be billed at a rate of $80.00 plus the cost of equipment, if needed.

Copies of Warranty Repair Orders shall be forwarded to the Office of Fleet Management within ten (10) days after completion of each repair. Repair orders shall be complete with all parts and labor cost.

18.1 CAB STRUCTURE AND SHEET METAL WARRANTY

A ten (10) year warranty shall be provided for the cab structural components and sheet metal panels, including doors.

CAB CORROSION WARRANTY

A ten (10) year warranty shall be provided for cab perforation due to corrosion from within. It shall exclude surface rust caused by chips or scratches in the paint.

The chassis manufacturer shall warrant the cab, all features and options, exclusive of maintenance items, against defective materials and workmanship for ten (10) years from the in-service date.

The cab structure shall be warranted by the manufacturer against cracking and corrosion damage, as evidenced by perforation, for a period of ten (10) years from the in-service date.

All warranty coverage's shall include parts and labor required only by the manufacturer's authorized repair facility to perform the repair as directed by the manufacturer; and at the location necessary to properly perform the repair as determined by the manufacturer.

18.2 WARNING EQUIPMENT WARRANTY

A five (5) year warranty shall be provided for all chassis manufacturer installed components, including air horns, electric horns, LED lights, LED contour light bar, (except consumable parts) and electric load management system. LED modules/lights shall have a ten (10) year warranty

Two (2) highly detailed and comprehensive manuals, each depicting chassis component operating procedures, maintenance requirements, maintenance intervals and procedures, warranty registration with the manufacturer, warranty coverage and claim procedures, shall be presented and reviewed with the Fire Department acceptance authority prior to vehicle acceptance. These manuals shall be delivered with each vehicle.

18.3 CROSSMEMBERS WARRANTY

A ten (10) year warranty shall be provided for all cross members, including gussets, due to breaking or cracking.

18.4 FRAME RAILS WARRANTY

A lifetime warranty shall be provided for chassis frame rails due to breaking or cracking. Any modification to the rail or body application must receive written permission from the builder before it is performed to validate warranty.

18.5 AXLES WARRANTY

A five (5) year parts and labor warranty shall be provided on the drive axle(s) (differential assemblies, axle shafts and axle housings) and for the steering axle (beam, spindles, kingpins and kingpin bearings and steering arm).

18.6 WARRANTY - AERIAL DEVICE

The manufacturer of the aerial device will guarantee to the original purchaser to repair or replace any defective or prematurely failed parts, resulting from faulty material or workmanship, for a period of five (5) years after delivery of the aerial device to the purchaser. A copy of the aerial warranty will accompany the bid.

18.7 ALLISON TRANSMISSION WARRANTY

An Allison Transmissions, Inc. five (5) year warranty shall be provided for the heavy-duty transmission.

18.8 PAINT WARRANTY

The apparatus manufacturer (not a third party paint manufacturer) shall warrant the paint coatings for a period of seven (7) years from delivery and acceptance of the complete vehicle. The warranty shall include adhesion, peeling, delamination, cracking, clouding or loss of gloss. Paint chipping and surface fracturing caused by an object striking the paint surfaces are not warrantable.

18.9 ENGINE WARRANTY

Engine warranty will include but not be limited to the complete fuel system, complete cooling system and all electronic engine controls and wiring as well as the engine itself.

19.0 PRE-PRODUCTION INSPECTION

19.1 Provide a **pre-construction** conference, for five (5) people, at the manufacturer's factory prior to any metal being cut, or the acquisition of any major components being locked-in. The successful bidder shall incur all expenses for lodging, meals, and transportation (transportation will be via air if more than 125 miles one way).

19.2 Provide Inspection trip for five (5) people to inspect **completed chassis** prior to leaving the chassis manufacturer. The successful bidder shall incur all expenses for lodging, meals, and transportation (transportation will be via air if more than 125 miles one way). If the chassis, or aerial device is constructed at a different facility than the plant where the apparatus will be completed, an inspection trip for four (4) persons will be made to that facility upon installation of the aerial device to the chassis.

19.3 Provide a **pre-paint** inspection trip for body and aerial device configuration, for five (5) people, to the facility where construction of the unit is to be completed, upon completion of the prototype unit. The successful bidder shall incur all expenses for lodging, meals, and transportation (transportation will be via air if more than 125 miles one way).

19.4 Provide Inspection trips for five (5) people, to the local dealer upon **final completion** of the finished unit, prior to delivery. The successful bidder shall incur all expenses for lodging, meals, and transportation (transportation will be via air if more than 125 miles one way).

20.0 Bidder's Questionnaire

		YES	NO
1.	The unit offered is manufactured entirely in the United States?	( )	( )
2.	The apparatus offered is not a prototype; and there are at least five (5) apparatus of similar design in service in the United States?	( )	( )
3.	The capacity and performance tests will be satisfactorily performed in compliance with the information contained in this package?	( )	( )
4.	The manufacturer fabricates and assembles the fire apparatus chassis, body, and aerial device entirely in the same factory complex? If no, attach explanation.	( )	( )
5.	A full-time local representative of the manufacturer is maintained: Name:_____ Address:_____ Phone:_____	( )	( )
6.	Said representative maintains factory trained and certified mechanics?	( )	( )
7.	The manufacturer maintains a Factory Service School at the factory?	( )	( )
8.	All pages of the General Instructions, Requirements, and Specifications have been received and reviewed?	( )	( )
9.	Has the Bidder completed all the questions and filled in the blanks in the specifications?	( )	( )
10.	Is the Bid Security attached?	( )	( )
11.	Does the Bidder comply with Purchaser's specifications without exception?	( )	( )
12.	Are all requested engineering diagrams and drawings included with the proposal?	( )	( )
13.	Does the proposed apparatus comply with dimensional requirements of the specifications?	( )	( )
14.	Does the manufacturer maintain a Service Center and Parts Depot?	( )	( )

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

15.	Does the manufacturer provide a program of Factory training for the Fire Department's mechanics?	( )	( )
16.	Are all specified warranties in compliance with the specifications?	( )	( )
17.	Are all proposed warranties in compliance with the specifications?	( )	( )
18.	Will the apparatus body be covered by a five year warranty?	( )	( )
19.	Will the aerial device be covered by a five year warranty?	( )	( )
20.	Will the entire apparatus be manufactured in the United States?	( )	( )
21.	Has a list of five (5) in-service vehicles similar design been included with the proposal?	( )	( )
22.	Are the proposed apparatus and equipment new in all respects?	( )	( )
23.	Have you provided an accurate statement of apparatus dimensions?	( )	( )
24.	Have you included a copy of your own detailed Bidder's specifications?	( )	( )
25.	Have you included a separate list of exceptions?	( )	( )
26.	Are you taking total exception?	( )	( )
27.	Are you proposing component substitutions which you feel exceed the specification?	( )	( )
28.	Does weight distribution comply with the recommendations of the NFPA?	( )	( )
29.	Does the apparatus comply with the appropriate requirements of the Federal Motor Vehicle Safety Standards?	( )	( )
30.	Will the apparatus have a certified GVWR sticker?	( )	( )
31.	Are the aerial device, torque box, basket, and outriggers modular components of the apparatus?	( )	( )
32.	Does the manufacturer meet all specified criteria and code conformance?	( )	( )

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

33.	Will the local representative's Field Service Technician deliver the apparatus?	( )	( )
34.	Will the local representative's Field Service Technician train the Fire Department in the use and maintenance of the chassis, and body, for a four (4) day period?	( )	( )
35.	Will the aerial manufacturer provide training on the aerial device as required?	( )	( )
36.	Has the “Aerial Specification” document been provided?	( )	( )

37. State the dimensions of your proposed apparatus?

    a. Overall Height:

    b. Overall Length:

    c. Overall Width:

    d. Outrigger Spread:

38. Delivery of the apparatus shall take place within _____ calendar days after the execution of the contract.

REPLACEMENT PARTS COST QUESTIONAIRRE

Description (Replacement part costs questionnaire)		Cost	Custom Stainless Cab	Custom Aluminum Cab
Door	Assem. Chassis, complete			
	left side	ea.		
	right side	ea.		
	Tiller			
	left side	ea.		
	right side	ea.		
Door	Glass, Chassis			
	left side	ea.		
	right side	ea.		
Door	Latch Assem			
	left side	ea.		
	right side	ea.		
Door	Paddle Latch			
	left side	ea.		
	right side	ea.		
Door	Weather seal			
	left side	ea.		
	right side	ea.		
Door	Window Regulator			
	left side	ea.		
	right side	ea.		
Seats	911	ea.		
	911 2+2	ea.		
Windshield	Chassis Glass			
	left side	ea.		
	right side	ea.		

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

Description (Replacement part costs questionnaire)		Cost	Custom Stainless Cab	Custom Aluminum Cab
Windshield	Tiller Glass			
	left side	ea.		
	right side	ea.		
	front	ea.		
	rear	ea.		
	Wiper Motor			
	left side	ea.		
	right side	ea.		
	tiller	ea.		
	Wiper arm			
	left side	ea.		
	right side	ea.		
	tiller	ea.		
Cab	Gauges and switches			
	air	ea.		
	oil	ea.		
	volt/amp	ea.		
	hour meter	ea.		
	fuel	ea.		
	headlamp control	ea.		
	turn signal switch	ea.		
	turn signal flasher	ea.		
	speedometer	ea.		
Brakes	Chassis			
Front Axle	Disc/Drum Assem	ea.		
Rear axle	Disc/Drum Assem	ea.		
	Tiller			
Tiller axle	Disc/Drum Assem	ea.		
		Cost	Custom Stainless	Custom Aluminum

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

Description (Replacement part costs questionnaire)			Cab	Cab
Brakes	Chassis			
Front Axle	pads / shoes	Set		
Rear axle	pads / shoes	Set		
	Tiller			
Tiller axle	pads / shoes	Set		
Exhaust	muffler	ea.		
	turbo charger	ea.		
Steering	Gear box			
	Chassis	ea.		
	Tiller	ea.		
	tie rods			
	Chassis	ea.		
	Tiller	ea.		
	Pitman arm			
	Chassis	ea.		
	Tiller	ea.		
	Shocks			
	Chassis	ea.		
	Tiller	ea.		
	power steering pump			
	chassis	ea.		
Wheels	aluminum,(w/o tire)			
	front	ea.		
	rear	ea.		
	tiller	ea.		
U-joints	Dana – Spicer			
	1810	ea.		
Ladder assem.	100 ft. Complete	ea.		

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

Service Ability Form

Service Center Location:

Distance in miles (one way) from Service Center Location to the Purchaser's Location is: miles.____

Please answer the following questions:

Is this shop an authorized warranty center for the apparatus builder? __ Yes __No

Is the Service Center enclosed and heated? __ Yes __ No

Number of full time Service Center Employees:

Number of fully equipped service vans:

Is your shop equipped to handle, without subletting, the following:

Body Repairs	__ Yes	__ No
Paint Work	__ Yes	__ No
Water Tank Repairs	__ Yes	__ No
Major Pump Repairs	__ Yes	__ No
Welding	__ Yes	__ No
Frame & Spring Repairs	__ Yes	__ No
Aerial Device Repairs	__ Yes	__ No
Power Train Repairs	__ Yes	__ No

This form was completed and submitted by:
(Please print or type full name)

Title of Individual: _____

Signature of Individual:_____

Subscribed and sworn before me Notary's Stamp

this __ day of _____, 20

Notary Public
Commission Expires

MUST BE FILLED IN
FIRM (VENDORS) NAME _____ BID NUMBER _____

22.0 Engineering Drawings

An approximate scale drawing of the proposed apparatus will be submitted with each bid.

The scaled drawings submitted with the bid will include the following:

a. Overall height to the highest point of the apparatus from the ground.

b. Sizes of all compartments; width, height, and depth, including clear opening dimensions.

c. Overhang front and rear.

d. Wheelbase, Overall Length, and Overall Width of apparatus.

e. Angles of approach and departure.

f. Turning radius.

g. All operating angles of aerial device, including over cab angle.

The drawing must show, but not be limited to, such items as the chassis being utilized, lights, horns, sirens, all compartment locations and dimensions, etc. In actuality, this blueprint will be a visual interpretation of the unit as it is to be supplied.

A blueprint must be approved by the Purchaser prior to any metal being sheared or cut for the unit. The Purchaser, the Manufacturer's Representative and the Apparatus Manufacturer will each have a copy of this blueprint. This blueprint will then become a part of the total contract.

23.0 Parts and Service

Service Center and Parts Depot

Each Bidder must be able to display that they have in recent times and are currently maintaining an established service center and a parts depot capable of satisfying the warranty service requirements and parts requirements for the model and quantity of vehicles bid. Service Center must have supplied parts to at least ten (10) fire departments and serviced at least twenty (20) fire trucks within the past year.

The Bidder must state the location of an authorized service center, with a staff of factory-trained mechanics, well versed in all aspects of service for all major components, of the apparatus within a reasonable distance of the Purchaser. This service center must be not more than 60 (sixty) miles away from the delivery point. In addition, the successful Bidder must maintain a separate service facility at the manufacturing site, in order to satisfy the need for possible major emergency service work.

Local Representation

In order to assure the Purchaser that prompt, knowledgeable, professional representation is made on behalf of the manufacturer, the manufacturer must maintain a representative within a reasonable distance from the Purchaser.

This representative must be competent and knowledgeable with respect to the sale and service of fire apparatus and emergency vehicles.
The representative must make available factory-trained mechanics that are completely trained in the servicing and maintenance of the product offered and must be equipped to offer prompt service on the product in the Purchaser's in-service location. These mechanics must hold current and valid certifications from the manufacturer.

29.0 Quality of Workmanship

Quality and Workmanship

The design of the apparatus must embody the latest approved automotive engineering practices.

The workmanship must be of the highest quality in its respective field. Special consideration will be given to the following points: accessibility of the various components which require periodic maintenance, ease of operation, drive-ability, turning radius, aerial operations, and symmetrical proportions.

Construction must be rugged, and ample safety factors must be provided to carry loads as specified and to meet both on and off road requirements and speed conditions as set forth under "Performance Tests and Requirements."

Welding will not be employed in the assembly of the apparatus in a manner that will prevent the ready removal of any component part for service and/or repair.

All wiring will be loomed, braided, bundled as necessary, and grommeted to prevent wear and deterioration

General Construction

The complete apparatus, assemblies, subassemblies, component parts, etc., will be designed and constructed with the due consideration to the nature and distribution of the load to be sustained and to the general character of the service to which the apparatus is to be subjected when placed in service. All parts of the apparatus will be designed with a factor of safety, which is equal to or greater than that which is considered standard and acceptable for this class of equipment in firefighting service. All parts of the apparatus will be strong enough to withstand general service under full loads. The apparatus will be so designed that the various parts are readily accessible for lubrication, inspection, adjustment and repair. Bidders' specifications must meet minimum requirements of N.F.P.A. Pamphlet #1901, Underwriters Laboratories Inc. standards and all State and Federal Department of Transportation vehicle regulations at the time of the sale of the unit.

The apparatus will be designed and constructed, and the equipment mounted, with due consideration to proper distribution of the load between front and rear axles that all specified equipment, including a full complement of specified ground ladders, loose equipment, and firefighters will be carried without overloading or injuring the apparatus.

The aerial ladder will be designed as a modular component of the apparatus. The aerial ladder, its support structure, and outrigger system will be designed to comprise an integrated assembly, removable from the carrier vehicle as a single self-supporting unit.

The design will facilitate repair, modifications, or replacement of the aerial device, apparatus body, or chassis individually, as required by wear from use, obsolescence, or for purposes of refurbishment.

30.0 Delivery Responsibility

Delivery of the apparatus will be completed within 300 calendar days after the award of the contract. All pricing will be net and will include delivery of new apparatus per Purchaser's instructions.

Delivery will be made by the manufacturer's representative, who will employ a factory trained and certified Field Service Technician who will drive the truck under its own power from manufacturers' facility to the in-service location and provide at least four (4) days of on-site training to the members of the Fire Department and Fleet Management in the use and maintenance of the vehicle.

30.1 Delivery Information - Final Delivery shall be made between the hours of 8:00 AM and 3:30 PM, Monday through Friday, except City Holidays. Each unit shall be accompanied by a Delivery Slip, which will contain the City's Bid Number, Item Number, Purchase Order Number, and Serial Number of the Unit.

VENDOR MUST NOTIFY OFM THIRTY (30) DAYS PRIOR TO MAKING ANY DELIVERY.

DELIVERY CONTACT PERSON:

OFFICE OF FLEET MANAGEMENT
100 S. BROAD STREET, 3RD FLOOR
PHILADELPHIA, PA 19110
215-686-1877 (VOICE MAIL)

DELIVERY LOCATION:

OFFICE OF FLEET MANAGEMENT
SHOP 415
3895-99 RICHMOND STREET
PHILADELPHIA, PA 19137
PHONE (215) 685 - 1232

32.0 CERTIFICATIONS & MANUALS (PER ORDER)

32.2 Provide the **necessary documents** for the City to take Title to the vehicle in accordance with the Pennsylvania Motor Vehicle Code. **ALL THE ITEMS, INVOICE (STATE ORIGINAL), MSO, MV-1, ETC) ARE TO BE HAND DELIVERED FOURTEEN (14) DAYS PRIOR TO DELIVERY TO:**

CITY OF PHILADELPHIA
OFFICE OF FLEET MANAGEMENT
KATHLEEN KELLY
100 S. BROAD STREET, 3RD FLOOR
PHILADELPHIA, PA 19110

32.3 OPERATION, MAINTENANCE AND REPAIR DATA

Prior to the delivery of the first units, the vendor shall forward directly to the Office of Fleet Management, Maintenance, Operating and Repair manuals and Parts Lists as specified below. The manuals shall be shipped separately to OFM 100 E. HuntingPark Avenue, Phila, Pa. 19124 and not with the units. All manuals shall be in the form of neatly bound books, with durable covers, and shall be properly identified with the manufacturer's name, model and serial number of the equipment. Awarded bidder must provide a delivery slip for these manuals which shall be signed by the receiving Fleet Maintenance Supervisor and provide this document to BQA representative with the other paperwork.

The operating and maintenance or shop manuals shall be the latest manufacturer's handbook, covering in detail the recommended operating, maintenance and service procedures.

Where components or equipment of several manufacturers have been used in manufacturing the unit, the manuals shall include operating, maintenance and repair information and parts lists of all manufacturers covering all of the components used. Where the vendor or manufacturer uses components manufactured by other in building equipment which he sells under his own trade name, he shall furnish the parts numbers and full data of the original manufacturers of all components used, where possible, as well as the part numbers he may assign to these components as being parts of his product.

32.3.1 MANUALS

One (1) set of manuals shall be furnished for each unit delivered.

Each manual shall cover chassis, superstructure, engine, transmission, differential, hydraulic system and all other added equipment. Operating Instructions and schematics including:

Minimum requirements are the manuals listed below. OFM shall provide a list of current manuals available; at time of Pilot inspections

Maintenance Instructions	Emission Diagrams
Repair Instruction	ElectricWiring Diagrams
Parts Information	Collision

Provide a CD of the above listed manuals.
Provide an eight-year subscription to all manufacturers issued Service Bulletins (two for each vehicle supplied under this order)

NOTE: **Provide two (2) additional sets of operators manuals, these manuals are to be delivered one month prior to delivery.**

Provide one (1) CD per vehicle which includes all operators' manuals information.

32.3.2 PREVENTIVE MAINTENANCE INSTRUCTIONS

In addition to the manuals specified above, the vendor shall furnish an equal number of condensed Preventive Maintenance Instructions for all parts of the unit. These instructions shall consist of manufacturers' recommendations for periodic lubrication, cleaning and other preventive maintenance services, and shall be made up in a compact from covering the particular unit delivered.

32.3.3 RECOMMENDED SPARE PARTS

The vendor shall furnish with each service manual a list of recommended spare parts. The list shall include all necessary data for ordering the parts, even if originally furnished by other manufacturers.

The vendor warrants that they shall maintain or have maintained a stock of repair parts within the Philadelphia Metropolitan area at inventory levels for the period described hereafter:

The manufacturer shall supply, through a dealer, a published price list for spare parts required to support the units to be manufactured hereunder for ten (10) years from the date of delivery of the last unit.

The vendor, if necessary shall provide technical and field service support. This support shall be by personnel qualified to advise on training, repair and maintenance of the equipment. The technical representatives shall be available in the Philadelphia Metropolitan area when required by the City.

The repair or shop manuals shall include but not be limited to detailed drawings, electric, pneumatic and/or hydraulic schematics, piping diagrams and other pertinent information.

32.3.4 SERVICE

Due to the importance of keeping this vital piece of firefighting apparatus in service with a minimum of downtime, the manufacturer of the aerial device will maintain a network of service centers with factory trained personnel.

The aerial manufacturer will also have a separate facility for service of units so they do not conflict with production units. The service facility will carry an inventory of parts, separate from production parts.

34.0 INSTRUCTIONS & TRAINING

The vendor shall furnish three (3) video training films, VHS 1/2 inch, covering the following subjects (if available):

Operator Training
Routine Maintenance
Preventive Maintenance

In addition, the vendor shall instruct City employees in the operation, servicing and maintenance of the units or equipment delivered at the following City facilities and at such times as the Engineer may designate, all within thirty days after final acceptance of the first unit.

TRAINING PROGRAM

To instruct OFM and Fire Department personnel in the operation, preventative maintenance and repair and care of the aerial device, this training program shall be oriented towards a hands-on approach utilizing the new apparatus.

1. Review personnel training level and determine specific training requirements.
2. Explain operations of the entire aerial device. Each participant shall actually use the aerial and be taught the necessary steps of safe operation.
3. Troubleshooting will be emphasized and reinforced continually throughout the training period.
4. Preventative maintenance procedures shall be setup and definite schedules developed to assure proper maintenance of the aerial device.
5. Instruction in the use of tools and how to replace minor assemblies, as applicable. Equally important in this training will be when to call appropriate personnel for assistance.
6. How to order parts through the local service center by utilizing parts manual.

ON-SITE PREVENTATIVE MAINTENANCE & OPERATIONAL TRAINING PROGRAM

PROGRAM OUTLINE

An on-site program for training of Fire Department and OFM personnel shall be provided. This program shall be designed to assure complete understanding of all aspects of the aerial device in the operating environment.

After the unit has been accepted, a factory trained, qualified Field Service Technician shall be provided for a minimum of eight (8) days of training for PFD employees. In addition a separate training period designed for maintenance and repair of four (4) days shall be provide for OFM employees

Training shall be provided for two days to each of the four platoons which will use this apparatus. The training program shall be designed to instruct the individual who has never utilized an aerial device of this type before. The individuals will be thoroughly taught the operating systems of the aerial device, including emergency operation. Introductory service skills utilizing the vehicle shall also be taught.

35.0 ENGINEERING RESPONSIBILITY & CHRONIC COMPLAINTS/FAILURES

The term **CHRONIC COMPLAINTS/FAILURES**, as used herein, shall mean that the same component, sub-component, assembly or part, such as an engine, transmission, differentials, hydraulic system, pumps, etc. including valves, controls, water pumps, high pressure water systems, etc. develops repeated defects, breakdowns, and/or malfunctions.

The responsibility for the design of this equipment shall rest upon the successful vendor, and they shall consider all elements of operation for which the warranty shall apply. The successful vendor shall be responsible for the compliance and performance of each subcontractor, including all suppliers.

Where the equipment, units= and/or sub-components develop **CHRONIC COMPLAINTS /FAILURES** during service operations, the successful vendor will be required to make any engineering design changes, repairs, alterations, retrofits or to make an adequate heavy duty redesign of any component so as to properly correct and continue to render continuous, durable and safe performance. Warranty periods shall be for an additional one year, measured from the completion date of any corrective measures. This additional warranty shall not expire at the end of the initial warranty period even when the correction is performed in the last days of the original, stated, warranty period.

Minor items or ordinary service adjustments are not included nor considered under this scope of **CHRONIC COMPLAINTS/FAILURES**. Conditions caused by other factors such as operational damage due to accidents, vandalism, misuse, or lack of proper maintenance, service, lubrication as prescribed or recommended by the Original Equipment Manufacturer (OEM), are also excluded.

Records and reports will be maintained by the Office of Fleet Management and will be made available for the successful vendor=s periodic examination relative to **CHRONIC COMPLAINTS/FAILURES.**

The successful vendor shall provide written reports to the City, detailing the action taken as a result of a notice of complaint describing the failure.

Any written notices of complaints or field action with corrections made, shall be forwarded directly to the Office of Fleet Management, 100 S. Broad Street, 3rd Floor, Philadelphia, PA 19110, Tel. (215) 686-1825, FAX (215) 686-1829, in numbered report identifying the vehicle's property number, part or serial number of the failed component, with copies to the Engineering Section, same address.

For a fair and equitable evaluation of the **CHRONIC COMPLAINT/FAILURE**, the successful vendor, when notified of service difficulties, will be permitted to make detailed studies, analyze operational conditions and will have access to the equipment in order to make recommendations for corrections so as to obtain the desired safe and durable mechanical performance.

To reduce or eliminate **CHRONIC COMPLAINTS/FAILURES** on equipment, the City, as part of this contract, shall designate a Technical Review Committee, consisting of the Fleet Manager, Fleet Engineer, Deputy Fleet Manager and Operations Manager of the affected equipment, to review, analyze and evaluate any successful vendor=s remedies.

In the event the successful vendor fails to address, or make the proper changes, repairs, modifications, retrofits, or does not render field service after written notice, or unnecessarily delays any actions, the Office of Fleet Management shall have the option of seeking appropriate restitution for loss of production.

The successful vendor shall also be subject for Loss of Use, in the form of rental, lease payments, or a $200.00 per day fee, while a vehicle is rendered unserviceable or out-of-service.

36.0 COMMUNICATION EQUIPMENT SPECIFICATIONS

Each vehicle will be outfitted by the City with an 800 MHz digital mobile radio.

The vendor shall provide power supply protected by circuit breaker as follows:

At center console on dash:
- one battery hot 10 amp (all times)
- one ignition hot 10 amp (can be supplied from battery switch n “on” position
- one ground

At box under officer’s seat:
- one battery hot 40 amp
- one ground
- one coax cable terminated at this point and attached to base of antenna on cab roof

The vendor shall provide and install an 800 MHz antenna base with whip antenna on the cab roof. Cable shall be routed from antenna base to Officers seat area.

37.0 95 – 100’ MID-MOUNTED AERIAL LADDER/PLATFORM

GENERAL INFORMATION

The aerial ladder/platform assembly will be a four (4) or five (5) section welded telescoping steel or aluminum ladder, aluminum or steel platform, pre-piped waterway, steel or aluminum turntable, torque box and outriggers.

Should the aerial be of steel or aluminum design then the entire structure (Ladder, Turn Table & Platform) should be made of the same material.

37.1 INTENT OF AERIAL SPECIFICATIONS

It will consist of the true ladder type. It will consist of an aluminum or steel **1000**-pound capacity platform, four (4) or five (5) steel or aluminum ladder sections, a steel or aluminum turntable, torque box and outriggers. The height of the unit will be **95 – 100’** and the horizontal reach will be a minimum of **88'.**

It is the intent of the purchaser that the device must meet all the requirements of the National Fire Protection Association's (NFPA) 1901 standard, latest edition. It is also the intent of the purchaser to secure a fire service proven piece of apparatus that will be manufactured in the U.S.A.

It is not the intent of the purchaser to deviate from this requirement; therefore, platforms attached to booms, whether solid or lattice, or articulating arms will not be considered as meeting these specifications or the intent of these specifications.

Measurements referred to in this specification are for reference only, and are meant to define an acceptable device and are not meant to eliminate comparable products.

37.2 DESIGN STANDARDS

The ladder shall be designed such that stresses produced at 2 x DL (Dead Load) + 2 x RL (Rated Load Capacity) shall not exceed material yield strength and a one and one-half to one (1.5:1) stability factor, in compliance with the intent of the NFPA Standards for aerial fire apparatus at a minimum.

The capabilities shall be established in the unsupported configuration; and all ladder sections, turntable, torque box, outriggers, etc. shall be thoroughly strain gauge tested in addition to complete computer modeling analysis. The Bidder shall employ a full-time Registered Professional Engineer assigned to aerial design. The Bidder shall provide written certification, signed by an on-staff Registered Professional Engineer, certifying that the unit meets this requirement.

37.3 INTEGRITY OF DESIGN

It is preferred that bidders offer designs that were created in-house and not by subcontracting. In no case will a proposal be considered which has not been overseen by a Registered Professional Engineer.

37.4 REFERENCES

A list of ten (10) in-service units of similar design to apparatus proposed shall be provided by the manufacturer of the aerial device. The manufacturer shall also have had this type and/or similar design of equipment in field service for a minimum of five (5) years. This list shall include the Fire Department's name and address, chief's name, and telephone number.

37.5 HEIGHT

The rated vertical height of the aerial ladder platform at 78 degrees elevation and full extension shall be 95 - 100 feet. This shall be measured by a plumb line from the top surface of the platform handrail to the ground.

37.6 REACH

The minimum horizontal reach shall be 88 feet. This shall be measured from the center line of rotation to the front edge of the platform handrail.

37.7 WELDMENT FIXTURES

To ensure the highest levels of quality and ultimate safety, all weldments (outrigger, torque box frame, turntable, ladder sections, pins, bushing, etc.) shall be manufactured by the bidder to ensure sole source responsibility. All raw materials shall be vendor certified. As specified in the Aerial Apparatus Certification section, each weldment shall be third party certified prior to assembly.

To ensure tolerances between parts and part interchangeability, all weldments shall be manufactured in fixtures. To further ensure weld integrity all weldments, the fixtures must be able to rotate to enable the weldment to be welded in the number 1 flat welding position, resulting in maximum weld penetration in the welded material.

37.8 AERIAL APPARATUS CERTIFICATION - (TYPE I)

The aerial device shall be tested and certified by a third-party testing company in compliance with the National Fire Protection Association (NFPA) Standard No. 1914 (latest edition) during construction and before shipment.

All welding on the aerial device shall meet American Welding Society (AWS) D1.1 Structural Welding Code.

The following tests shall be conducted by personnel holding a Level II certification in accordance with ASNT-TC-1A recommend practices:

1. Nondestructive testing methods shall be incorporated into the inspection to detect defects and improperly secured parts.

a) Magnetic particle inspection shall be conducted on all parts of the ladder, turntable torque box and outriggers before assembly to assure the integrity of the weldments and to detect any discontinuities.

b) Ultrasonic inspection shall be used to detect any flaws in pins, bolts, and other critical mounting components.

2. Functional tests, load tests, stability tests and visual structural examinations shall be performed. These tests shall determine any unusual deflection, noise, vibration, or instability characteristic of the unit.

Upon completion of the preceding inspections, the third-party testing company shall issue a Certificate of Inspection - (Type I) indicating that all specified standards have been satisfied. Aerial manufacturers not utilizing third party, independent testing companies shall not be acceptable. Aerial manufacturers not providing a Type I Certification of Inspection shall not be acceptable.

37.9 TESTING CRITERIA

The manufacturer of the aerial device shall provide a written statement signed by a Registered Professional Engineer certifying the aerial's ability to perform the following tests.

The following stability requirements shall be met by the aerial apparatus when it is in a service-ready condition, but with all normally removable items such as water, hose, ground ladders, loose equipment, etc. Removed. Items mounted on the aerial device shall remain mounted.

1-1/2:1 Stability Test - A test of the apparatus shall be performed that the ladder sections are so designed and powered to support a load representing 150% of the manufacturer's rated payload capability at maximum horizontal reach and rotated 180 degrees. Specifically, 1500 pounds with the ladder fully extended, at 0 degrees will be rotated 180 degrees. The ladder may need to be raised slightly to order to clear apparatus body and cab.

1-1/3:1 Stability Test - A test of the apparatus shall be performed that the ladder sections are so designed and powered to support a load representing 133% of the manufacturer's rated payload capability at maximum horizontal reach and rotated 180 degrees with the vehicle on a slope of 5 degrees downward in a direction most likely to cause overturning. Specifically, 1333 pounds with the ladder fully extended shall be rotated 180 degrees. The ladder may need to be raised slightly in order to clear apparatus body and cab.

A time test of the apparatus shall be performed to raise the platform from the bedded position, extended to full height and rotated through a 90 degree turn smoothly and without undue vibration in not over 120 seconds.

A water tower test of the apparatus shall be performed to test the ability to discharge 1,000 gallons per minute, 90 degree to the ladder, with the ladder at full extension, 30 degrees elevation.

37.10 LOAD CRITERIA CERTIFICATION (Minimum)

Each bidder shall supply a written statement from a Registered Professional Engineer certifying that the structural safety factor based on rated capabilities have been achieved. This statement shall be based on the following definitions:

DL = Dead load stress induced by structure and permanently attached components (psi).

RL = Rated capacity load stress induced by vertical payload (1000 pound minimum).

WL = Water reaction stress induced by nozzle reaction and weight of water at 1000 GPM per nozzle one (1) at 90 degrees either side of ladder centerline.

Fy = Material Yield strength (psi).

The ladder shall be certified to the following criteria:

With no water flowing, and full rated vertical tip load (1000 pound minimum) in worst position (0 degrees elevation with ladder at full extension), for ladder stress: 2 x DL plus 2 x RL is less than or equal to Fy

With the ladder at a 45 degree elevation angle at full extension and with water flowing and full rated vertical tip load (1000 pound minimum) with monitor in worst position for ladder stress (1000 GPM minimum): 2 x DL plus 2 x RL plus WL is less than or equal to Fy

37.11 LADDER/ PLATFORM CRITERIA AND STANDARDS

The following ladder/platform load capacities shall be established at a minimum with the truck level, the outriggers fully extended and lowered to relieve the chassis weight from the axles. The capacities shall be based upon 360 degree continuous rotation. The ratings shall be based on average weight of personnel on ladder at 250 lbs. each.

LADDER/PLATFORM OPERATION CAPACITIES

Elevation	Base	InnerMid	Mid	OuterMid	Fly	Platform
-10° to 20°						1000
21° to 30°	250					1000
31° to 40°	250	250				1000
41° to 50°	250	250	250	250		1000
51° to 60°	250	250	250	250	250	1000
61° to 78°	250	250	250	250	500	1000

WATER TOWER OPERATION CAPACITIES

The following capacities shall be based upon continuous 360 degree rotation and up to full extension. The ladder/platform and water system shall be designed to permit 1,250 gpm with the water stream 90 degrees to ladder centerline or with the water stream 45 degrees above horizontal and as far below horizontal as nozzle design allows.

Elevation	Base	InnerMid	Mid	OuterMid	Fly	Platform
-10° to20°						500
21° to 30°	250					500
31° to 40°	250	250				500
41° to 50°	250	250	250			500
51° to 60°	250	250	250			500
61° to 78°	500	250	250	250	250	500

OPERATION ON GRADES

The aerial shall be capable of being operated in any plane up from 3-1/2 to 6 degrees out of level with full rated capabilities. For slope conditions from 3-1/2 degrees to 8.0 degrees, capabilities shall be reduced by no more than 50%. Operation beyond this limit shall be at the operator's discretion.

MOUNTING OF THE AERIAL DEVICE

The aerial device shall be mid-mounted on the truck chassis in order to permit driver visibility and to keep the overall height of the vehicle at a minimum. Maximum height is to be 11'.

A ladder rest shall be provided to support the ladder in the travel position. The ladder rest shall be attached to the torque box as close to the rear axle as design allows. Stainless steel bedding plates shall be attached to the ladder base section to protect the ladder paint (where required) when the unit is in the travel position.

37.12 TORQUE BOX FRAME

A torque box frame shall be provided to transfer all loads and torque into the outriggers. The torque box shall consist of steel weldments with reinforcement plates welded, thus forming a single structural weldment for aerial load distribution among all of the outriggers.

The torque box shall provide support for the turntable bearing plate.

37.13 TURNTABLE BOTTOM AND TORQUE BOX TOP PLATE

Due to the critical nature and high stress levels encountered by these weldments, specific material requirements and manufacturing techniques shall be strictly adhered to, these being as follows:

The plate material used for both the turntable bearing plate and the torque box plate shall be plate steel which has the following properties:

1. Highly resistant to lamellar tearing.

2. Reduced sulfur levels and sulfide shape control to improve toughness.

Due to the critical nature of these components, any substitute must have vendor-certified anti-lamellar tearing properties and specific criteria for toughness and sulfur control. Any material not specifically designed to address lamellar tearing shall not be acceptable.

37.14 OUTRIGGERS / STABILIZERS/ JACKS

Independently controlled outriggers will be provided that will meet or exceed the stability requirements of NFPA 1901. The spread of the outriggers is of special operational concern and the narrowest outrigger setup configuration is necessary. The outrigger jack spread will not exceed 18 ft. measured center of pin to pin, center of cylinder to cylinder.

37.14.1 OUTRIGGER PADS

A floating type steel outrigger pad will be provided on each outrigger. The outrigger pads will require no operator adjustment during set-up.

Auxiliary outrigger pads will be provided for each outrigger.

Auxiliary outrigger pad storage bracket will be constructed near the outriggers on each side of the apparatus. TBD at Pre-Construction.

37.14.2 OUTRIGGER LEVELING INDICATORS

Two (2) bubble type leveling indicators shall be provided at the outrigger control station, one (1) each side, to assist in outrigger set-up and leveling of the apparatus.

An additional bubble type leveling indicator shall be provided at the rear of the apparatus to assist in outrigger set-up and leveling of the apparatus, when the tether control system is being operated.

37.14.3 OUTRIGGER DEPLOYMENT WARNING ALARM

An outrigger deployment-warning device will be provided to warn personnel in the vicinity of the apparatus that the outriggers are in motion.

Whenever an outrigger control handle is utilized, the device will produce a pulsing tone, separate and distinctive from that of other audible warning systems provided on the apparatus. When the outrigger control device is released to its neutral position, the signal will cease.

37.14.4 OUTRIGGER LIGHTS

4" diameters, white, ground illumination lights will be located beneath the outrigger beams to illuminate the ground area for night operation.

If “H” type outriggers are offered, 7" diameter, double-faced, red, flashing lights will be mounted on the inner vertical surface of the outer jack box structure below the horizontal beam.

All outrigger lights will be activated by the "Ladder Power" switch in the cab to eliminate the need to activate additional switches before starting aerial operations.

37.14.5 LADDER/OUTRIGGER INTERLOCK SYSTEM

A ladder/outrigger interlock system shall be provided to prevent the lifting of the aerial from the nested position, until the operator places all jacks in the load supporting configuration. A limit switch at the ladder rest shall prevent operation of the outriggers once the aerial has been elevated from the nested position. The interlock system shall be provided with manual override. For the safety of personnel and equipment, no exceptions shall be allowed to this interlock system.

37.14.6 SAFETY FEATURES

The outrigger system shall provide the following safety features:

1. An outrigger interlock system to prevent raising of the aerial prior to all outriggers' being in firm contact with the ground. Green indicator lights shall be provided at the outrigger control stations to indicate circuit completion.

2. An interlock shall be provided to require the front bumper stabilizers (where required) be raised prior to the main four (4) outrigger jacks.

3. A ladder cradle/outrigger interlock system shall be provided to prevent the lifting of the aerial from the nested position until the operator places all jacks in the load supporting configuration. A limit switch at the ladder rest shall prevent operation of the outriggers once the aerial has been elevated from the nested position.

For the safety of personnel and equipment, no exceptions shall be allowed to this interlock system.

37.14.7 OUTRIGGER CONTROL

An illuminated outrigger control station will be provided on both sides of the apparatus near the front.

If a “H” type outrigger system is offered, each outrigger will be independently controlled in both in/out and up/down modes to allow vehicle set-up in restricted areas or on uneven terrain; however, it will not be possible to lower the jacks unless one (1) of the two (2) following conditions have been satisfied:

1. All outrigger beams have been fully extended.
2. The operator actuates the momentary override switch to allow discretionary placement of an outrigger beam.

The following features will be provided, clearly identified and suitably illuminated for ease of operation:

a) Fast Idle Switch - A two-position, up/down toggle switch located on the control panel to activate the Engine Fast Idle.

b) Emergency Power Unit (EPU) Switch - A spring-loaded switch to activate the emergency hydraulic power system.

c) Outrigger Control Handles - One (1) control handle per outrigger. If a “H” type outrigger system is offered, two (2) control handles per outrigger - one (1) to extend/retract the outrigger beam and one (1) to raise/lower the outrigger jack.

d) "Outrigger Deployed" Indicators - A green light for each outrigger, located on the panel in the vicinity of its respective outrigger controls, to indicate when the outrigger jack is in the load supporting position.

37.14.8 REMOTE OUTRIGGER CONTROLS

A pendant outrigger control box shall be connected to the outrigger/stabilizer control system in the curb side rear apparatus compartment. The multiplexed control box shall be furnished with a 15 foot corded wire, so the controls can be extended to either side of the apparatus while operating the outrigger/stabilizers.

The control box shall feature an on/off power switch and indicator, outrigger/stabilizer individual control switches, fast idle switch and "Outrigger Deployed" green indicator lights.

37.14.9 OUTRIGGER LEVELING SYSTEMS / STABILIZERS

In any instance where an automatic leveling system or stabilizers are offered the ability to control manually will exist. Any system that does not allow the operator to set the vehicle up manually will not be considered.

37.15 AERIAL LADDER SECTION CONSTRUCTION

The aerial ladder shall be comprised of either four (4) or five (5) sections to meet height and reach requirements of this specification. The ladder sections shall be constructed of welded high-strength steel throughout. Each section shall be trussed diagonally, vertically, and horizontally, using steel rectangular tubing, reinforced at critical points for extra rigidity, thus giving a high strength-to weight ratio.

Each section shall be equipped with 1-1/4" diameter rungs, placed at no greater than 14-inch centers for ease of climbing. All ladder rungs shall be welded to each rung rail section in two (2) places. K-bracing shall be provided between the rungs and the ladder rung rails to provide the ability to discharge water at 90 degrees to the side of the ladder.

All rungs shall be covered with deeply serrated, replaceable, heavy duty rubber sheaths, which shall be both glued and clamped security to the rungs with metal clips. Due to high maintenance cost and difficulty in replacement of anti-slip rung surface and the inability to provide a safe surface during icing conditions, ladder designs that do not utilize rubber rung covers shall not be acceptable.

Performance shall be defined and compared as follows:

1. Platform and aerial payloads - both wet and dry

2. Water flowing capabilities in all directions, at all positions, with the highest possible payloads and with one (1) or two (2) streams of water

3. The ability to perform conditions 1 and 2 (above) in adverse conditions such as high winds and icing

4. Maximum payload required in either a wet or dry condition to cause the front off-side jack to lose contact with the ground with the ladder positioned at 0 degrees elevation and 90 degrees to the side of the truck at full extension.

5. The amount of pressure and flow required to lift a fully extended ladder and platform when loaded or beyond capacity.

The base section shall include a triangulated lifting configuration, consisting of steel tubing and steel plating.

37.15.1 LADDER HANDRAIL DIMENSIONS

To allow the passing of personnel on the ladder and safe ladder climbing at any angle, the minimum dimensions of the ladder sections shall be the largest dimensions allowable within the manufacturers designs for specified ladder.

37.15.2 OVERLAPS AREAS

The overlap areas of the ladder shall have added stiffness by utilizing a combination of diaphragm plates and tubing. Overlaps between each section at full ladder extension shall be within the engineered dimension for maximum ladder section support.

37.15.3 BASE SECTION NAMEPLATES

Two (2) nameplates shall be provided and bolted on the ladder base section for the Fire Department's name, one (1) each side. The nameplates shall be large enough to match current PFD aerial apparatus. At a minimum 10” Scotch light lettering, gold with black drop shadow will be utilized.

37.16 PLATFORM CONSTRUCTION

The platform will be constructed of five assembly groups:

Platform framework, floor, handrails, corner gates, and access gate/access ladder.

37.16.1 SUPPORT STRUCTURE FRAMEWORK

The support structure framework of the platform shall be a steel or aluminum weldment consisting of channel and tubing for strength and rigidity.

The slave leveling cylinders shall attach to this structure from the ladder fly section, thus keeping the platform level at all times.

Three (3) heavy duty rubber bumpers shall be installed under the platform to prevent damage to the platform when the unit is placed on the ground or on the edge of a building. The bumpers shall be bolted directly to the structural framework of the platform.

37.16.2 PLATFORM COVERINGS

For maximum safety, the operator in the platform shall be protected by rigidized stainless steel protective shields. The shields shall be provided on the sides of the platform, behind the gates, the side and front surface of each front corner gate, front of platform and the entire underside of platform.

37.16.3 FLOOR

The floor of the platform shall have a total internal (inside handrail) area of 18.80 square feet, with a 9" external step for a combined total area of 29.00 square feet. The floor shall be an open-type non-slip grating, thus preventing the accumulation of water on the platform floor.

The floor shall be a one-piece assembly which extends out past the platform handrail structure 8.00" on each side and 9.00" at the forward gate corners, making transfer in and out of the platform easier.

For safety of transfer to or from the platform, the platform floor and outside platform step shall be on the same level. The two (2) front corners of the floor shall be cut at a 27 degree angle, allowing the platform to be maneuvered closer to buildings.

37.16.4 HANDRAIL STRUCTURE

In compliance with the NFPA Standard, a forty-two inch (42") high continuous, unbroken handrail shall be provided on all four sides of the platform to prevent personnel from falling from the platform.

The railing shall be constructed so that no opening below it is greater than 24".

A four-inch (4") high kick-plate shall be provided around the floor of the platform except the area at the front corner gates which shall remain floor level to prevent tripping.

Each front corner of the platform shall be equipped with an inward swinging spring loaded gate assembly for access to the platform. The gate openings shall have a minimum size of 19.75"wide by 40.5"high.

Handrails shall be provided off the rear of the platform to bridge the gap between the platform and the ladder for safe transfer when the ladder is raised to high elevations. The handrails shall be designed to pivot within 10" of the fly section handrails.

37.16.5 PLATFORM/LADDER ACCESS GATE

A gate shall be provided between the platform and the fly ladder section. The gate shall be spring-loaded and shall automatically return to the closed position at all times. The gate shall push upward and/or inward to the platform from the fly section. The gate shall not move if pushed against from inside the platform. A pin type lock assembly shall be installed which shall lock the gate in the stored position for additional safety.

37.17 PLATFORM LEVELING SYSTEM

A platform leveling system shall be provided and so designed that the platform, together with its rated payload, can be supported and maintained level in relation to the turntable, regardless of the elevation of the ladder.

Platform leveling shall be accomplished by hydraulic circuitry that is independent from the main hydraulic system with an interconnecting control valve.

The leveling of the platform shall be accomplished by the following two (2) systems working together.

1. Dual master/slave hydraulic cylinder - The leveling of the platform shall feature a dual master/slave system with each side capable of maintaining the platform level. Two (2) 3" bore master cylinders shall be mounted between the turntable and the ladder base section; and two (2) 3" bore slave cylinders shall be mounted between the ladder fly section and the platform. Master/slave cylinders shall be equipped with spherical swivel bushings to extend cylinder seal life and provide a non-rigid, cushioned suspension of the platform.

   As the platform is raised or lowered, hydraulic fluid shall be transferred between the master and slave cylinders, thus maintaining the platform level. The slave cylinder shall be mounted outside of the platform for maximum platform space utilization.

2. Auto-leveling system - An automatic level sensing device, located in the platform, shall be provided to ensure that the platform is always level. The leveling system shall provide the following safety features:

a. The leveling system shall be so designed that with the platform raised to its maximum elevation, the platform slave cylinders shall be fully retracted, thus making tipping of the platform impossible should a hydraulic failure occur.

b. Leveling cylinders shall have hydraulic holding valves to prevent the platform from tipping should the hydraulic lines be severed.

c. The slave cylinders shall be mounted outside the platform for maximum utilization of space and for safety of personnel from moving cylinders.

37.18 PLATFORM MOUNTING

The platform shall be suspended from the tip of the fly section in a manner that provides a cushioning effect when the vehicle encounters road irregularities. The steel platform support weldment shall be pinned to the end of the fly; and the hydraulic cylinders shall be attached at a point below the pinning point and to the fly section behind the pinning point to create a load absorbing triangle which utilizes the cushioning effect of the cylinders in the design.

37.19 SAFETY BELT CONNECTIONS

Four (4) stainless steel pompier safety belt loops will be provided in the platform. The loops will be located as follows; one (1) near the platform operator's station, one on the left side of the platform and two (2) will be located on the front of the platform.

37.20 LIFTING ARMS

Lifting arms shall be provided for the aerial platform which shall make it possible to raise and lower items such as stokes basket, tools, equipment, etc. from the platform by the use of a hoist and/or descent device, while allowing the aerial to remain stationary at the scene if necessary. Maximum lifting capability shall be 500 lbs. (250 lbs. per arm).

37.21 STEEL LIFTING EYES

Two (2) welded steel lifting eyes shall be installed under the platform one (1) each side of the platform centerline. Each eye shall be of the "U" shape design and attached directly to the support structure of the platform. The lifting eyes shall have a capacity of 500 lbs. each or a combined capacity of 1000 lbs.

Any weight attached to the lifting eyes must be subtracted from the capacities indicated in the platform capacity load chart located in the platform.

37.22 PLATFORM CLEARANCE LIGHTS

Five (5) red LED clearance lights shall be provided on the lower platform structure. The lights shall be installed three (3) on the center of the platform and one (1) on the each side sections of the platform. The lights shall be wired to the clearance light switch or the headlight switch in the cab dash panel.

37.23 REPELLING JIG

A repelling jig shall be affixed to the front of the basket for use in conjunction with repelling operations. Configuration to be approved by Fire Department.

37.24 PLATFORM 110 VOLT SYSTEM

Two (2) 110 volt 15 amp electrical circuits utilizing 12 gauge five strand electrical cable will be provided to the platform. Circuits will be wired from the platform to the turntable through the collector ring assembly.

Two (2) 110-volt weatherproof outlets, **Nema L5-15R**, with female three prong, twist lock type, environmental covers will be furnished, one (1) on each side of the platform.

37.25 PLATFORM QUARTZ LIGHTS

Two (2) Hoosier, 500 watt, telescoping quartz lights (or approved equal) will be mounted on the rear of the platform. Each light will be provided with telescoping poles and will be switched at the lighthead. Each light will be wired to the ladder 110-volt system and will be wired into the circuit breaker panel.

37.26 PLATFORM RECESSED QUARTZ LIGHTS

Two (2) 500 watt Alpha 2000 Quartz lights will be recessed, one (1) on the front center of the of the platform and one (1) on the center bottom of the platform. These lights will be adjusted to illuminate the underside and sides of the platform without blinding the operator, unlike telescoping pole lights. Each light will be wired to the platform 110-volt circuit and will be equipped with separate switches

37.27 LADDER/PLATFORM LIGHT PACKAGE

Two (2) spotlights will be mounted at the rear of the base ladder section, one (1) on each handrail. The spotlight will be capable of swiveling 180 degrees and are to be used to direct light up the inside or outside of the ladder walkway.

One (1) spotlight and one (1) floodlight will be mounted at the front of the platform.

All four (4) lights will be 12 volt, 6" diameter, with on/off switches on each light. The lights will be mounted below handrail height, so as not to increase the overall height of the vehicle.

37.27.1 SPOTLIGHTS

The four (4) aerial spotlights will be **Unity** type lights.

37.28 PLATFORM EQUIPMENT STORAGE COMPARTMENTS

Two (2) aluminum tread plate compartments with a total of 7.5 cubic feet of storage shall be attached to each exterior rear corner of the aerial ladder platform. The compartments shall be sectioned off and provided with a separate access doors. Each door shall be furnished with a push-to-release door latch.

The compartment shall provide storage for possible equipment, like a fire axe, 100 feet of 1-3/4" fire hose and/or SCBA face masks. All equipment that is to be furnished for the above compartments shall be listed under separate sections of the specifications.

37.29 PLATFORM AXE MOUNT

A pickhead axe **mounting only** will be provided and mounted in the platform. The axe location will be in the left rear of the platform within the framework of the platform structure. The axe will in no way obstruct the interior of the platform.

37.30 PLATFORM HALLIGAN MOUNT

A Halligan bar **mounting only** will be provided and mounted in the platform. The bar location will be in the left rear of the platform within the framework of the platform structure. The Halligan bar will in no way obstruct the interior of the platform.

37.31 PLATFORM RESCUE BASKET HOLDER

Two (2) detachable rescue stretcher basket holders will be furnished for the platform. The basket holders will be constructed from heavy wall aluminum tubing, which will be capable of being removed from receivers located in the main platform structure on the front of the platform. Heavy-duty mechanical pins will be provided to secure the holder in the platform receivers. The minimum rated capacity of each arm will be 250 lbs. Each arm will be tested and certified by the manufacturer third party testing firm.

A heavy-duty seat belt type strap will be provided on each holder.

37.32 ROOF LADDER BRACKETS

A roof ladder bracket will be provided capable of holding up to a 20 foot Duo-Safety roof ladder securely in place. The ladder shall be secured through its beams and one (1) rung, by a bar capable of being latched in place. The mount will be designed to withstand a minimum of a 500-pound load while maintaining a minimum of a two to one (2:1) safety factor. The complete system shall maintain and exceed these criteria as well. There shall also be a latching pawl to keep the ladder in a vertical position at all times.

38.0 AERIAL LADDER COMPONENTS

38.1 ELEVATION SYSTEM (must meet NFPA 1901 2003 or latest edition 20.9)

Two (2) double-acting lift cylinders shall provide smooth, precise elevation from minus degrees to plus 78 degrees. Lift cylinders shall be attached to a triangulated lifting configuration which distributes equal force to each side of the ladder base section. The triangulated lifting configuration shall apply all lifting forces in a plane parallel to the vertical center line of the base and side rails.

The elevation cylinders shall be pinned to the front structure of the turntable weldment and within the upper section of the triangulated lifting structure one (1) each side of the ladder.

Elevation cylinders shall have a 7" internal diameter (bore); 3-3/4" cylinder rod diameter. The elevation cylinders shall be equipped with integral (on the cylinder) holding valves to prevent the unit from falling should the charge lines be severed at any point within the hydraulic system. A hydraulic holding valve shall be provided in the elevation circuit to retain the aerial ladder in its bed when the vehicle is in motion.

The elevation cylinders shall be provided with both rod and piston "hydraulic cushions". The cushions shall serve to decelerate the cylinder near the end of its stroke resulting in a smooth stop at full cylinder stroke.

38.2 ROTATION SYSTEM (must meet NFPA 1901 2003 or latest edition 20.10)

A 40.29" diameter external tooth monorace bearing shall be provided for 360 degree continuous rotation in either direction. The bearing shall have a minimum rated moment of 523,000 ft. lbs. To ensure proper bearing installation and long service life, surfaces of both the open base bearing plate and the turntable bearing plate shall be milled. Units that do not have milled bearing surfaces shall not be acceptable.

The bearing shall be bolted to the turntable and bolted to the open base support plate, using seventy-one (71) 7/8" diameter Grade 8 bolts. A planetary drive gear box, powered by a hydraulic motor, shall provide precision rotation control throughout 360 degrees of rotation. A spring-applied, hydraulically-released disc type brake shall be furnished to provide positive braking of the turntable assembly against reactionary forces such as water flow and gravity.

The turntable rotation bearing shall be easily accessible for lubrication and Retorquing of bolts from the turntable side, for ease of access.

Access to the turntable bearing bolts which requires the removal of the ground ladders and/or the ground ladder slide assemblies, during bolt retorquing process, shall not be acceptable.

38.3 ROTATION LIMITING SYSTEM

An aerial ladder rotation limiting system shall be provided to notify and prevent the operator from rotating the aerial ladder into a restricted position due to a "short-set" outrigger configuration. The system shall enable the operator to place the aerial ladder in a 180 degree rotation to the opposite side of the apparatus than that of the "short-set" outriggers only. Indicator lights shall be provided on the turntable control console to indicate outrigger not deployed status.

In order to rotate the aerial ladder with a outrigger "short-set", the aerial interlock override control momentary switch located in the turntable control console shall require to be continuously activated while rotation of the aerial is in process. The system shall be capable of rotating the ladder slightly past the centerline of the apparatus on the "short-set" side to enable bedding of the ladder within the travel support structure without system cutout.

38.4 EXTENSION/RETRACTION SYSTEM

A full hydraulic powered extension and retraction system of the ladder shall be provided through dual hydraulic cylinders and cables, each capable of operating the ladder in the event of failure of one of the systems.

The extension cylinders shall have a 4.25" internal diameter (bore) with 2.25" diameter rod. The extension/retraction cylinders shall be equipped with integral (on the cylinder) holding valves to prevent the unit from falling should the charge lines be severed at any point within the hydraulic system.

The extension cylinder shall be provided with "hydraulic cushions". The cushions shall serve to decelerate the cylinder near the end of its stroke resulting in a smooth stop at full cylinder stroke.

Cables attached to the base and mid ladder sections shall be routed over sheave wheels on the base section and cylinder rod. This cabling arrangement shall act as a stroke multiplier to provide full-power ladder extension and retraction.

The extension/retraction cables shall have a minimum safety factor of 5:1

In order to minimize the obstruction to the ladders climbing area, the extension and retraction sheave wheel assemblies and cables shall be located between the aerial ladder section handrails.

38.5 LADDER SLIDE MECHANISM

All ladder slide pads shall consist of Nylatron synthetic material. Slide pads shall be used on both upper and lower bearing surfaces and to control side sway of the sections.

38.6 LADDER LUBRICATION

In order to maintain a high in service level the ladder shall be designed to require minimum amounts of lubrication.

The ladder rails shall be sprayed with a rust prohibitive paint designed to ride on a set of pads which require no greasing of the rails. Grease shall be applied only to the front and rear sliding areas to further reduce friction.

In order to eliminate the need for greasing, the extension and retraction sheave wheels and ladder pivot shall utilize a combination of stainless steel pins and self lubricating bearings. Designs which require greasing of the sheave wheels shall be unacceptable due to increased maintenance costs.

38.7 AIR/ELECTRIC/HYDRAULIC LADDER TRACK

All air, electric and hydraulic line routing shall be accomplished using a flexible conduit system. Routing shall be such that cables shall be fully enclosed except at points of transition between sections. The conduit shall run through the handrail uprights, so the conduit does not decrease the interior width of the ladder..

38.8 EXTENSION INDICATOR

The base section handrails shall be provided with red Scotch-Lite reflective striping and numbers to indicate the extension of the aerial device. The stripes and numbers shall be spaced to indicate each 10 feet of aerial extension beyond the fully retracted position.

39.0 HYDRAULIC SYSTEM

The hydraulic system shall provide power in as efficient a manner as possible. The system shall use a piston type load sensing pump and shall be capable of operating under any rated load condition and aerial position at normal engine idle (slow idle) or governor controlled fast idle. The piston pump shall be capable of generating sufficient flows to allow multiple function operation without significant loss of speed.

For size and weight considerations, a 40 gallon (maximum) oil reservoir is desired. The reservoir shall be equipped with a gated drain line; and a gated suction line shall be provided between the oil reservoir and the hydraulic pump. The reservoir shall have a magnetic drain plug, an oil level sight glass and an easily accessible fill cap.

The system shall be equipped with both a pressure and a return line filter of no greater than 10 micron in mesh size. Filters shall be equipped with easily visible dirt alarms. Both filters shall be protected by bypass circuits to protect the system from extreme contamination caused by the breakdown of a neglected filter and subsequent release of previously trapped particles into the system.

The hydraulic system cylinders shall be sized and rated in accordance with previously described structural safety factors.

All hydraulic hoses and steel lines used in the system shall have 4:1 safety factor based upon burst pressure. Hoses shall be of the steel braided, rubber covered type and shall be properly sized to reduce heat build-up during prolonged periods of operation.

The system shall not be dependent upon an auxiliary cooler to control system temperature.

The system shall be capable of generating full rated flow capacities at no more than 1500 rpm. Each function shall be protected by a system relief valve and/or individual circuit relief valves, preset at the factory. Maximum preset system pressure shall be 3000 psi.

A three-function hydraulic proportional valve bank shall control ladder functions. The valve shall be located at the turntable with direct linkage controls. Three (3) aerial control actuators shall be located at the aerial control station to provide "Raise/Lower"; "Extension/Retraction" and "Swing Left/Right" functions.

The hydraulic system shall be capable of simultaneous outrigger functions or simultaneous aerial functions.

39.1 COMBINATION HYDRAULIC, WATER AND ELECTRIC SWIVEL

Hydraulic power to the turntable hydraulic circuits shall be provided through a three-port, high pressure hydraulic swivel permitting 360 degrees continuous rotation of the turntable.

Water shall be transferred to the aerial waterway by means of a 5" internal diameter water swivel, permitting 360 degree continuous rotation.

Electric power to the turntable electric circuits shall be comprised of a minimum of twenty-six (26) ring collector assembly, permitting 360 degree continuous rotation of the turntable.

39.2 220 VOLT AC/12 VOLT DC EMERGENCY HYDRAULIC SYSTEM

The apparatus shall be equipped with a 220 volt emergency hydraulic power system. The emergency system will be able to driven by the apparatus generator or a 12 volt DC system and shall be capable of limited ladder functions to stow the ladder and outriggers in case of primary hydraulic pump failure.

Two (2) spring loaded switches shall be provided, one (1) on each side outrigger control station, to activate the emergency power unit.

40.0 POWER TAKE-OFF (PTO)

The apparatus shall be equipped with a "Hot-Shift" PTO driven by the chassis drive train. A red indicator light shall be located in the cab next to the PTO switch to show when the PTO is engaged.

The PTO shall only engage with the chassis spring brake set and the transmission in neutral to prevent unintentional movement of the chassis during hydraulic system operation.

For the safety of personnel and equipment, no exceptions shall be allowed to this neutral safety system.

40.1 AERIAL HOUR METER

An aerial hour meter will be installed in the cab adjacent to the ladder power and PTO control switches. The hour meter will be wired to the aerial PTO circuit to record ACTUAL hours of operation for the aerial. The hour meter will aid in scheduling preventative maintenance as outlined in the operator's manual.

41.0 TURNTABLE

41.1 TURNTABLE TREADPLATE

A steel tubing support structure shall be welded to the turntable bearing plate, to support the turntable tread plate.

A 96" diameter, aluminum tread plate deck assembly shall be furnished around the turntable weldment. The tread plate shall be furnished with a 1-1/2" lip on all sides. An aluminum tread plate access step shall be provided at the heel of the ladder.

41.2 SAFETY RAILING - TURNTABLE

Forty-two inch (42") high safety railing shall be provided at the sides and rear of the turntable. The safety railing shall be constructed of 1-1/4" diameter heavy duty brushed stainless steel tubing with deeply serrated rubber sheaths. Brackets shall be polished stainless steel type. A vinyl covered safety chain shall be provided across each corner opening with chrome plated snap style clips.

41.3 CRADLE ALIGNMENT INDICATORS

Aluminum arrows with red Scotch-Lite coating shall be provided on the turntable surface, and on the apparatus body to indicate the alignment of the aerial ladder with the ladder travel cradle. The indicators shall be suitably illuminated for night time operation.

41.4 AERIAL CONTROL STATION - TURNTABLE CONSOLE

An aerial control console shall be located on the driver's side of the turntable when the aerial is in the travel position to reduce damage from overhanging tree limbs. The components shall be clearly identified and suitably illuminated for ease of operation.

Deadman Foot Switch: A switch to safeguard against accidental movement of the aerial ladder. The aerial ladder function controllers shall remain inactive while the foot switch is not depressed.

Master Electrical Power Switch: A two (2) position, push/pull power switch shall be provided on the control panel. The switch shall be wired so that electric platform controllers are activated when the master switch is in the "ON" position, and electrical power is deactivated when in the "OFF" position.

Ladder Function Controllers: Three (3) ladder function controllers located on the turntable control console to provide elevation, extension, and rotation operational control of the aerial device. These controls shall be arranged to permit the operator to regulate the speed of these operations within the safe limits as determined by the manufacturer.

Fast Idle Switch: A toggle switch located on the control panel to activate the Engine Fast Idle.

Platform Auxiliary Leveling Switches: A guarded switch located on the control panel to hydraulically re-level the platform as needed. A mushroom switch located on the control panel to deactivate the auxiliary platform leveling system.

Load Chart: The manufacturer's load chart, installed within view from the operator's console and properly illuminated for easy reference by the operator. The load chart shall indicate the manufacturer's recommended safe aerial loading and capacity weights at all angles of elevation and all extensions of the ladder.

Elevation Angle Indicator: A bubble-type indicator mounted in clear view of the operator to indicate the aerial device's angle of elevation.

Rung Alignment Indicator: A light located on the control panel to indicate that aerial ladder rungs are properly aligned for safe climbing.

Outrigger "Not Deployed" Warning Light: A red indicator light shall be provided on the turntable console that shall be illuminated while the outriggers are not in a load supporting position. This light shall turn off once the outriggers are properly locked in position.

Hydraulic Oil Pressure Gauge: A 5000 psi hydraulic oil pressure gauge shall be provided and installed to indicate the overall pressure of the hydraulic system.

A hinged aluminum tread-plate cover shall be provided for the T/T control console.

41.5 AERIAL CONTROL - PLATFORM CONSOLE

The main aerial control console shall be located at the right rear corner of the platform and include rung alignment indicator, outrigger not-deployed indicator, platform leveling switch, aerial function controllers, speed selection switch, a fast idle switch and a momentary safety switch.

Located near the console shall be the operators load chart, elevation angle indicator and intercom controls.

All features shall be clearly identified and suitably illuminated for easy of

operation.

The console shall have three (3) fixed attachment platform locations, left or right rear corners or the front center of the platform. The console box shall be connected at each location by means of a multi-pin bayonet connector.

Ladder function controllers shall be grouped in an identical manner as those at the turntable console for simplicity of operation. The controls shall be so designed that the turntable controls shall override those at the platform even if the aerial device is being operated from the platform console.

42.0 AERIAL ELECTRICAL SYSTEM

Electrical power for the aerial device shall be drawn from the chassis electrical system and routed through major segregated circuits and into an electric collector ring assembly. The circuits shall provide power for the aerial device controls, indicators, and interlocks; other circuits shall power auxiliary equipment such as lights, intercom, etc.

The electric collector ring assembly shall provide power for electrical ground, ladder control functions, 12 and 120 volt systems. The collector rings shall be enclosed in a sealed, weatherproof housing to prevent corrosion.

All aerial device wiring shall be multi-conductor, copper 16 gauge (minimum), color-coded, with thermosetting cross-linked polyethylene insulation. All aerial device wiring shall be in pre-engineered harnesses with each circuit identified by number and color code. Harness connections shall be through locking, weatherproof, guided pin connectors.

43.0 ENGINE, FAST IDLE ACTUATOR

A fast idle actuator system shall be provided to raise the engine RPM to a pre-set level for proper aerial operation. For the safety of personnel and equipment, the fast idle system shall not activate unless the interlock systems have been applied, the chassis spring brakes are set and the transmission is in neutral or in drive.
No exceptions shall be acceptable to this system. The aerial device shall not be dependent upon the fast idle circuit to perform any rated task.

44.0 AUDIBLE LOAD ALARM WITH GAUGE AND LIGHTS

An audible alarm with color coded gauge and with a dB level no less than 90 shall be provided at the turntable control console to alert the operator should the load limitations of the ladder be exceeded. The alarm shall only notify the operator of the condition but in no way restrict the further operation of the ladder.

Two (2) Whelan #800 amber color strobe lights shall be located at the end of the base section, one (1) each side, wired to the load gauge to indicate an unsafe condition. The gauge shall indicate the load on the aerial ladder and provide a continuous read-out of the load relative to the rated capacity of the aerial ladder.

45.0 CAB AND BODY PROXIMITY WARNING SYSTEM WITH SHUT-DOWN

A cab and body proximity warning system with shut-down shall be installed on the apparatus. The system shall be designed to warn the aerial device operator, when the ladder is in a position where contact with the cab and body could occur while rotating the ladder at low angles, and while lowering the ladder when it is positioned over the cab and body. The system shall prevent the aerial device from contacting the cab and body. System will not allow continuation into the crush zone even with override.

The system shall include a visual and audible alarm at all ladder control consoles. The system shall remain in the warning mode while the ladder is in a position where contact could occur. It shall deactivate only when the ladder is rotated away or elevated above the contact zone area.

46.0 TURNTABLE WORK LIGHTS

Four (4) 12 volt work lights shall be installed on the rear step of the turntable to illuminate the turntable tread-plate area.

47.0 COMMUNICATION SYSTEM

An Atkinson two-way communication system shall be furnished between the platform control station and the turntable control station.

The communication control box, which includes "Talk" and "Listen" volume controls and a "Push to Talk" button, shall be located at the turntable control console. A "hands-off" speaker which requires no operator attention shall be located at the platform control station.

48.0 BREATHING AIR SYSTEM

A breathing air system shall be routed to the aerial ladder platform. Two (2) 444 cubic foot, 4500 psi air cylinders, with current hydrostatic test stampings, shall be securely mounted on the ladder base section, one (1) each side. The air cylinders shall be interconnected to a pressure regulator located on the left air cylinder. A shut-off valve on each cylinder shall allow the use of air from either cylinder.

Air from the cylinders shall be routed through a lower cylinder mounted pressure regulator, which shall reduce cylinder pressure to airline pressure, to the platform via Kevlar reinforced synthetic air hose. At the platform, the air shall be filtered through an

airline filter and an upper platform mounted pressure regulator to be further reduced from airline pressure to air mask pressure.

48.1 LOW AIR PRESSURE WARNING SYSTEM

A Class 1 low air pressure warning system (visual & audible) shall be provided to indicate the amount of air remaining in the breathing air system. Visual and audible devices will be located at both the turntable and platform control panels.

48.2 BREATHING AIR OUTLETS

Four (4) Hansen quick connect couplings for airline respirators shall be provided, two (2) each side of the platform.

48.3 AIR REFILL HOSE

A fifty foot (50') high pressure refill hose shall be provided for refilling the air cylinder without having to remove the cylinder from its mounting.

49.0 AERIAL WATER SYSTEM

A 1500 GPM pre-piped waterway system shall be provided as outlined in NFPA 1901. The waterway shall run from two (2) 5” storz intakes with 30 degree elbow (one each side) to the end of the last fly section on the aerial and shall be telescopic in nature. The design of the waterway should be as such to maximize water flow and to achieve 1500 GPM’s.

A 5” storz blind cap shall be provided on each inlet.

A relief valve preset at 225 psi will be located beneath the turntable to protect the water system from excessive pressures.

A 1 ½” Drain Valve shall be provided so as to be able to drain the entire waterway system. It will be installed so as to be operated from the officer side of the apparatus.

An automatic drain will be provided in aerial water way to automatically drain the system for freezing conditions.

A liquid filled water pressure gauge shall be located near each intake.

A Class 1 Flowminder shall be installed on the turntable control console to provide a visual display of the ladder water system flow (GPM).

49.1 PLATFORM WATER SYSTEM

A water swivel shall connect the fly section waterway to the platform waterway. The water swivel shall permit water tower operations throughout the aerial devices full range of elevation.

Two (2) 3.00" ID aluminum pipes (or similar design) shall transfer water from the swivel to two (2) 4" gear-operated butterfly valves on the front of the platform. A deck gun shall bolt onto each of the butterfly valves by means of an 8-bolt mounting flange. The butterfly valves shall enable the deck guns to be shut down for use of the pre-connects. These valves should be of the slow close design.

A shower nozzle, located beneath the platform and with direct linkage control from inside the platform, shall be provided for heat protection of platform personnel. A pressure relief valve set at 165 psi shall be located beneath the platform.

Two (2) 2-1/2" gated pre-connects, equipped with male National Standard Threads (NST), shall be located on the front of the platform. Each pre-connect shall be provided with a 2-1/2" NST x 1-1/2" NST chrome plated reducer and 1-1/2" NST chrome plated cap with retention chain.

49.2 DUAL AKRON MONITORS

Electric Monitor

The aerial platform will come equipped with one (1) Akron 3578 electrically controlled monitor with an Akromatic 5078 straight stream to fog nozzle.

The monitor shall have fully enclosed motors and gears with built in manual override capability and quick attach handles. The monitor shall be able to operate in the horizontal and vertical axis simultaneously.

Control switches for horizontal movement, vertical movement and pattern selection shall be located at the base of the platform at the turn table console as well as close proximity to the monitor in the platform.

A 30’ tether will also be provided to operate electric monitor. Location TBD @ preconstruction.

Monitor shall be installed on the front of the platform, offset to the left.

Manual Monitor

The aerial platform shall come equipped with one (1) Akron 3570 two-wheeled manual monitor with an Akron 3570 straight stream to fog nozzle.

The monitor shall be able to operate in the horizontal and vertical axis simultaneously.

Monitor shall be installed on the front of the platform, offset to the right.

49.2.1 PLATFORM MOUNTED STACK TIPS

Two (2) sets of Akron #2499 pyrolite stack tips shall be installed in the platform adjacent to the monitor mounting. An Akron #350 screw type mounting plate shall be installed to hold each set of tips while not in use.

50.0 PIKE POLE STORAGE

Pike poles will be provided by the contractor and stored in the ground ladder storage area with access from the rear of the apparatus.

Pike poles will be stored in 2 ½" diameter plastic tubes.

Provide the following NUPLA I-Beam style SPD (fiberglass handle) pike poles:

Two (2) six foot
Two (2) eight foot
Two (2) twelve foot
Two (2) six foot EK Hooks
Two (2) sixteen foot

51.0 ADDITIONAL EQUIPMENT

Two (2) - 25' Length of Snaptite TX Duralite TPX 5" Hoseline with 5" Storz Couplings

Two (2) – Snaptite gate valve 'G'; Part # GS50SW50: 5" Snaptite Storz x 5" Snaptite Storz Swivel

Two (2) – Snaptite 3-way Siamese clappered S3; Part # S3S50T25N: 5" Snaptite Storz x (3) 2 ½" NST F Turntable

No. 41-V-20M:86
supersedes 41-V-20L:85
Effective 1/16/86

CITY OF PHILADELPHIA
PROCUREMENT DEPARTMENT
STANDARDS DIVISION

SPECIFICATION

TRUCKS: AUTOMOTIVE INTERNAL COMBUSTION ENGINE

1. SCOPE & CLASSIFICATION:

This specification covers the general requirements for Trucks in various body styles and weight classifications. The Trucks shall be powered by internal combustion engines. They shall be constructed, assembled and equipped to perform properly under the operating conditions for which they are intended. Each unit shall be unused in all component parts and shall be the latest model in current production and include all accessories normally furnished as standard as shown in current literature. These specifications shall be construed as minimum and where the manufacturer's fleet standard exceeds these, vehicles shall be so furnished; where optional equipment is specified, the description thereof shall be the governing minimum. They shall be registered with the Pennsylvania Department of Revenue for the License Class and Axle Weights indicated in the purchase description.

This specification shall be used in conjunction with appropriate detailed chassis purchase description for the specific type of truck called for in the Invitation to Bid (See Index - Last Page).

(NOTE): - Reference to GVW in these specifications is a guide only; final GVW rating shall be determined by the D.O.T. Rules and Regulations in regard to axles, springs, suspension, brakes and tires as required in the T-Form Specifications.

2. APPLICABLE SPECIFICATIONS:

The following specifications, of the , latest issue in effect on the date of the Invitation to Bid, shall form a part of this specification.

- Department of Transportation - Federal & State Motor Vehicle Safety Standards.
- Society of Automotive Engineers, Inc. - SAE Standards & Recommended Practices.

TRUCKS, AUTOMOTIVE, INTERNAL COMBUSTION ENGINE - SPECIFICATION 41-V-20M:86

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- OSHA Rules & Regulations - Shall apply when applicable.
- Federal Department of Health, Education & Welfare - Air Pollution Control for New Motor vehicles.
- Commonwealth of Pennsylvania - Traffic & Motor Vehicle Rules and Regulations.
- Manufacturer Line Set Ticket - Shall be forwarded to the Director of Automotive Services upon delivery of the chassis to the City of Philadelphia, or if Pilot Model Inspection, at the factory.

(NOTE) - Any intent of this specification shall be superseded by the provisions of the above.

3. **CAB & CHASSIS**:

3.1 Cab - Shall be conventional, three-man adjustable seat with three seat belts.

3.2 Chassis - The chassis shall be sturdily constructed and shall be of strength capable of withstanding all imposed loads when operating at the gross vehicle weight without excessive strain on any members or parts.

3.3 Chassis Body & Cab Colors:

3.3.1 City of Philadelphia, Paint Colors & Lettering by Department as follows:

DEPARTMENT	**COLOR**	**DUPONT REF. #**	**LETTERING COLOR**
Fair. Pk.	**GREEN**	**72001**	**IVORY**
Fire Dept.	**RED**	**55141**	**GOLD LEAF**
Police (Body)	**BLUE**	**5351A**	**----------**
Police (Roof)	**WHITE**	**92635**	**----------**
Sheriff (Body)	**BLUE**	**5351A**	**---------**
Sheriff (Roof)	WHITE	92635	-------

Water (Up to 21,000 lbs. GVW)	WHITE	508	BLUE
Water (26,000 Lbs. GVW & Up)	SAFETY YELLOW	75306	BLUE
Recreation (Stadium)	BLUE	78387	WHITE
All Other Depts. Except Library	SAFETY YELLOW	75306	BLUE

3.3.2 - All lettering listed above shall be three inches (3") high on front doors, both sides, as follows.

PHILADELPHIA

(NAME OF DEPARTMENT)

(6-DIGIT VEHICLE NUMBER)

NOTE) Stenciling of Lettering is NOT acceptable.

3.3.3 Optional Lettering - Streets Department: All vehicles shall have 1-1/2" size numbers placed on the left side of the front bumper and three inch (3") size numbers on the rear of the body as follows:

Department # - Vehicle # - Division

This lettering is in addition to the lettering specified in 3.3.2 above and lettering instructions may be obtained from the Automotive Services Division of the Department of Public Property.

3.3.4 Official Colors & Lettering of ALL Free Library Vehicles:

A) The vehicle shall be painted as follows:

1. Top Half = White
2. Bottom Half = Dark Blue
3. Dividing Stripe (3" Wide) between top and bottom halves located approx. 3" above blue bottom half = Bright Green

B) The vehicle shall be lettered as follows:

1. "THE FREE LIBRARY OF PHILADELPHIA" in large bold letters.
2. "READ" in large bold letters with a book-and-bell design (using white, blue and green) in the center of the letter "R".
3. Dark Blue lettering on white areas; white lettering on dark blue areas.

C. Paint Color Reference Numbers

COLOR	**LIBRARY PANTONE**	**TRADE NAME**	**DUPONT NO.**
WHITE	----------	WHITE	92635
DARK BLUE	287	DARK BLUE	24160
BRIGHT GREEN	368	BIG BAD GREEN	5081D

(NOTE): Instructions for the above Library Lettering may be obtained from the Automotive Services Division of the Department of Public Property.

4. **BODY:**

Body provided shall be as required in Bid Specs.

5. **CAB & BODY EQUIPMENT:**

5.1 Equipment & Accessories - The following equipment, and/or accessories shall be provided.

Cab & Body:

5.1.1 Fresh Air Heater and Defroster with separate control for temperature and fan.

5.1.2 All gauges shall be provided for ammeter, oil pressure, water temperature and fuel, 16,000 GVW & up.

5.1.3 Dual windshield wipers, power-operated, two-speed or variable.

5.1.4 Dual sun visors.

5.1.5 Dome Light.

5.1.6 Directional Signals - Class "A" Type, as per Pennsylvania DOT Motor Vehicle Regulations - with traffic hazard switch for flashing all turn signal lights simultaneously.

5.1.7 Combination arm rest/inside grab handle on cab doors adjacent to driver and passenger seats.

5.1.8 Safety Seat Belts - Belts shall comply with DOT Rules and Regulations.

5.1.9 **Mirrors**:
Inside Adjustable, up to 12,000 GVW
Outside, Dual Right/Left W/C to 12,000 GVW
Outside, Dual Right/Left W/C, 6" x 16", for 16,000 lbs. GVW and up.

5.1.10 **Undercoating** - Shall be applied to all exposed sheet metal under chassis and body including fender wells unless constructed of plastic.

(NOTE): Compacting-Type Trucks - are to be undercoated on the cab and chassis but NOT under the compactor Body.

5.1.11 **Cab Outside Grabhandles** - Shall be provided on trucks 16,000 lbs. GVW and up.

6. **FRAME:**

The Chassis Frame shall be constructed of pressed steel or equal; and shall be provided with adequate cross-members, exclusive of engine supports, so designed and constructed as to support adequately the gross weight of the body and load, the power plant, and all other necessary equipment under the operating conditions for which the truck is intended.

6.1 Frame shall be specified in terms of minimum acceptable resisting moment, which is the product of the section modulus of the frame section and the unit stress at the minimum yield point.

MOMENT (M) = SECTION MODULUS (S) X UNIT STRESS (F)

In the case of built-up frame sections, the combined section modulus shall be considered as the sum of the individual section moduli.

6.2 Frame Attachments - Front & Rear Towing hooks or Eyes shall be provided, 16,000 lbs. GVW and up. They shall be fastened to the frame in such a manner as to develop maximum tension and minimum bending in the frame members.

6.3 Factory Frame Reinforcement - Shall be provided for 16,000 lbs. and up GVW, GCW and Chassis when specified in bid specifications.

Frame reinforcement is required on all Dump Trucks and Trucks with Cranes, Hydraulic Buckets and other Attachments inducing high twisting and weight stresses.

6.4 Frame Strength - The vehicle frame as supplied by the manufacturer shall meet all requirements as established and set forth by the Federal Government and the Commonwealth of Pennsylvania, Department of Transportation, to meet the GVW of the vehicle bid and shall have the prescribed Certification Sticker affixed to said vehicle. In order to meet the aforementioned standards, the bidder may provide a frame that is either structurally reinforced ("J" type, "L" type, "C" type, etc.) or is constructed of a "high tensile" rating steel or specially heat treated steel (minimum rating of 110, 000 PSI).

7. **SUSPENSION AXLES** - Rear Axles shall be capable of operating under all conditions with multi-purpose gear lubricants.

7.1 Springs - Springs shall match rating of front and rear axles capacity in pounds.

7.2 Shock Absorbers - Shock Absorbers shall be provided front and rear for all 7,500 lb. and 12,000 lb. capacity chassis.

7.3 Tire Chain Clearance - On Drive Wheels, single and dual, wheel chain clearance shall be provided.

7.4 Tandem Axle Suspension - Shall be walking beam type, with at least 50" axle spacing, rubber bushings and a cast steel saddle with steel springs to match axle capacity.

7.5 Axle Capacity shall be provided at least as follows:

GVW REF.	FRONT AXLE	REAR AXLE
7,500 LBS.	3,300 LBS	5,000 LBS.
11,000 LBS	4,000 LBS.	8,000 LBS.
16,000 LBS.	5,000 LBS.	15,000 LBS.
21,000 LBS.	6,000 LBS.	17,000 LBS.
26,000 LBS.	9,000 LBS	19,000 LBS.
30,000 LBS.	12,000 LBS.	23,000 LBS.
48,000 LBS.	16,000 LBS.	38,000 LBS.

(NOTE) - The above listed front axle capacities generally are not applicable to tractor specifications and they will be specified in the bid documents.

7.6 All single driving axles shall be equipped with limited slip differential, positive drive. Tandem axles shall be provided with inter-axle differential lock, air operated; dash switch with a red warning light.

8. **BRAKES:**

Service Brakes shall be provided on all wheels as follows:

8.1 7,500 lbs. to 11,000 lbs. GVW - Power Assisted Brakes

8.2 16,000 lbs. to 25,000 lbs. GVW - Vacuum-Boosted Hydraulic Brakes with a reserve tank, or power steering pump assist, and dash gauge.

8.3 26,000 lbs. GVW and UP - Full Air Brakes with dual reserve tanks, air pressure gauge on dash, buzzer, 12 cu. ft. (min.) water cooled air compressor, fail-safe rear brakes (Berg or Maxi type) released by air pressure, automatic reservoir drain valves and dash mounted controls.

(NOTE) - "S" Type Cam Brakes with automatic slack adjuster shall be provided in lieu of "wedge"-type brakes.

9. **ENGINE:**

Engine as specified and provided shall be in accordance with all the applicable provisions of Section #2, and it shall be of at least the listed minimum displacement, in accordance with the truck GVW, as follows:

9.1 Gasoline Powered Engines, if specified -

7,500 lbs. GVW = 345 cu. in.
11,000 lbs. GVW = 345 cu. in.
16,000 lbs. GVW = 360 cu. in.
21,000 lbs. GVW = 360 cu. in.
26,000 lbs. GVW = 390 cu. in.
30,000 lbs. GVW = 425 cu. in.
48,000 lbs. GVW = 425 cu. in.

(NOTE) - Trucks with GVW under 7,500 lbs. will use the 7,500 lbs. GVW rating as a guide.

9.2 Diesel Powered Engines, if specified.

16,000 lbs. GVW = 500 cu. in./4 cycle
21,000 lbs. GVW = 500 cu. in./4 cycle
26,000 lbs. GVW = 500 cu. in./4 cycle
30,000 lbs. GVW = 550 cu. in./2 cycle
30,000 lbs. GVW = 670 cu. in./4 cycle
48,000 lbs. GVW = 550 cu. in./2 cycle
48,000 lbs. GVW = 670 cu. in./4 cycle

(NOTE) - A key-type electrical solenoid or a manual type shut-down

system shall be provided on all diesel engines.

10. **ENGINE EQUIPMENT:**
All engines shall be provided with the following equipment:

10.1 Replaceable-type lube oil filter, engine-mounted.

10.2 Electronic-type ignition system, if gasoline engine.

10.3 Non-leaded Fuel System, if gasoline engine; all engines to have in-line replaceable fuel filters.

10.4 Engine Governor shall be provided on all trucks with a GVW of 16,000 lbs. or over; top governed speed limit allowable through transmission and rear axle ratios is 55 MPH.

10.5 Manufacturer's rated heavy-duty dry-type intake air cleaner.

10.6 All engines shall be provided with an automatic shutdown system for high water temperature and low oil pressure when specified in the Invitation to Bid.

10.7 Diesel engines are to be provided with cold weather starting provisions.

11. **TRANSMISSION**:

11.1 All trucks will be provided with fully automatic transmissions having the minimum number of forward speeds, in accordance with the truck GVW, as follows:

Up to 7,500 lbs.	3 speeds
11,000 lbs.	3 speeds
16,000 lbs.	4 speeds
21,000 lbs.	4 speeds
26,000 lbs.	4 speeds
30,000 lbs.	5 speeds
48,000 lbs.	5 speeds

(NOTE) - Transmissions provided on Trucks with GVW's of 26,000 lbs. or over shall have factory installed external type oil filters and an oil temperature gauge mounted on the dash.

12. **STEERING**:

All trucks shall be provided with Power Steering

13. **ENGINE COOLING SYSTEM:**

13.1 All engines shall be provided with increased cooling including a sealed radiator coolant recovery system with a surge tank.

13.2 All coolant systems shall be protected by permanent-type anti-freeze down to temperature of at least minus 30oF.

14. **ELECTRICAL EQUIPMENT:**

The chassis shall be provided with 12-volt electric starting, lighting and ignition system with two (2) keys. Alternator shall be heavy-duty type, at least 60 amp output, with 30 amp output at idle. All electrical systems in the vehicle shall be protected by circuit breakers or fuses. Battery shall be a 12-volt "Maintenance Free" type.

15. **TIRES:**

15.1 Tires of the same size and manufacturer shall be provided on the front and rear unless specified otherwise in the Invitation to Bid.

15.2 Front tires shall be "regular" tread type.

15.3 Rear driving axles shall be provided with "All Traction" type tires.

15.4 All-Wheel Drive Type Trucks, (including "Jeeps"), shall be provided with "all traction" type tires on all front and rear driving axles.

(NOTE) - "Military" Grade tires or Wide-Open Tread type tires are not acceptable for "All Traction" Type tires.

Police 4WD type vehicles shall be provided with blackwall "all traction" type steel belted radial tires.

15.5 A mounted "regular" tread type tire ("all traction" type for 4WD type vehicles) and rim shall be provided as a spare unit.

15.6 Trucks shall be provided with the number of tires sized and rated, in accordance with the trucks GVW, as follows:

LBS GVW	NO OF TIRES	RIM SIZE	TIRE SIZE	TIRE PLY
7,000	4	--	8.75 X 16.5	8
11,000	6	--	8.00 X 19.5	8
16,000	6	7.00	9.00 X 20	10
21,000	6	7.00	9.00 X 20	10
26,000	6	7.50V	10.00 X 20	12
30,000	6	7.50V	10.00 X 20	14
48,000	10	8.00V	10.00 X 20	14

(NOTE) The above ratings are to be considered as the minimum acceptable.

15.7 Cast spoke wheels are to be provided on all trucks with GVW ratings of 16,000 lbs. and above.

16. **FUEL TANK:**

All Trucks will be provided with the listed minimum size fuel tank, in accordance with their rated GVW, as follows:

RATED GVW	TANK SIZE & TYPE
7,500 LBS.	20 GALLON - REGULAR TANK
11,000 LBS.	20 GALLON - REGULAR TANK
16,000 LBS.	30 GALLON - REGULAR TANK
21,000 LBS.	50 GALLON - SAFETY STEP TANK
26,000 LBS.	50 GALLON - SAFETY STEP TANK
30,000 LBS.	50 GALLON - SAFETY STEP TANK
48,000 LBS.	DUAL 60 GALLON - SAFETY STEP TANK

17. **SAFETY EQUIPMENT**:

17.1 All trucks shall be provided with all safety equipment as required by DOT/ICC for vehicles in interstate operations. This equipment shall include, but not be limited to:

Fire Extinguisher - Dry Charge Type, Flags, Flares, Reflectors, etc.

Each Kit shall be mounted in a convenient location inside the cab.

17.2 Backup warning buzzer/alarm shall be provided on trucks with a GVW of 16,000 lbs. or above.

17.3 A Manual Engine Shut-Down System shall be provided on all diesel engines.

18. **WARRANTY:**

Warranty - In addition to any policy guarantees usually extended to the general public, the contractor shall guarantee the vehicle and body, and parts thereof against defective material, workmanship, and/or faulty design for a period of one (1) year from date of acceptance delivery to the Department of Public Property. The vendor shall replace all defective assemblies or parts without cost to the City (including labor), f.o.b. manufacturer's nearest dealer or branch, or to original destination whichever is designated by the using agency. The contractor shall make immediate replacement from his plant or through his dealer or branch.

Warranty Rate - Rate shall be $25.00 per hour, plus 15% parts handling charge, when repairs are performed at City garages.

19. **PRE-PRODUCTION INSPECTION**:
Provide transportation and costs for two (2) persons to inspect pilot model unit at factory. All preparations; travel, lodging, meals and other arrangements will be made by the bidder at his own expense.

20. **QUESTIONNAIRE:**
The questionnaire included with the Invitation to Bid shall be completely filled out and submitted by bidder with his bid.

21. **QUESTIONS REGARDING BID**:
All questions regarding Bid Specifications should be directed to the Director of Automotive Services Division, Room 1140, M.S.B. or call extension (215) 686-4481.

22. **ILLUSTRATIONS & DRAWINGS:**
The bidder shall furnish with his bid, two (2) sets of illustrations and complete data sheets to assist the purchasing and using agencies in determining whether the vehicle offered is adequate to perform the work specified and if it meets the Bid requirements/description.

23. **REPAIR PARTS & SERVICE:**
As the continuous operation of the vehicle contemplated by this specification is of utmost importance, contractor shall be able to furnish, upon request, sources of maintenance and repair, parts and supplies for a period of ten years.

24. **CERTIFICATION OF COMPLIANCE WITH SPECIFICATIONS:**
The bidder shall certify on the form furnished with the Invitation and Bid that the Truck, component units, and parts shall be suitable for the work to be performed and will be constructed to definite standard dimensions, with proper clearance and fits; that previously published or set ratings shall not arbitrarily be raised without prior approval of the manufacturer of the actual unit and further, that the truck offered shall comply in every respect with the terms of this specification. In the event that the truck offered does not comply with this specification, the bidder shall state definitely, referring to the proper paragraph of this specification, where the Truck he proposes to furnish does not comply. Where no statement is received, the successful bidder shall be required to meet every requirement of the specification.

25. **REQUIREMENTS:**

General - Though they shall not be specifically enumerated herein, all parts necessary to provide a complete and efficient truck shall be furnished. All parts shall conform to current engineering practices of the industry relative to design, strength, quality of material and workmanship. The City reserves the right, at its option alone, to accept trucks with minor deviations from this specification.

26. **MATERIALS:**
The Truck and all parts thereof shall be made of materials which are suitable for the intended service and shall be produced by current standard manufacturing processes. The materials shall be free from characteristics or defects which affect the appearance or which shall affect the proper functioning of the finished product.

27. **GROSS VEHICLE WEIGHT AND DRY CHASSIS WEIGHT RATINGS:**
These shall be as specified in the Invitation to Bid. The gross vehicle weight rating shall include the weight of the complete chassis and cab with all attachments, accessories, and equipment required by this specification, and the body with its rated load, full complement of fuel, lubricants, coolant and the operator.

28. **FINISH:**
All surfaces and parts not having a chrome-plated or polished metal surface shall be department color-coated as per paragraph 3.3.1 over a rust-inhibiting primer coat. All concealed metal surfaces are to be protected with a rust-inhibiting primer coat.

29. **WORKMANSHIP:**
Workmanship shall conform to current best manufacturing practices followed from Trucks of similar type and capacity. Component parts and units shall be manufactured to definite standards dimensions, with proper fits and clearance.

30 **SHIPMENT & DELIVERY**:

30.1 Delivery Information - Final delivery shall be made between the hours of 8:00 AM and 4:00 PM, Monday through Friday, except City Holidays. Each vehicle shall be accompanied by a Delivery Slip which will contain the City's Bid Number, Purchase Order Number, Item Number on the Purchase Order, and Serial Number of the Vehicle. Delivery shall be made to:

Department of Public Property
Automotive Services Division
6000 N. Broad St.
Philadelphia, PA

Phone (215) 548-0481

(NOTE) - Unless a different location is specified in the Invitation to Bid.

Notification of any changes in the delivery location will be made to

the successful bidder at least one week prior to the scheduled delivery date.

30.2 Where mounted equipment, such as bodies and accessories are to be furnished under separate contracts, the chassis vendor shall deliver the vehicle to the mounted equipment vendor location designated by the City. He shall secure a dated receipt for delivery with a copy for the City.

Upon completion of the work for which he is responsible, the mounted equipment vendor shall deliver the complete unit to the City of Philadelphia. It is the responsibility, however, of the chassis vendor to obtain the State Inspection Stickers on each vehicle, and therefore, he shall make such arrangements with the mounted equipment vendor as may be mutually agreeable which shall enable the body vendor to get the necessary State Inspection before final delivery.

The Prime Bidder retains the ultimate responsibility of providing a completely assembled and acceptable vehicle in all respects as per this specification and the Invitation to Bid.

30.3 **DELIVERY CONDITIONS:**

30.3.1 Vehicles, regardless of delivery point, shall be ready for use including all lubricants, coolant and operating fluids as required. Minimum ten (10) gallons of fuel shall be provided. Battery fully charged, tires properly inflated.

30.3.2 Unloading and any labor, equipment or material required for it, shall be the responsibility of the bidder. The City will designate the unloading area of the delivery site to be used.

31. **INSPECTION:**

31.1 Pennsylvania State Inspection - Each vehicle shall pass the Vehicle Code Examination of the Department of Transportation, Commonwealth of Pennsylvania; when delivered, chassis vendor shall have attached current State Inspection Stickers in the proper location.

31.2 Exhaust Emissions Inspection - All vehicles with GVW's subject to the provisions of the Pennsylvania Department of Transportation exhaust emission regulations must meet said requirements and have the appropriate sticker affixed to the windshield, along with the State Vehicle Inspection Sticker, when the vehicle is delivered to the City.

31.3 City Inspection - City Inspection of delivered vehicles will be conducted at the specified delivery point. It will be conditioned upon the satisfaction of all of the requirements of this specification and the Invitation to Bid.

31.4 Director of Automotive Services, Department of Public Property, shall be notified when Pilot or First Production Model is available for inspection at Manufacturer's Plant.

32. **CERTIFICATES & MANUALS TO BE FURNISHED BY VENDOR:**

32.1 Operator's Handbook with each vehicle.

32.2 Provide the necessary forms (completed) and documents for the City to take Title to the vehicle in accordance with the Pennsylvania Motor Vehicle Code.

32.3 Vendor shall supply the Director of Automotive Services, Public Property, not less than five (5) copies each (for chassis, body and accessories furnished) of Shop Manuals, Parts Catalogues, Flat Rate Manuals, and Price Lists, including updated supplements for a period of one year for each type of vehicle. The City shall pay the bidder his costs from the manufacturer for any additional copies required by the operating department.

32.4 Financial Responsibility Statement - Successful bidder is to provide with each delivered vehicle, a Pennsylvania "Financial Responsibility Statement" card (MV-45) completely filled out as per instructions thereon for that vehicle.

33. **SIGNS:**

Signs - Decals or other devices showing Dealer's Name and/or Address shall not be permitted on the outside of the vehicle.

34. **SCHOOLS:**

Each bidder shall arrange with the Director of Automotive Services Division, Department of Public Property, a formal school training program for the current year vehicles and equipment bid upon. These schools shall be available for all City Department's automotive maintenance employees, such as Foremen, Inspectors and Maintenance Mechanics. The Department of Public Property shall make available classroom facilities at Automotive Shop II, Front Street & Hunting Park Avenue, for the required training.

PURCHASE DESCRIPTIONS/PENNA. REGISTRATION CLASSES FOR TRUCKS AND CHASSIS ACCORDING TO THEIR G.V.W.

It is the intention of this Purchase Description Section to indicate the Pennsylvania Registration Class for the various size trucks generally specified for City services.

Reference: Pa. Manual on Automotive Titles and License, 13th Edition

T-1 **PURCHASE DESCRIPTION: TRUCK, CHASSIS, REF: 7,001-9,000 LBS.**

GVW

1. **Classification:**

    1.1 It is the intention of this Purchase Description to describe a Truck Chassis including all the standard options and as required in 41-V-20 (latest issue). The equipment bide shall qualify for Truck License Plates of the Commonwealth of Pennsylvania as Minimum Class #3.

T-2 **PURCHASE DESCRIPTION: TRUCK, CHASSIS, REF: 9,001-11,000 \ LBS. GVW**

1. **Classification:**

    1.1 It is the intention of this Purchase Description to describe a Truck Chassis including all the standard options and as required in 41-V-20 (latest issue). The equipment bid shall qualify for Truck License Plates of the Commonwealth of Pennsylvania as Minimum Class #4.

T-3 **PURCHASE DESCRIPTION: TRUCK, CHASSIS, REF: 14,001-17,000 LBS. GVW**

1. **Classification:**

    1.1 It is the intention of this Purchase Description to describe a Truck Chassis including all the standard options and as required in 41-V-20 (latest issue). The equipment bid shall qualify for Truck License Plates of the Commonwealth of Pennsylvania as Minimum Class 6.

T-4 **PURCHASE DESCRIPTION: TRUCK, CHASSIS, REF. 17,001-21,000 LBS. GVW**

1. **Classification:**

1.1 It is the intention of this Purchase Description to describe a Truck Chassis including all the standard options and as required in 41-V-20 (latest issue). The equipment bid shall qualify for Truck License Plates of the Commonwealth of Pennsylvania as Minimum Class 7.

T-5 **PURCHASE DESCRIPTION: TRUCK, CHASSIS, REF. 21,000-26,000 LBS. GVW**

1. **Classification:**

1.1 It is the intention of this Purchase Description to describe a Truck Chassis including all the standard options and as required in 41-V-20 (latest issue). The equipment bid shall qualify for Truck License Plates of the Commonwealth of Pennsylvania as Minimum Class 8.

T-6 **PURCHASE DESCRIPTION: TRUCK, CHASSIS, REF. 26,001-30,000 LBS. GVW**

1. **Classification:**

1.1 It is the intention of this Purchase Description to describe a Truck Chassis including all the standard options and as required in 41-V-20 (latest issue). The equipment bid shall qualify for Truck License Plates of the Commonwealth of Pennsylvania as Minimum Class 9.

T-7 **PURCHASE DESCRIPTION: TRUCK, CHASSIS, REF. 44,001-48,000**

LBS. GVW

1. **Classification:**

   1.1 It is the intention of this Purchase Description to describe a Truck Chassis including all the standard options and as required in 41-V-20 (latest issue). The equipment bid shall qualify for Truck License Plates of the Commonwealth of Pennsylvania as Minimum Class 14.

BODIES

The Bodies as required in Bid items shall fit the chassis and be properly and securely mounted thereon. The bodies shall harmonize perfectly with the chassis, to be correctly proportioned, properly balanced (load distribution), compact and satisfactory in appearance. The materials used in the construction of the bodies shall be of the highest quality. All vehicles with Bodies shall be equipped with mud flaps/stone deflectors as required by DOT and Commonwealth of Pennsylvania. Approximately three (3") inches shall be provided from back of cab to front of body for best load distribution factor.

The following Body Classifications shall be provided as specified in the Invitation to Bid:

BODY:
The truck body, including equipment and body operating devices, shall be completely installed as specified in the Invitation to Bid.

BODY STYLE:
In addition to the cab normally provided with the truck chassis, a body described as follows will be provided according to the body class specified in the Invitation to Bid.

BUMPERS:
Bumpers/Liftgates - Manufacturer's standard type front and rear bumpers shall be provided on all vehicles as per D.O.T. regulations except as specified in the bid specifications. If a lift gate is specified on a vehicle that normally has a rear bumper, the rear bumper is still a requirement as an extension of the chassis or incorporated into the liftgate if either is compatible with the lift gate provided.

Class A-1; Crew Cab:

All steel construction of integral design with four doors; 6-man seating, adjustable front seat, 6 seat belts.

Class A-2; Pickup:

All steel construction at least 96" long x 50" wide beyond wheelhousing; full width rear tailgate, safety chain, stake pockets and rear bumper.

Class A-3; Suburban:
All steel construction, full width rear doors, windows all around, at least 9-passenger seating with removable intermediate and rear axle seats, one seat belt per passenger and a rear bumper**.**

Class A-4; Stake/Platform:
Body shall be wood or steel construction with removable slatted stake sections on sides and ends. Front-end shall permit adequate rear vision from cab windows. All sections shall interlock. Body shall be securely mounted to frame with full length oak stringers under body.

Class A-4-1(A) Stake & Platform as per A-4, above, at least 12 feet long, 82" wide with 40" high sections.

Class A-4-2(B) Stake & Platform as per A-4, above, at least 14 feet long, 82" wide with 40" high sections.

Class A-5; Step Van:
Shall consist of all-metal construction integral with chassis manufacturer's flat-back" type step van mounted on forward control type chassis, with double full-width rear doors, driver adjustable stand-up seat, passenger seat, and a rear safety step bumper.

Class A-5-1(A)	Step Van - As per A-5, above, at least 10 feet long, 78" wide, 68" high.
Class A-5-2(B)	Step Van - As per A-5, above, at least 12 feet long, 78" wide, 68" high.

DUMP BODIES AND HOISTS

CLASSIFICATION:
Dump Bodies shall be constructed of high strength corrosion resistant steel. Hoists for Dump Trucks shall be underbody hydraulic power type hoists with controls in cab. They shall provide a dumping angle of not less than 50 degrees and shall be of such a type that will positively control the position of body throughout the entire dumping angle. The hoisting shall be stopped automatically when the body reaches the maximum dumping angle (at least 50 degrees) and retain its position until released. The hoist cylinder shall be so designed as to allow for disassembly and servicing with ordinary hand tools. The pump shall be of the manifold type and oil tracts shall be cored or of seamless steel tubing or high pressure composition hose that shall withstand a minimum burst pressure of 6,000 lbs. per sq. inch. The pump shall be so designed as to compensate for end thrust and the shafts shall rotate on anti-friction bearings. The pump shaft shall be of the automatic self-adjusting seal type, eliminating the necessity for packing nuts and glands.

- Provide red warning light(s) on dash to alert operator that the PTO is engaged.

- Provide rear window protector screen.

- Provide rear spring-loaded pintle hook, "V" reinforced to main frame rails, (clear dump body at full dumping position).

- Approximately three (3") inches shall be provided between cab and dump body for good load distribution.

- A sliding universal joint assembly shall be provided at the pump end of the drive shaft. The body hinges shall operate on hinge pins under double shear or if single shear, a through hinge shaft shall be provided with a center support to prevent deflection. The power take-off shall be anti-friction bearing type. Hoist, power take-off and control parts shall be of sufficient capacity to amply take care of power required to operate hoist with 100% overload in body with relief valve.

- Full length longitudinal hardwood sills shall be provided with hoist frame mechanism to clear dump body for chain clearance at full load (full spring deflection shall be allowed). Hoist mechanism shall be securely mounted. The tailgate shall be double-acting with offset top hinges, tailgate and spreader chains.

TYPE DU-1 8 Ft. length medium duty Dump Body, 3 cubic yard capacity, with at least 16" sides, 84" width, constructed of not less than #10 USS Gauge Steel. Sides shall be reinforced with vertical "V" braces, not less than (2) two on each side. Ends shall be at least 6" higher than sides. Cab shield shall be provided, full width of body, projected at least 18" forward - #10 USS Gauge Steel. Class - #30 Hoist shall be provided with cab PTO controls to include detailed specifications as listed in Classification #1. Flooring shall be ten (10) USS Gauge Steel, minimum.

TYPE DU-2 10 Ft. length heavy-duty Dump Body, 5 cubic yard capacity, with at least 24" sides, 84" width, constructed of not less than #10 USS Gauge Steel. Sides shall be reinforced with vertical "V" braces, not less than (3) three on each side. Ends shall be at least 6" higher than sides. Cab shield shall be provided, full width of body, projected at least 18" forward - #10 USS Gauge Steel. Class - #50 Hoist shall be provided, power-up and down, with cab PTO controls to include detailed specifications as listed in Classification #1. Flooring shall be ten #8 USS Gauge Steel, minimum

TYPE DU-3 12 Ft. length heavy-duty Dump Body, 10 cubic yard capacity, with at least 39" sides, 84" width, constructed of not less than #8 USS Gauge Steel. Sides shall be reinforced box section design with at least four (4) vertical bars on each side. Ends at least 6" higher than sides. Cab shield shall be provided, full width of body, full cover shield, #10 USS Gauge Steel. Class - #80 Hoist shall be provided, power-up and down, with cab PTO controls to include detailed specifications as listed in Classification #1.

VAN BODIES

1. **CLASSIFICATION:**

Van Bodies shall be reinforced aluminum construction. Exterior panels shall be .40" thickness minimum and sides shall be beaded on 4" centers, for extra strength and rigidity, with 5-post, smooth front. Side uprights, top rail roof bows, and radius shall be extruded aluminum section of minimum .125 thickness. Corner post shall be extruded aluminum minimum of .125 thickness. Side sills shall be extruded aluminum minimum of .156 thickness. Exterior panels shall be riveted to uprights and roof on not less than 2" centers.

Rivets shall be of the side lock" moisture proof type. Uprights and roof bows shall be installed at 12" centers to provide adequate strength. All roof joints, side panels, and front panels shall be leak-proof. Body shall have a minimum of 7, three (3") inch cross members, #12 gauge aluminum or of a heavy-duty steel gauge 4" type, securely mounted to the truck chassis by means of "U" bolts. Interior of body shall be protected on sides and front with 1/4" grade AC waterproof plywood lining approximately 36" high, installed 8" above floor, with lengthwise slats above extending to roof. Front of body shall be provided with shatterproof glass windows of not less than 220 square inches in area and aligned with cab rear windows. Floor shall be kiln dried 4 x 4 (finished dimension) oak construction or as specified in the Invitation to Bid. Rear of body shall be equipped with full width roll-up door with safety catch and key lock.

TYPE VB-1 Van Body, complete as per above specifications and at least 12 ft. long, 78" high and 88" wide.

TYPE VB-2 Van Body, complete as per above specifications and at least 14 ft. long, 78" high and 88" wide.

COMPACT VANS

1. **CLASSIFICATION:**

Bodies shall be reinforced steel construction. They shall have full width rear doors with safety glass and locks. Maintenance accessibility shall be convenient and not require major removal of components to change oil, oil filter or air filters. It should also offer ease of service to windshield washer reservoir, master brake cylinder, oil crankcase check, automatic transmission fluid level check, battery and radiator service. Driver's seat should be adjustable and a passenger seat shall be included.

TYPE CV-1 Shall have wheelbase of at least 123" with curbside full width opening doors and as in Classification #1, Compact Vans.

TYPE CV-2 Shall have wheelbase of at least 123" with seating capacity of at least 12 adult passengers; seat belts shall be provided for all passengers. Van shall be provided with safety glass all sides and with a curbside double door safety step and as in Classification #1, Compact Vans.

Attention Bidder:

This bid document may not contain all of the documents that you will need to complete the bid submission. On occasion, it is not possible to include the following:

Exhibits
Drawings
Attached specifications
Attached documents

If you have not received a corresponding attachment, drawing or exhibit that is referenced in the bid document you may obtain it by contacting the Public Information Unit at 215-686-4720.

TERMS AND CONDITIONS OF BIDDING AND CONTRACT

1. **PREPARATION AND SUBMISSION OF BID**. All bids must be written in ink or typewritten and made on the forms issued and signed in ink by a person with legal authority to bind the bidder. This Invitation and Bid and any contract awarded hereunder shall include, without limitation, the Invitation and Bid, all addenda thereto issued by the Procurement Department and these Terms and Conditions of Bidding. It is the sole responsibility of the bidder to ensure that it has received any and all addenda and the Procurement Commissioner may in his/her sole discretion reject any bid for which all addenda have not been executed and returned in accordance with the instructions provided therein. No bid may be considered if received after the date and time for the opening of bids established by this Invitation and Bid, nor may any bid be modified after that date and time. The time of bid opening shall be the time displayed on the City's official bid clock. In the event of any discrepancy between actual time and the City's official bid clock, the latter shall determine the time of bid opening.

2. **SPECIFICATIONS**. When a formal, numbered, specification is referred to in this Invitation and Bid, no deviation therefrom will be permitted and the bidder will be required to furnish articles and/or services in conformity with that specification. When catalogues, model numbers, trade names, or cuts are listed in this Invitation and Bid, they are, unless otherwise specified, included for the purposes of furnishing bidders with information concerning the style, type or kind of article and /or service desired. A bidder may offer an article and/or service which he/she certifies to be equal or better in quality, performance and other essential characteristics. If submitting an alternate the bidder must specify the alternate (e.g., make and model #) in the bid and submit with the bid a complete description of the article (including any technical literature) and/or service proposed to be furnished. Failure to do so, will require the bidder to furnish the article and/or service specified in the Invitation and Bid. The Procurement Commissioner reserves the sole right to determine whether alternates offered are equal or better. Unless otherwise provided in the bid specifications, all items offered by the bidder must be new. A “new” item is one which will be used first by the City. This clause shall not be construed to prohibit bidders from offering goods, supplies, equipment or materials containing recycled materials or printing with recycled content; bidders intending to provide goods made with recycled materials should notify the Procurement Department.

3. **PAYMENT FOR EQUIPMENT**. Unless otherwise provided in the bid specifications, when equipment involves installation, (which shall also be interpreted to mean erection and/or setting up or placing in position for service or use) and/or testing, and where such installation or testing is delayed, payment may be made on the basis of 50% of the price bid when such equipment is delivered on site. A further allowance of 25% may be made when the equipment is installed and ready for test. The balance shall be paid only after the equipment is tested and found to be satisfactory by the City. If the equipment must be tested, but installation is not required to be made by the supplier or if the equipment must be installed but testing is not required, payment may be made on the basis of 75% at the time of delivery and the balance shall be paid after satisfactory testing and/or installation as required.

4. **TYPES OF BIDDER RESTRICTED**. Bidders must not be a party to more than one bid for the same article or service. A violation of this condition may, in the sole discretion of the Procurement Commissioner, result in rejection of any or all such bids in which the bidder is interested.

5. **QUANTITIES AWARDED**. For requirements contracts only, the articles and quantities of such articles as set forth in the Invitation and Bid are estimates and the Procurement Commissioner, in his/her sole discretion, may make an award for all or some of the articles bid and in such quantities as the Procurement Commissioner shall deem appropriate. For firm limit contracts, it is the City's intent to award based upon the quantities set forth in the Invitation and Bid, but the City reserves the right to award more or less.

6. **TAX EXEMPTION**. The City of Philadelphia is exempt from the payment of any federal excise or transportation taxes and any Pennsylvania Sales Tax. The price bid must be net, exclusive of taxes. However, when under established trade practice any federal excise tax is included in list prices, bidder may quote the list price and shall show separately the amount of the federal tax, either as a flat sum or as a percentage of the list price, which shall be deducted by the City. In the event bidder pays any sales or use tax, bidder hereby assigns to City, or City's agent, all of its rights, title and interest in any sales or use tax which may be refunded as a result of the purchase of any articles furnished in connection with the contract and bidder, unless directed by the City, shall not file a claim for any sales or use tax refund subject to this assignment. Bidder authorizes the City, in City's name or the name of bidder, to file a claim for refund of any sales or use tax subject to this assignment.

7. **PRICE INCREASES AND DISCOUNTS.** All articles must be delivered at the price(s) bid, FOB Destination Point. Bids containing reservations of the right to increase the price(s) bid , including, but not limited to, late payment charges, will not be considered, except where the Procurement Commissioner, in his/her sole discretion, finds it in the City’s best interest to do so. Discounts offered for payment may be a factor in the awarding of bids only in the event of tie bids. (In the event of an absolute tie the award decision will be made in the best interest of the City as determined by the Procurement Commissioner in his/her sole discretion.) Discounts must be for a period of at least 15 days to be so considered. Discounts offered shall be assumed to be from gross price unless otherwise indicated.

8. **BID SECURITY**. Unless the bidder is properly covered under the City's Annual Master Bid Security Program or an individual bid bond is required in the Invitation and Bid, all bids must be accompanied by a Certified Check, Treasurer's Check, Cashier's Check, Bank Money Order or United States Postal Money Order made payable to the order of "The City of Philadelphia" in the proper amount as shown below:

AMOUNT OF BID OR EST. CONTRACT	AMOUNT OF CERTIFIED CHECK
$ 25,000.00 or less	No Check Required
$ 25,000.01- $ 99,999.99	$ 500.00
$ 100,000.00 - $ 249,999.99	$ 2,000.00
$ 250,000.00- $ 499,999.99	$ 4,000.00
$ 500,000.00 or more	$ 6,000.00

When computing amount of Bid for Certified Check purposes, do NOT deduct for trade-ins.

Any bid in excess of $500,000 is not covered by the Annual Master Bid Security Program and bidder must submit a Certified Check, Treasurer's Check, Cashier's Check, Bank Money Order or United States Postal Money Order made payable to the order of "The City of Philadelphia" in the required amount.

Once the lowest responsive and responsible bidder has been determined, the Procurement Department shall refund, with the exception of the fee paid for participation in the City's Annual Master Bid Security program, the bid security except the bid security of the lowest responsive and responsible bidder. Upon return of the duly executed contract documents, required fees and the furnishing of any required bonds or other performance security by the lowest responsive and responsible bidder, its bid security will be refunded.

9. **PERFORMANCE SECURITY**. The City of Philadelphia requires performance security for contracts greater than $25,000. If the amount of the contract to be awarded is greater than $25,000 but less than or equal to $500,000, the successful bidder is required to participate in the City's Master Performance Security Program by paying to the City a non-refundable fee of $5.00 per thousand dollars of the contract amount for firm limit contracts and $4.00 per thousand dollars of the contract amount for requirements contracts, or as otherwise specified. If the amount of the contract to be awarded is in excess of $500,000 the successful bidder is required to furnish an individual performance bond, issued by a surety approved by the City on a form prepared by the City's Law Department and in the amount specified in the notice of contract award. The successful bidder is also required to pay a bond preparation fee to the City's Law Department in an amount prescribed by Chapter 17-700 of The Philadelphia Code; a schedule of such fees may be obtained from the Procurement Department's Public Information Office.

10. **CANCELLATION AND AWARD.** The Procurement Commissioner, in his/her sole discretion, may cancel any Invitation and Bid prior to bid opening. After bid opening, the Procurement Commissioner, in his/her sole discretion, may reject all bids, if deemed in the best interest of the City. In all cases where a contract award is made by the Procurement Department, the bidder is bound by the terms and conditions of the Invitation and Bid upon the submission of its bid. All bids are valid for a period of not less than 60 days, or as otherwise specified in the Invitation and Bid. If the bid has not been awarded within the specified period of time, the bid shall be valid for subsequent award only upon the express consent of the bidder, with no change to the submitted bid. All contract awards shall be made by the Procurement Department upon written notice to the bidder that is determined by the Procurement Department to be the lowest responsive and responsible bidder.

11. **RESPONSIVENESS.** Subject to the right of the Procurement Commissioner to waive nonresponsiveness as set forth below in this Section, these Terms and Conditions of Bidding and the specifications and requirements included in this Invitation and Bid are mandatory and must be strictly followed by all bidders in the preparation and submission of its bids. After bids are opened, the Procurement Department, and other City departments or agencies where appropriate or specified, shall review all bids for responsiveness to these Terms and Conditions of Bidding and the specifications and requirements included in this Invitation and Bid.

Any bid which is incomplete, obscure, conditional, or unbalanced, which contains additions not called for, or irregularities of any kind, including alterations or erasures, or which fails to conform in any respect to these Terms and Conditions of Bidding and the specifications and requirements included in this Invitation and Bid is nonresponsive and shall be rejected, except where the Procurement Commissioner, in his/her sole discretion, determines that the nonresponsiveness is not material to the Invitation and Bid or that a waiver of the nonresponsiveness is otherwise permitted by this Invitation and Bid, by these Terms and Conditions of Bidding or by law. The Procurement Department's determination of nonresponsiveness shall be final and any bid rejected as nonresponsive shall not be eligible for contract award.

12. **RESPONSIBILITY.** Unless otherwise specified, after bids are opened the Procurement Department, and other City departments or agencies where appropriate or specified, shall review and may investigate the responsibility, including, but not limited to, the qualifications, references, capacity and ability to perform the contract resulting from this Invitation and Bid in accordance with its terms, and integrity, of the lowest responsive bidder. All determinations of bidder responsibility shall be vested in the sound discretion of the Procurement Commissioner and other City officials. Any bidder who is deemed not responsible shall be ineligible for award of the contract.

Bidders deemed not responsible will be notified of such determination and the reasons therefore in writing by the Procurement Department, and shall have the right to contest the determination by submitting to the Procurement Department, within forty-eight (48) hours after receipt of its written determination, a written request for reconsideration that includes information relating to the bidder's

qualifications and responsibility and demonstrating the insufficiency of the reasons stated in the written determination for finding the bidder not responsible. Any further determination of a contesting bidder's responsibility shall be vested in the sound discretion of the Procurement Commissioner and other City officials.

13. **CONTRACTS**. Awards of contracts in amounts less than or equal to $25,000 shall become contracts binding upon the City upon written notice of award by the Procurement Commissioner. Awards of contracts in amounts greater than $25,000 shall not become contracts binding upon the City until after written notice of award is made and until after all of the following conditions have been satisfied:

a. Successful bidder posts sufficient Performance Security, as required in the Invitation and Bid, within the time specified in the written notice of award;
b. Successful bidder posts a Labor and Materials Bond, if and as required by the Invitation and Bid, within the time specified in the written notice of award;
c. Approval of the contract as to form by the City's Law Department;
d. Certification by the Director of Finance and City Controller as to the availability of funds; and
e. Execution of the contract by the Procurement Commissioner.

The Procurement Commissioner may, in his/her sole discretion, cancel any contract award if any of the above conditions (a-e) are not satisfied, or if the Procurement Commissioner, in his/her sole discretion, determines cancellation to be in the best interests of the City. The bidder agrees that in the event of such cancellation, it shall not have any claim against the City, including any claim for breach of contract or of any other legal duty, or for lost profits, costs, damages, or expenses of any kind.

14. **INSURANCE.** Unless otherwise specified, the successful bidder (referred to in this Section as "contractor") shall, at its sole cost and expense, procure and maintain in full force and effect, during the entire period of the contract (including any applicable warranty and/or renewal periods) the minimum types of insurance specified below. All insurance shall be procured from reputable insurers authorized to do business in the Commonwealth of Pennsylvania and shall be acceptable to the City. All insurance required herein shall be written on an "occurrence" basis and not a "claims-made" basis. The City of Philadelphia, its officers, employees and agents are to be named as additional insureds on all policies required hereunder, except the Workers' Compensation and Employers' Liability. Also, an endorsement is required stating that the coverage afforded these parties as additional insureds will be primary to any other coverage available to them. The City's coverage as an additional insured shall be primary coverage. The insurance shall provide for at least thirty (30) days prior written notice to be given to the City in the event coverage is materially changed, canceled or non-renewed. Certificates of insurance evidencing the required coverages shall be submitted to the City within fifteen (15) days of notice of contract award.

The City reserves the right to require the contractor to furnish certified copies of the original policies of all insurance required hereunder at any time upon fifteen (15) days prior written notice. The insurance requirements set forth herein are not intended and shall not be construed to modify, limit, or reduce the indemnifications made in this contract by the contractor to the City or to limit the contractor's liability under this contract to the limits of the policies of insurance required to be maintained by the contractor hereunder.

(a) WORKERS COMPENSATION AND EMPLOYERS LIABILITY:
- (1) Workers' Compensation -Statutory limits.
- (2) Employers Liability - $100,000 Each Accident - Bodily Injury by Accident; $100,000 Each Employee - Bodily Injury by Disease; $500,000 Policy Limit -Bodily Injury by disease
- (3) All states endorsement

(b) GENERAL LIABILITY INSURANCE
- (1)Limit of Liability: $1,000,000 per occurrence combined single limit for bodily injury (including death) and property damage liability.
- (2) Coverage: Premises operation; Blanket contractual liability; Personal injury liability (employee exclusion deleted); Products and completed operations; Independent Contractors; Employees as additional insured; Cross liability; Broad form property damage (including loss of use) liability; Asbestos abatement liability coverage (Note: Required for asbestos abatement projects only).

(c) AUTOMOBILE LIABILITY
- (1) Limit of Liability: $1,000,000 per occurrence combined single limit for bodily injury (including death) and property damage liability.
- (2) Coverage: owned, non-owned and hired vehicles.

15. **FAILURE TO EXECUTE CONTRACT**. Any bidder not lawfully released from its bid, who refuses to execute a contract in accordance with its bid or who fails, refuses or is unable to furnish any required bonds, performance security or insurance, as may be required by the Invitation and Bid and/or these Terms and Conditions of Bidding, shall be liable for the entire amount of its bid security, as liquidated damages to the City; or if bid security is furnished under the Annual Master Bid Security Program, for 10% of the amount of its bid, as liquidated damages to the City; or where the damages are readily ascertainable by the City, for the actual loss, cost or damage incurred by the City as a result of its failure to execute the contract or to furnish such bonds, performance security or insurance.

16. **DEFAULT**. All work performed and goods and services rendered by a successful bidder (referred to in this Section as "contractor") under any contract resulting from this Invitation and Bid shall strictly conform to these Terms and Conditions of Bidding and the specifications and requirements contained in this Invitation and Bid. The successful bidder shall comply with all federal state and local laws, statutes and ordinances and the regulations of all governmental departments, boards, agencies and commissions. The following shall constitute

events of default under any contract resulting from this Invitation and Bid:

a. Failure by contractor to comply with any provision or Section of the contract, including the bid specifications contained in this Invitation and Bid and these Terms and Conditions of Bidding and/or failure by contractor to comply with any federal state and local law, statute, ordinance or regulation of any governmental department, board, agency and commission.
b. Falseness of any representation or warranty made in the contract or other document(s) submitted to the City by contractor in connection with this Invitation and Bid.
c. Failure by contractor to pay its suppliers or subcontractors, misappropriation of any funds provided under the contract or failure to notify City upon discovery of any misappropriation.
d. A violation of law by contractor which results in its making a guilty plea, a plea of nolo contendere, or conviction of a criminal offense by contractor, its directors, employees, or agents or indictment or issuance of charges against contractor, its directors, employees or agents for any criminal offense or other violation of law (whether or not the offense or violation of law is ultimately adjudged to have occurred), where such criminal offense, violation, indictment or charges, in the sole judgment of the Procurement Commissioner, adversely affect the performance of the contract.
e. Failure by contractor to comply with the Mayoral Executive Order establishing the City's antidiscrimination policy relating to the participation of minority, woman and disabled owned disadvantaged business enterprises.
f. The Procurement Department's determination that the contractor is not a responsible bidder on this Invitation and Bid, where such determination is made, and is based upon, information received after award of the contract and/or after execution of the contract by the Procurement Commissioner and/or after satisfaction of any or all other conditions of a binding contract set forth in Section 13 above.
g. Any other act or omission identified in these Terms and Conditions of Bidding or elsewhere in the Invitation and Bid as an event or condition constituting default.

Upon the occurrence of an event of default, the Procurement Commissioner, in his/her sole discretion, may require contractor to cure the default within a period of time to be determined by the Procurement Commissioner, or terminate the contract in whole or in part and exercise any one or more of the following remedies (which remedies may be concurrent and shall be in addition to and not in lieu of the remedies available to the City at law, in equity, under any bond(s) filed in connection with the contract or under other sections of these Terms and Conditions of Bidding and contract):

a. purchase goods and/or services from others in substitution of goods or services that were not furnished or performed by contractor or that were defective or otherwise in violation of any provision of the contract; the cost of such substituted goods and services shall be the sole responsibility of contractor and contractor agrees to pay immediately, upon receipt of the City's invoice, the difference between the contract price and the substituted product or service cost, plus any other loss, cost or damages incurred by the City.

b. appropriate to the payment of the difference between the contract price and the cost of such substitute goods or services, and the amount of any other loss, cost or damage incurred by the City as a result of the default, any monies which may then be due and payable to contractor under this contract or any other contract that contractor then has with the City.

The City shall notify contractor in writing of such termination, which shall be effective as of the date specified in the notice of termination (the "Termination Date"). The Procurement Commissioner may, in his/her sole discretion, require contractor to continue to furnish all goods and perform all services required under the contract until the Termination Date, in which case, subject to the remedies enumerated above, the successful bidder shall be paid in accordance with the contract therefor. If the City requires contractor to cure the event(s) of default, or to continue to furnish goods or services until the Termination Date, and contractor refuses or fails to do so, then such failure shall itself be deemed an event of default under this Section, for which the City may exercise any of its rights hereunder.

17. **BID PROCESSING FEE**. In addition to bid security and any other fee or monies required to be submitted with the bid, the bid shall be accompanied by a non-refundable processing fee in the form of a separate Standard Check, Bank Money Order or United States Postal Money Order made payable to the order of "City of Philadelphia" in an amount based on the gross amount of the bid in accordance with the formula below. Cash is not acceptable.

AMOUNT OF BID OR ESTIMATED CONTRACT	AMOUNT OF PROCESSING FEE
$ 25, 000.00 or less	No Check Required
$ 25,000.01 to $ 100,000.00	$ 10.00
$ 100,000.01 to $ 300,000.00	$ 30.00
$ 300,000.01 to $ 500,000.00	$ 50.00
$ 500,000.01 to $ 1,000,000.00	$ 100.00
$ 1,000,000.01 to $ 2,000,000.00	$ 200.00
$ 2,000,000.01 to $ 3,000,000.00	$ 300.00
$ 3,000,000.01 to $ 4,000,000.00	$ 400.00
$ 4,000,000.01 to $ 5,000,000.00	$ 500.00
$ 5,000,000.01 or more	$ 600.00

Failure to submit the Bid Processing Fee may result in rejection of the bidder's bid. In addition, if a contract award is made pursuant to this Invitation and Bid, any unpaid bid processing fees owed by the successful bidder to the City must be paid prior to the City's release of any payments under the resulting contract.

18. **NONDISCRIMINATION**.
a. Any contract awarded pursuant to this Invitation and Bid is entered into under the terms of the Philadelphia Home Rule Charter and in its performance, bidder shall not discriminate nor permit discrimination against any person because of race, color, religion, national origin or sex. Such discrimination shall constitute an event of default under this contract entitling City to terminate this contract forthwith. This right of termination shall be in addition to any other rights or remedies as provided herein in Section 16 or otherwise available to the City at law or in equity.
b. In accordance with Chapter 17-400 of The Philadelphia Code, bidder agrees that its payment or reimbursement of membership fees or other expenses associated with participation by its employees in an exclusionary private organization, insofar as such participation confers an employment advantage or constitutes or results in discrimination with regard to hiring, tenure of employment, promotions, terms, privileges or conditions of employment, on the basis of race, color, sex, sexual orientation, religion, national origin or ancestry, shall constitute an event of default under this contract and shall entitle the City to all rights and remedies as provided herein in Section 16 or otherwise available to the City at law or in equity. Bidder agrees to include the immediately preceding sentence, with appropriate adjustments for the identity of the parties, in all subcontracts which are entered into pursuant to this contract. Bidder further agrees to cooperate with the Commission on Human Relations of the City of Philadelphia in any manner which the said Commission deems reasonable and necessary for the Commission to carry out its responsibilities under Chapter 17-400 of The Philadelphia Code. Failure to so cooperate shall constitute an event of default under this contract entitling the City to all rights and remedies as provided herein in Section 16 or otherwise available to the City at law or in equity.

19. **ETHICS REQUIREMENTS**. To preserve the integrity of City employees and maintain public confidence in the competitive bidding system, the City intends to vigorously enforce the various ethics laws as they relate to City employees in the bidding and execution of City contracts. Such laws are in three categories:

a. Gifts. Executive Order No. 16-92 prohibits City employees from soliciting or accepting anything of value from any person or entity seeking to initiate or maintain a business relationship with the City of Philadelphia, its departments, boards, commissions and agencies. All City employees presented with gifts or gratuities as indicated in Executive Order 16-92 have been instructed to report these actions to the appropriate authorities. All bidders, agents or intermediaries who are solicited for gifts or gratuities by City employees are urged to report these incidents to the Inspector General, Aramark Tower, Third Floor, 1101 Market Street, Philadelphia, PA 19107.
b. City employee interest in City contracts. In accordance with Section 10-102 of The Philadelphia Home Rule Charter, no bid shall be accepted from, or contract awarded to, any City employee or official, or any firm in which a City employee or official has a direct or indirect financial interest. All bidders are required to disclose any current City employees or officials who are employees or officials of the bidder's firm, or who otherwise would have a financial interest in the contract.
c. Conflict of Interest. Both the State Ethics Act and the City Ethics Code prohibit a public employee from using his/her public office or any confidential information gained thereby to obtain financial gain for himself/herself, a member of his/her immediate family, or a business with which he/she or a member of his/her immediate family is associated. "Use of public office" is avoided by the employee or official publicly disclosing the conflict and disqualifying himself/herself from official action in the matter, as provided in The Philadelphia Code §20-608.

20. **PATENTS**. The successful bidder shall be solely responsible for all royalties and charges that may be due to any patent holder for or on account of the use of any patented appliance, product or processes. Evidence of such payment shall be submitted upon request of the Procurement Commissioner and failure to submit such evidence may, in the sole discretion of the Procurement Commissioner, result in rejection of the bid or constitute an event of default, entitling the City to all rights and remedies as provided herein in Section 15 and/or Section 16..

21. **INDEMNIFICATION**. All bidders shall indemnify, defend and hold harmless the City, its officers, employees and agents from and against any and all losses, costs (including, but not limited to, litigation and settlement costs and counsel fees), claims, suits, actions, damages, liabilities and expenses, occasioned wholly or in part by the bidder's act or omission or fault or negligence or the act or omission or fault or negligence of bidder's agents, subcontractors (including suppliers), employees or servants in connection with the contract, including, but not limited to, those acts or omissions or faults or negligence in connection with loss of life, bodily injury, personal injury, damage to property, contamination or adverse effects on the environment, the bidder's default under the contract, losses incurred by the City's Master Performance Security Program, failure to pay subcontractors and suppliers and any infringement or violation of any proprietary right (including, but not limited to, patent, copyright, trademark, service mark and trade secret). This obligation to indemnify, defend and hold harmless the City, its officers, employees and agents shall survive the termination of the contract resulting from this Invitation and Bid.

22. **TAX REQUIREMENTS**. Any contractor, or vendor of goods, wares and merchandise, or purveyor of services, who bids on and is awarded a contract by the City and/or School District of Philadelphia, is subject to Philadelphia's business tax and Ordinances and regulations. The City Solicitor has ruled that anyone who is awarded a contract by the City

and/or School District pursuant to a bid has entered into a contract within the City, and the subsequent delivery of goods into the City or performance of services within the City constitutes "doing business" in the City and subjects the successful bidder, including but not limited to, one or more of the following taxes:

a. Business Privilege Tax
b. Net Profits Tax
c. City Wage Tax

The successful bidder, if not already paying the aforesaid taxes, is required to apply to the Department of Revenue, 1401 John F. Kennedy Blvd., Public Service Concourse, Municipal Services Building, Philadelphia, PA 19102, for a tax identification number and to file appropriate business tax returns as provided by law. Questions should be directed to the Business and Earnings Tax Unit at (215) 686-6600.

23. **TAX INDEBTEDNESS**. The City of Philadelphia does not wish to do business with tax delinquents or other businesses indebted to the City. In furtherance of this policy, the following certifications have been developed and shall form a part of any contract resulting from this Invitation and Bid. The successful bidder, or other entity contracting with the City is referred to below as the "contractor".

a. Contractor's Certification of Non-Indebtedness - Contractor hereby certifies and represents that contractor and contractor's parent company(ies) and subsidiary(ies) are not currently indebted to the City of Philadelphia (the "City"), and will not at any time during the term of this contract (including any extensions or renewals thereof) be indebted to the City, for or on account of any delinquent taxes (including, but not limited to, taxes collected by the City on behalf of the School District), liens, judgments, fees or other debts for which no written agreement or payment plan satisfactory to the City has been established. In addition to any other rights or remedies available to the City at law or in equity, contractor acknowledges that any breach or failure to conform to this certification may, at the option of the City, result in the withholding of payments otherwise due to contractor and, if such breach or failure is not resolved to the City's satisfaction within a reasonable time frame specified by the City in writing, may result in the offset of any such indebtedness against said payments and/or the termination of this contract for default (in which case Contractor shall be liable for all costs, losses and other damages resulting from the termination).

b. Subcontractor's Certification of Non-Indebtedness - Contractor shall require all subcontractors performing work in connection with this contract ("subcontractor" shall also include suppliers providing goods or materials) to be bound by the following provision and contractor shall cooperate fully with the City in exercising the rights and remedies described below or otherwise available at law or in equity:

"Subcontractor hereby certifies and represents that subcontractor and subcontractor's parent company(ies) and subsidiary(ies) are not currently indebted to the City of Philadelphia ("City"), and will not at any time during the term of contractor's contract with the City (the "contract"), including any extensions or renewals thereof, be indebted to the City, for or on account of any delinquent taxes (including, but not limited to, taxes collected by the City on behalf of the School District of Philadelphia), liens, judgments, fees or other debts for which no written agreement or payment plan satisfactory to the City has been established. In addition to any other rights or remedies available at law or in equity, subcontractor acknowledges that any breach of or failure to conform to this certification may, at the option of the City, result in the withholding of payments otherwise due to subcontractor for services rendered in connection with the contract and, if such breach or failure is not resolved to the City's satisfaction within a reasonable time frame specified by the City in writing, may result in the offset of any such indebtedness against said payments otherwise due to subcontractor and/or the termination of subcontractor for default (in which case subcontractor shall be liable for all costs, losses and other damages resulting from the termination)."

24. **ASSIGNMENT**. The successful bidder shall not assign the contract resulting from this Invitation and Bid, or any part of the contract, or any right to any monies to be paid under the contract, or delegate performance of the contract, without obtaining the prior written consent of the Procurement Commissioner. The decision whether to consent to an assignment is within the Procurement Commissioner's sole discretion. In no case shall the Procurement Commissioner's consent to the assignment of any monies to be paid under the contract relieve the bidder from faithful performance of any of its obligations under the contract or change any of the terms and conditions of the contract. Any purported assignment in violation of this provision shall be of no effect.

25. **MACBRIDE PRINCIPLES CERTIFICATION**. Section 17-104(2)(b) of The Philadelphia Code prohibits the City from accepting bids from companies that do business in Northern Ireland, unless that business has implemented the fair employment principles embodied in the Macbride Principles. In furtherance of this Ordinance, bidder makes the following certification and representations:

a. In accordance with Section 17-104 of the Philadelphia Code, bidder by execution of its bid certifies and represents that (i) bidder (including any parent company, subsidiary, exclusive distributor, or company affiliated with Bidder) does not have, and will not have at any time during the term of any contract resulting from this bid (including any extensions thereof), any investments, licenses, franchises, management agreements or operations in Northern Ireland and (ii) no product to be provided to the City under any resulting contract will originate in Northern Ireland, unless Bidder has implemented the fair employment principles embodied in the MacBride Principles.

b. In the performance of any contract resulting from this bid, Bidder agrees that it will not utilize any suppliers or subcontractors at any tier (i) who have (or whose parent subsidiary, exclusive distributor of company affiliate have)

any investments, licenses, franchises, management agreements or operations in Northern Ireland or (ii) who will provide products originating in Northern Ireland unless said supplier or subcontractor has implemented the fair employment principles embodied in the MacBride Principles. Bidder further agrees to include provisions with this subparagraph (b), with appropriate adjustments for the identity of the parties, in all subcontracts and supply agreements which are entered into in connection with the performance of any resulting contract.

c. Bidder agrees to cooperate with the City's Director of Finance in any manner which the said Director deems reasonable and necessary to carry out the Director's responsibilities under Section 17-104 of The Philadelphia Code. Bidder expressly understands and agrees that any false certification or representation in connection with this subparagraph (c) and/or any failure to comply with the provisions of this subparagraph (c) shall constitute a substantial breach of any contract resulting from this Invitation and Bid entitling the City to all rights and remedies provided in this bid or otherwise available in law (including, but not limited to Section 17-104 of the Philadelphia Code) or at equity. In addition, it is understood that false certification or representation is subject to prosecution under 18 Pa.C.S. Section 4904.

BIDDER MUST SIGN BID on Page 8 of 8 of Conditions of Bidding

SIGNING OF BIDS

This contract consists of the Invitation and Bid (including exhibits and attachments), any addenda thereto issued by the City and the foregoing Terms and Conditions of Bidding (collectively, the "contract") and contains all the terms, conditions and requirements agreed upon by the parties. The terms "contract" and "agreement," whether capitalized or uncapitalized, shall have the foregoing meaning wherever they are used in the Invitation and Bid, addenda thereto, the Terms and Conditions of Bidding, and this page. No other contract or agreement, oral or otherwise, regarding the subject matter of the contract shall be deemed to exist or to bind any party hereto or to vary any of the terms contained in the contract.

This contract may not be changed, amended or renewed, in whole or in part, except by a written amendment signed by the parties. No waiver by the City of any breach or noncompliance by the undersigned with any provision of this contract shall relieve the undersigned of any of its obligations or representations made under this contract.

This contract and all disputes arising under this contract shall be governed, construed and decided in accordance with the laws of the Commonwealth of Pennsylvania. The parties agree that any lawsuit, action, claim or legal proceeding involving, directly or indirectly, any matter arising out of or related to this contract or the relationship created or evidenced thereby, shall be brought exclusively in the United States District Court for the Eastern District of Pennsylvania or the Court of Common Pleas of Philadelphia County. It is the express intent of the parties that jurisdiction over any lawsuit, action, claim, or legal proceeding shall lie exclusively in either of these two forums. The parties further agree not to raise any objection to any lawsuit, action, claim or legal proceeding which is brought in either of these two forums and the parties expressly consent to the jurisdiction and venue of these two forums. The parties further agree that service of original process in any such lawsuit, action, claim or legal proceeding may be duly effected by mailing a copy thereof, by certified mail, postage prepaid to the addresses specified in the Invitation and Bid and/or this page.

NOTE: ANY BID THAT IS NOT EXECUTED IN ACCORDANCE WITH THE INSTRUCTIONS PROVIDED BELOW OR THAT DOES NOT INCLUDE STREET ADDRESS, CITY, STATE AND PHONE NUMBER, MAY, IN THE SOLE DISCRETION OF THE PROCUREMENT COMMISSIONER, BE REJECTED.

SIGNING OF BIDS:
If bid is by an INDIVIDUAL or a PARTNERSHIP, or if the bid does not exceed $25,000, date and sign the bid here, with original signatures, in ink.

This _____day of_____200____

_____ _____
(Signature of Owner, Partner) **(Type or Print Name and Title)**

_____
(Business Name of Bidder)

_____ _____
(Address, including Zip Code) **(Telephone Number, including Area Code)**

If bid is by a CORPORATION, date and sign the bid here with original signatures, in ink, by (a) President or Vice-President of the corporation AND (b) Secretary, Assistant Secretary, Treasurer or Assistant Treasurer of the corporation; and (c) affix the seal of the corporation. If the form is not signed by the President or a Vice-President and Secretary, Assistant Secretary, Treasurer or Assistant Treasurer, attach a duly certified corporate resolution authorizing the person signing in place of such officers to execute this bid for the corporation.

This_____day of _____200____

CORPORATE SEAL

_____
(Corporate or Business Name of Bidder)

_____ _____
(Address, including Zip Code) **(Telephone Number, including Area Code)**

_____ _____
(Signature of President or a Vice-President) **(Signature of Secy., Asst.Secy., Treas. or Asst.Treas.)**

_____ _____
(Type or Print Name and Title) **(Type or Print Name and Title)**

APPROVED AS TO FORM CONTRACT EXECUTION

_____ _____
(Asst. City Solicitor) **(Procurement Commissioner)**

CITY OF PHILADELPHIA

INSTRUCTIONS FOR GETTING PAID BY THE CITY OF PHILADELPHIA

The City attempts to process invoices in a timely manner. Delays can occur because of incomplete or inaccurate invoicing information. Please make sure that all your invoices contain the following information to help the City in paying you as quickly as possible.

1. **AFTER THE DELIVERY OR SERVICES HAS BEEN COMPLETED YOU MUST SUBMIT THREE (3) COPIES OF AN INVOICE FOR PAYMENT TO THE RECEIVING DEPARTMENT LISTED ON THE PURCHASE ORDER.**

2. **THE INVOICE MUST CORRECTLY REFERENCE THE PURCHASE ORDER NUMBER, THE VENDOR NAME, ADDRESS AND FEDERAL EMPLOYER IDENTIFICATION NUMBER.**

3. **CHECKS WILL ONLY BE MADE PAYABLE TO THE COMPANY NAME AS SHOWN ON THE PURCHASE ORDER; THE INVOICE MUST REFLECT THIS SAME COMPANY NAME AS THE "PAY TO".**

4. **THE INVOICE MUST SHOW THE QUANTITY AND TYPE OF ITEM OR SERVICE AND THE PRICE.**

5. **THE UNIT OF PURCHASE ON THE INVOICE MUST AGREE WITH THE UNIT CITED ON THE PURCHASE ORDER. REFERENCE TO THE SPECIFIC LINE ITEM IS HELPFUL.**

Paying vendors is the responsibility of the *receiving* City Department(s), not the Procurement Department. Vendors should bring any problems concerning payments to the attention of the appropriate City receiving department. The name and number of the contact person can generally be found on the purchase order. If all necessary paperwork has been submitted to the department and questions still remain, vendors should contact:

City of Philadelphia
Accounting Verification
Room 1340 Municipal Services Building
1401 J.F.K. Blvd.
Philadelphia, PA 19102
Tel. 215 686 6365

VENDORS INTERESTED IN RECEIVING PAYMENTS ELECTRONICALLY MUST COMPLETE AN ACH VENDOR ENROLLMENT AND CHANGE FORM. THIS FORM CAN BE DOWNLOADED FROM WWW.PHILA.GOV/BIDS.

BIDDERS GUIDELINES*

The following list will assist you in the preparation of your bid.

- Read the entire bid so that you fully understand all the requirements.
- All bids must be submitted to the City no later than the time and date stated as the bid opening.
- Note the City Anti-Discrimination Policy. If Minority Business Council Participation is required be sure to fill out all appropriate forms. If you have questions call MBEC at (215) 686-6232.
- Make sure you submit the appropriate Bid Security and Bid Submission Fee with your bid. Refer to Section 1 of the bid and the Conditions of Bidding sheet.
- Bidder must meet **all** qualifications.
- If an alternate to any item is being offered, you must follow the instructions in paragraph 2 of the Conditions of Bidding sheet.
- Does the bid require a site inspection, attendance at a Pre-Bid Meeting, samples, financial information or other data you must provide?
- Have you signed and returned all Addenda?
- If the bid is going to be awarded as a whole, you must bid on all items. See Section 3 of the bid: Bid Evaluation and Award.
- Bidders' attention is directed to the Conditions of Bidding sheet regarding the Master Performance Bond.
- Bids and pricing must be written in ink or typed. FAXed bids will not be accepted.
- **Do not** submit counter terms or conditions. **Your bid will be rejected**.
- Have you signed the Contract Page and affixed your Corporate Seal as required?
- **Do not** combine check amounts: All checks should be individual and specific.
- Please double check all mathematical calculations for errors.

If you have questions call Public Information at (215) 686-4720.

*This information is provided for guidance only and does not preclude your responsibility to read fully and respond to all portions of this bid.

CITY OF PHILADELPHIA

PROCUREMENT DEPARTMENT

Public Information Unit

ATTENTION VENDORS

If your company would like to receive the results of a particular bid, the Public Information Unit of the Procurement Department will forward this information to you after the contract has been fully executed, at a ***fee of $10.00*** for ***each*** bid number requested. Please be advised that bid tabulations ***are not available*** by telephone. If you have any questions, please call 215-686-4755 or 4756.

BID RESULTS REQUEST FORM

Please complete form below. Only one (1) request per form.

PLEASE NOTE INCREASED FEE Date of Request: _____

Bid Number Requested: _____ Opening Date: _____

Company Name: _____

Company Representative: _____

Address: _____

_____

Telephone No.: _____ Fax No.: _____

Mail this Request to the address below and enclose the following items:

- ☐ Check or Money Order payable to "**City of Philadelphia**";
- ☐ A self-addressed stamped envelope which is **at least 9 ½" x 12 ½" or larger** for each Bid requested.

Failure to send either of the above items, will void your request.

Mail Request To:

The Procurement Department Public Information Unit
Attention: Bid Results
1401 JFK Blvd.
Room 170B, MSB
Philadelphia, PA 19102-1685

Do Not Send Cash

Internal Use Only:	
Date Request Received:	Check Type:
Date Bid Result(s) Mailed:	Check Number:
Initials:	Check Amount $

Revised 10/01

C I T Y O F P H I L A D E L P H I A

Procurement Department
120 Municipal Services Building
Philadelphia, PA 19102-1685
(215) 686-4720
(215) 686-4716 Fax

Janet Hagan
Acting Procurement Commissioner

Master Bid Security Program for Service, Supplies and Equipment Bids
Period of Coverage: July 1, 2006 – June 30, 2008

(Bids for Professional Consulting Services, Public Works, Construction and Demolition [wrecking and building removal] *are not* covered under the Master Bid Security Program)

Dear Vendor:

The Philadelphia City Charter requires that each bid submission over $25,000 be accompanied by a certified check in the amount specified in the bid invitation. This requirement can be met for most bids if the Bidder is covered under the City's Master Bid Security Program. This program provides bid security coverage for Service, Supply and Equipment bids that have a total dollar value of over $25,000 up to $500,000.

To file for coverage under the Bid Security Program, for the period **July 1, 2006 to June 30, 2008**, complete the enclosed application and return it with a check for **$175.00.** Make the check payable to "**City of Philadelphia**". It is **non-refundable.** To clarify the precise use of the check, enter the words "**Bid Security Program**" **2006 – 2008** on the face of the check.

If you do not become a participant in the program at this time, you may still submit bids. However, they must be accompanied by a certified check in the amount specified in the Terms and Conditions of Bidding.

For additional information or inquiries regarding this program, please contact: The Public Information Unit at (215) 686-4719, (215) 686-4720 or (215) 686-4721.

IF A RECEIPT IS REQUESTED, PLEASE ENCLOSE A SELF-ADDRESSED STAMPED ENVELOPE.

Forward Check with Application to
CITY OF PHILADELPHIA
MASTER BID SECURITY PROGRAM
170A Municipal Services Building
Philadelphia, PA 19102-1685

Company Name: _____

Fed EIN/SSN: _____

Street Address _____

City, State, Zip: _____

Contact Person: _____

Telephone No: (___)_____Fax No: (___)_____

☐ A. Check payable to the City of Philadelphia in the amount of $175.00 for 7/1/06 to 6/30/08
(NO PERSONAL CHECKS)

Internal Use Only

Rcvd. ___/___/___ Pymt. Type _____ Ck. Amt. $ _____ Ck.# _____

C I T Y O F P H I L A D E L P H I A

PROCUREMENT DEPARTMENT
120 Municipal Services Building
Philadelphia, Pa 19102-1685
(215) 686-4750
FAX (215) 686-4728

Janet Hagan
Acting Procurement Commissioner

August 16, 2006

Dear Vendor:

Effective with bids opening **September 1, 2006** and later, The City of Philadelphia Procurement Department will be implementing the following change: Checks submitted with bids for Bid Security will be deposited by the City of Philadelphia. Vendors will no longer receive their original checks back after contract conformance. Following contract conformance the City of Philadelphia will issue a check to the vendor. Vendors interested in participating in the City's Master Bid Security Program can go to www.phila.gov and visit the City of Philadelphia's Procurement Department website to obtain an application.

Janet Hagan
Acting Procurement Commissioner

C I T Y O F P H I L A D E L P H I A

Office of the Director of Finance
Room 1330, Municipal Services Bldg.
1401 John F. Kennedy Boulevard
Philadelphia, PA 19102-1693

Vincent Jannetti
Director of Finance

The City of Philadelphia is pleased to announce a Vendor Information Payment System (VIPS) which will allow businesses such as yours to inquire about the status of invoices billed against purchase orders and professional services contracts. The only requirement is that your invoices utilize a unique number - either alpha, numeric or a combination of the two.

This system will be operational twenty four hours a day, seven days a week. All you have to do is dial **215-686-5968,** and follow the prompts to get an up to date status on your payments.

Enclosed for your convenience is an easy to use reference guide which provides a brief overview of what you can expect. I urge you to give it a try and see for yourself how easy it is to use. If you should happen to experience any problems, or if you would like to comment on this system, please call the Office of the Director of Finance at **215-686-6167**.

I believe that you will find this way of obtaining payment information convenient and easy to use.

Vendor Information Payment Reference Guide

- 1- Call 215-686-5968.
- 2- After the prompts,enter the 8 numeric characters that uniquely identifies your purchase order.
- 3- Select one of the three inquiry options:
  - a) by your purchase order.
  - b) by your company.
  - c) by your specific invoice number.
    - (Numeric invoice numbers only)

CITY OF PHILADELPHIA

OFFICE OF THE DIRECTOR OF FINANCE
Room 1330 Municipal Services Building
1401 John F. Kennedy Boulevard
Philadelphia, PA 19102-1693

Dear Valued Vendor,

The City of Philadelphia is pleased to announce a new online Vendor Invoice Information (VII) website which will allow businesses such as yours to inquire about the status of invoices billed against purchase orders and professional services contracts. The only requirement is that your invoices utilize a unique number - alpha, numeric or a combination of the two.

This system will be operational twenty four hours a day, seven days a week. All you have to do is log on to the City of Philadelphia's website: www.phila.gov, click on Vendor Invoice Information under the Help Me Section of the home page, enter your Federal Employer Identification Number (FEIN) and a valid active purchase order. Then, agree to a waiver statement and follow the prompts to get an up to date status on your payments.

I urge you to give it a try and see for yourself how easy it is to use. If you should happen to experience any problems, or if you would like to comment on this new system, please e-mail us using the question and comment field provided on the site.

I believe that you will find this new way of obtaining payment information convenient and easy to use.

Sincerely,

Vincent J. Jannetti
Acting Director of Finance