

PROCUREMENT DEPARTMENT
Rm 120 Municipal Services Building
Philadelphia, PA 19102-1685
FAX: (215) 686-4716

CITY OF PHILADELPHIA

Hugh Ortman
Procurement Commissioner

December 19, 2011

BID NUMBER: T2XT6870
TITLE: 4 X 2 Truck Conventional with 5 CY Dump Body
DEPARTMENT: Office of Fleet Management-Vehicle Purchases
DATE TO OPEN: January 09, 2012 at 10:30 AM

ADDENDUM # 1

TO ALL BIDDERS:

You are hereby notified of the following changes to the above mentioned bid:

OFM Spec Code 22622i.25
Page 17 of 32

CHANGE TO READ:

18.0 (100% parts, labor and travel time with "NO DEDUCTIBLE" less wear items)
LIST OF WEAR ITEMS SHALL BE SUPPLIED WITH BID.
BIDDER INITIALS _____

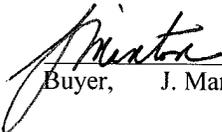
Engine
Base Coverage, Complete engine 2 years / 150,000 miles/ 10,800 Hours

Extended Coverage (After Base Coverage)
Covers all these components, including
mounting hardware and gaskets; cylinder
heads; rocker lever; Injectors; Turbo; ECM; ECM harness; pistons, rings
and liners; lube oil cooler; water pump; cylinder block;
oil pan; connecting rod assembly; lube pump
assembly; camshaft and bushings; cam followers;
major cooled EGR components 3 years / 150,000

Total Engine Coverage, base and extended with "NO DEDUCTIBLE"
(less wear items)
5 Years / 150,000 Miles / 10,800 Hours

| | |
|--------------------------------|--|
| Differential | 5 years / 150,000 miles |
| Transmission | 5 years / 150,000 miles |
| Cab & Chassis (Bumper /Bumper) | 2 years / Unlimited All components ie: utilized in starting, charging, accessory systems including harness, sensors, modules cranking motors, alternator, regulators etc. |
| Cab & Chassis Structural | 5 years / Unlimited miles |
| Hydraulic System | 2 years / Unlimited miles All components; valving, hoses, tubing, controls, pumps, PTO, Tanks, etc. |
| All added equipment | 2 years / Unlimited miles |

Please sign, date and return this addendum with your bid to the Procurement Department, 1401 J.F.K Boulevard, Bid Room 170A, Philadelphia, PA 19102-1685 as it now becomes a part of the proposal.


Buyer, J. Manton

AUTHORIZED SIGNATURE

FIRM NAME (PRINT)

DATE

JM/sj

PROCUREMENT DEPARTMENT
Rm 120 Municipal Services Building
Philadelphia, PA 19102-1685
FAX: (215) 686-4716

CITY OF PHILADELPHIA

Hugh Ortman
Procurement Commissioner

January 6, 2012

BID NUMBER: T2XT6870
TITLE: 4 X 2 Truck Conventional with 5 CY Dump Body
DEPARTMENT: Office of Fleet Management
DATE TO OPEN: January 09, 2012 at 10:30 AM

ADDENDUM # 2

TO ALL BIDDERS:

You are hereby notified of the following changes to the above mentioned bid:

- 1. The Bid Opening Date has been postponed until January 23, 2012 @ 10:30 AM.**
- 2. Delete OFM Spec Code 22622i.25 from this Invitation and Bid**
Replace with OFM Spec Code 22622j.25 attached to this Addendum
- 3. OFM Spec Code 22622j.25**
Page 17 of 32

CHANGE TO READ:

- 18.0 (100% parts, labor and travel time with "NO DEDUCTIBLE" less wear items)**
LIST OF WEAR ITEMS SHALL BE SUPPLIED WITH BID.
BIDDER INITIALS _____

Engine

Base Coverage, Complete engine 2 years / 150,000 miles/ 10,800 Hours

Extended Coverage (After Base Coverage)

Covers all these components, including mounting hardware and gaskets; cylinder heads; rocker lever; Injectors; Turbo; ECM; ECM harness; pistons, rings and liners; lube oil cooler; water pump; cylinder block; oil pan; connecting rod assembly; lube pump assembly; camshaft and bushings; cam followers; major cooled EGR components

3 years / 150,000

**Total Engine Coverage, base and extended with "NO DEDUCTIBLE"
(less wear items)**

5 Years / 150,000 Miles / 10,800 Hours

Differential 5 years / 150,000 miles

Transmission 5 years / 150,000 miles

Cab & Chassis (Bumper /Bumper)

2 years / Unlimited

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

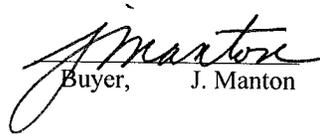
Cab & Chassis Structural 5 years / Unlimited miles

Hydraulic System 2 years / Unlimited miles

All components; valving, hoses, tubing, controls, pumps, PTO, Tanks, etc.

All added equipment 2 years / Unlimited miles

Please sign, date and return this addendum with your bid to the Procurement Department, 1401 J.F.K Boulevard, Bid Room 170A, Philadelphia, PA 19102-1685 as it now becomes a part of the proposal.


Buyer, J. Manton

AUTHORIZED SIGNATURE

FIRM NAME (PRINT)

DATE

JM/sj

TYPE 4X2 TRUCK, CONVENTIONAL WITH 5 CUBIC YARD DUMP BODY

GVWR 35,000 LBS. APPROX.

SPEC. CODE 22622j.25

REF. PURCH. DESCRIPTION 41-V-20M:86

VOCATION: Transporting, unloading and loading of materials, earth, sand, rock salt, **SNOW PLOWING** etc.

INTENT: The following paragraphs cover all equipment, attachments and superstructures included in the modification to the standard specification (s).

It is the intent of this specification to cover the basic requirements of a well designed 5 cubic yard dump (crossmember-less design) truck complete in every detail, with **adequate engine and transmission cooling for a severe SNOW PLOWING operation**, employing the best workmanship and material to insure ample sturdiness, flexibility and economy of operation.

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. Dealer must furnish at time of delivery, for each piece of equipment being delivered, a line sheet pertaining to all components of the vehicle. This unit must supply as a minimum all standard equipment of the referenced model(s) in this specification.

All wiring shall be color or number coded throughout. All electrical circuits shall be protected by circuit breakers or fuses. All chassis-to-body wiring shall be of the **DIN / WEATHERPACK** type connections. All wiring connections shall be crimped and soldered and covered with shrink wrap. All sub-contractor / up-fitter wiring procedures and material used, must be approved prior to installation by OFM.

All wiring and non hydraulic hoses and tubing throughout, shall be protected by convoluted plastic loom (if needed). All hydraulic hoses and tubing shall be protected by a nylon abrasion sleeve covering (if needed) and Hycon clamps. Rubber grommets shall be supplied on all wiring and hoses when passing through any bulkheads, body panels, etc.

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

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 should be addressed in letter form 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. ("Or Approved Equal Clause")

Engineering certified weigh slips shall be provided with the pilot model and signed by the Manufacturer's Engineering Department. It is understood that the components specified are minimum and manufacturer's Engineering Department recommends or deems necessary, particular weight distribution, a larger component or a larger GAWR totally. The burden of responsibility is hereby placed upon the Manufacturer's Engineering Department to supply a unit that is totally engineered correctly.

"OR APPROVED EQUAL"

The mention in the specifications of 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.

MODIFICATIONS TO THE STANDARD SPECIFICATIONS

2.0 APPLICABLE SPECIFICATIONS

All line set ticket (actual part numbers and descriptions used in manufacturing), service, parts, operator, and preventive maintenance manuals shall be provided in a computer readable media. Acceptable file formats are: ASCII, Excel, and Access, if available.

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

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

3.0 BODY & CAB

3.1 CAB

3.1 CAB, fiberglass tilt hood with a stationary grill and LED clearance lamps.

3.1.1 Provide an air suspension seat on driver's side, seat covering shall be heavy duty vinyl. Provide additional seating for two (2) passengers, with under seat storage compartment. All seats shall be provided with approved head rests and high visibility seat belts.

**Ref: National 2000
Bostrom**

3.1.2 Provide air ride cab mounting.

3.1.3 Provide operating vent windows on both front doors.

3.2 GVWR 35,000 lbs. approx.
Wheelbase AS REQUIRED
Cab-to-Axle To be determined by chassis and body manufacturer.

3.3 Chassis Body & Cab Colors

CHASSIS White, BASF 21-22783 Glasurit
One step Urethane,
or approved equal (DuPont / Sikkens / PPG)

BODY / FRAME Gloss Black

The use of other manufacturer's paint and base colors require prior approval by the Engineer, and the submittal of an approx. 4 inch x 6 inch sample of the base coat/final coat to be used.

3.3.1 through 3.3.4 OMIT

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

**4.0 DUMP BODY / HYDRAULICS
DUMP BODY 5 CUBIC YARD (WITHOUT SIDE BOARDS) AND HOIST**

4.1 DUMP BODY (STEEL)

Ref: BEAU ROC DLS, J&J, GALION or approved equal

4.1.1 DIMENSIONS

- Length 9'
- Floor Width Shall be 86" (front) to 88" rear to assist in load breakaway or as per body manufacturer.
- Side Height 36" with 1/4" inverted angle welded solid full length both sides (**Sides to be equal in height as tailgate**)
- Tailgate Height 36"
- Cab Shield 24" (Without Optional Tool Box)

4.1.2 LONG SILLS

8" X 3/16" thick, reinforced 80,000 psi high tensile steel, continuously welded to floor.

4.1.3 CROSSMEMBERS

Body shall be of the crossmember-less design.

4.1.4 FLOOR

Provide a one (1) piece 1/4" 215,000 psi tensile strength (Brinell 450). Floor sheet shall be bent up to join side sheet. Side rub rail shall extend to and join with floor to form a monocoque side beam. Floor shall have a 45 degree radius. Floor and radius and front to be pre-plumbed for heat.

4.1.5 TAILGATE

Shall be 5/32" 215,000 psi tensile strength steel (Brinell 450).
Bottom brace shall be dirt shedding.
Side bracing shall be fabricated from 3/16" x 3" x 4" structural tubing.
Top hardware will be top mount style with 3/4" hinge, 1 1/4" nitrated cold rolled steel pins braced with 1/2" angle.
The bottom pins shall be a minimum of 10" long, 1" diameter.

Tail gate shall be double acting, have two J hooks for chain hangers and 3/8" grade 7 spreader chains.

MUST BE FILLED IN
FIRM (VENDORS) NAME _____

BID NUMBER _____

Locking mechanism shall be zinc plated with individual threaded locking clevises for each side. Cross shaft shall be 1 1/4" cold rolled steel. Both pivot bearing and locking adjustment thread will have grease points with 3/4" latch plates and 5/8" latch hooks with 1 1/4" upper and lower locking pins. Entire mechanism shall be mounted to a 1/4" 80,000 psi high tensile steel bumper (municipal style) continuously welded into floor and rear post extensions to form a high strength structural unit.

Provide a retractable type with a minimum 1" flame cut latch finger.

Provide control lever located at the left front corner.

Provide external 3/8" banjo eyes for chains.

4.1.6 BODY SIDES

Body sides shall be 36" high, with inverted angle welded solid at top to equal tailgate height. Sides to be fabricated from 1/8" 215,000 PSI tensile strength steel (Brinell 450) with faceted smooth side design bent into the plate to increase rigidity. The side side shall have an 8 gauge A36 hi tensile front post and rear post of 3/16" 80,000 PSI high tensile steel. Top rail shall be a 3" x 4" x 3/16" structural steel tube with a 1/4" inverted angle fully welded both sides. The rub rail shall be dirt shedding and continuously welded to the side and floor.

4.1.7 BULKHEAD

Shall be 2 pieces, 1/8" 215,000 PSI tensile strength steel (Brinell 450). It shall have a formed 12" recess to hold the trunnion mount hoist. Recess shall not be more than 13" deep into body. Hoist mounting blocks shall be nitrated greaseable bushings.

4.1.8 CAB SHIELD

Shall be load bearing design fabricated out of 1/8" A-36 high tensile steel (full sheet one piece) 24" **(Without Optional Tool Box)**

4.1.9 HOIST

Provide a Mailhot CS 90-4.5-3 DA double acting 24 ton capacity with mounting kit and integrated body prop. Hoist to be NTEA rated and certified. The cylinder shall be a low mount front telescopic hoist with a fully nitrated cylinder surface. The cylinder shall be covered in the lower portion. All pivot points must include grease fittings and protective dust covers. All bolts shall be USS grade 8 and have nylon lock nuts.

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

The hoist cradle shall have the hoist bearing surface area formed directly from the cross supports. They shall be nitrated and have grease points.

4.1.10 REAR HINGE

Rear hinge assembly shall be 4" x 4" x 3/8" structural angle with 2 1/4" nitrated hinge pins and 3" nitrated hinge blocks and grease points on all bearing points.

4.1.11 SPREADER PLATE

Provide a 8" bolt on spreader plate shall be supplied.

4.1.12 SPLASH SHIELDS

Provide a 3/16" steel 24" X 30 permanently attached to the body in front of rear wheels.

4.1.13 GRAB HANDLES AND LADDER

Provide 1/2" round steel grab handles minimum both sides.

Provide two (2) aluminum stirrup type steps, securely attached below side rail on each side of the body. The steps on both sides shall be retractable design; these steps shall be able to hold a 250 pound person. Provide two (2) non-slip grab handles above the steps.

Ref: Bustin Slide-Away

4.1.14 WALK RAIL

Provide grip strut walk both sides full length.

4.1.15 TARP RAIL

Provide a 5/8" round tarp rail both sides full length.

4.1.16 COAL CHUTE

Provide a coal chute door, center of tailgate, with handle and locking chain.

4.1.17 SALT SPREADER PLATES

Provide bolt on removable baffle plates for salt spreader use.

4.1.18 MUD FLAPS

Provide rubber rear flaps, plain (No Logo) anti splash with angle bracket not to exceed 22 degree federal regulation.

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

4.1.19 LIGHTING (ALL LIGHTING SHALL BE LED)

Provide upper **tailgate** and chassis stop, turn and tail lamps, shall be 4" round, sealed, shock proof and weather resistant, LED and shall incorporate a reflector. Lamp assemblies shall be mounted in a "sealed box" with a rubber grommet. Location to be determined at the Pre-production inspection.

Ref: TRUCK-LITE LED, MODEL 44 (44202R)

Clearance and marker lamps (corner post) shall be 22" round, sealed, shock proof and weather resistant, LED and shall incorporate a reflector. Lamp assemblies shall be mounted in a rubber grommet.

Ref: TRUCK-LITE LED, MODEL 10 (10250R/Y)

Back up lamps shall be 4 " round, sealed, shock proof and weather resistant. LED lamp assemblies shall be mounted in a sealed box with a rubber grommet. Location to be determined at the Pre-production inspection.

Ref: TRUCK-LITE LED MODEL 44 (44205C)

ALL LIGHTS SHALL BE SEALED UNITS, WEATHER AND SHOCK PROOF AND RUBBER GROMMET MOUNTED. ALL WIRING SHALL BE TRUCK-LITE, 50 LED SERIES- SUPER SYSTEM HARNESS WITH PROPER JUNCTION BOXES OR OEM CONNECTIONS.

4.1.20 SIX LIGHT LED STROBE SYSTEM

Strobe light system shall be designed to provide a minimum of one hundred thousand hours (100,000 hrs.) six (6) LED amber lamps shall be mounted in sides and face of cabshield. Cab Shield - One left side near front, one right side near front and two in face not to interfere with clearance lamps. Rear corner post one each side. All lights shall be rubber shock mounted in a vinyl grommet and have a minimum of twelve (12) square inches lighting, oval design. Lens and housings shall be sealed polycarbonate. All lights shall be supplied via 18 ga. 3 conductor neoprene jacketed cable rated to 600 volts and wired to flash alternately. Entire light system shall be controlled via a cab mounted properly labeled lighted rocker switch. Switch shall be located within easy reach of operator.

Ref: Truck-Lite Super 60 Series

MUST BE FILLED IN
FIRM (VENDORS) NAME _____

BID NUMBER _____

4.2 DUMP BODY (304 STAINLESS STEEL)

Provide a dump body (**crossmemberless type**) required under these specifications shall be constructed of T304 stainless steel. Units shall consist of a heavy duty body, hydraulic hoist, cab shield, safety accessories and all other components necessary to make up a complete operating unit. The body hydraulic hoist and cylinder are all to be manufactured by the same company. Hoist shall be class 60 N.T.E.A. rated twin arm underbody design. **Scissor type hoist is not acceptable.**

Ref: BEAU ROC, J&J, GALION or approved equal

4.2.1 Dimensions

| | |
|------------------|---|
| Inside Length | 9 ft |
| Inside Width | 86" |
| Overall Width | 96" |
| Side Height | 36" inverted angle welded onto top rail. Weld on both sides continuous. |
| End Height | 36" |
| Rear Post Height | 36" |

4.2.2 CONSTRUCTION

Side steel 3/16" 304 stainless steel.

Floor 1/4" AR-400 one piece.

Floor radius 45 degree full length floor. Full length welding.

Side braces, 1 horizontal per side 8 gauge 6" wide vertical face formed into side sheet

Bottom rail, sloped dirt shedder type formed in side sheet. full length non skid grip strut both sides.

Rear corner post; 10" minimum, 8 gauge drop type full depth tied to 1/4" rear apron.

Front corner post full depth.

4.2.3 UNDERSTRUCTURE

6" I-beam long members, **crossmemberless** design.

4.2.4 TAILGATE

Tailgate, 3/16", 304 stainless steel. Two (2) vertical end box braces and boxed top rail bracing. Top rail shall be dirt shedder type.

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

Provide a six (6) panel type with two (2) full length horizontal dirt shedder braces. Tailgate shall be of double-acting design.

Provide heavy duty offset top hardware 1" top hinge to have 1 1/4" captive pins, 3/8" lower socket, 3/4" lower hook, 1/2" hinge bar, 5/16" spreader chains and 1 1/4" lower pins.

Hinge pins to have captured heads to prevent pins from turning and elongating top hardware holes.

Provide a retractable type with a minimum 1" flame cut latch finger.

Provide control lever located at the left front corner.

Provide external 3/8" banjo eyes for chains.

4.2.5 CABSHIELD

Provide a cabshield shall be load bearing, 3/16" integral headsheet with 24" integral cab shield, **(Without Optional Tool Box)**

Welding, continuous exterior welding required (skip welding not acceptable)

4.2.6 HOIST

Provide a U-60-823, class 60, N.T.E.A. type V underbody hoist.

Provide a 20.6 ton capacity, double acting cylinder.
Cylinder shall have a chrome plated piston rod with replaceable packing.
Cylinder shall be double acting with maximum requirements of 2,000 psi working pressure. Top cylinder pin 3" cr. bottom pin 2 3/16" cr. cylinder bore I.D to be a minimum of 8" stroke to be 23"

4.2.7 HOIST SUB-FRAME

Full length severe duty unitized construction with 1/4" hi-tensile formed channel longmembers.

Lift arms, two (2) each @ 3/4" thick each minimum.

Lift link, two (2) each 2 7/8" OD x 1/2" tubing.

Provide guides for dump body alignment.

Lift link pin shall be 2 1/8" OD

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

Dump angle minimum 55 degrees.

Provide a double acting hoist, power-up/down, 500 psi down side relief valve.

Provide body props, two (2) OSHA approved.

4.2.8 LIGHTING (ALL LIGHTING SHALL BE LED)

Provide upper tailgate and chassis stop, turn and tail lamps, shall be 4" round, sealed, shock proof and weather resistant, LED and shall incorporate a reflector. Lamp assemblies shall be mounted in a "sealed box" with a rubber grommet. Location to be determined at the Pre-production inspection.

Ref: TRUCK-LITE LED, MODEL 44 (44202R)

Clearance and marker lamps (corner post) shall be 22" round, sealed, shock proof and weather resistant, LED and shall incorporate a reflector. Lamp assemblies shall be mounted in a rubber grommet.

Ref: TRUCK-LITE LED, MODEL 10 (10250R/Y)

Back up lamps shall be 4 " round, sealed, shock proof and weather resistant. LED lamp assemblies shall be mounted in a sealed box with a rubber grommet. Location to be determined at the Pre-production inspection.

Ref: TRUCK-LITE LED MODEL 44 (44205C)

ALL LIGHTS SHALL BE SEALED UNITS, WEATHER AND SHOCK PROOF AND RUBBER GROMMET MOUNTED. ALL WIRING SHALL BE TRUCK-LITE, 50 LED SERIES- SUPER SYSTEM HARNESS WITH PROPER JUNCTION BOXES OR OEM CONNECTIONS.

4.2.9 SIX LIGHT LED STROBE SYSTEM

Strobe light system shall be designed to provide a minimum of one hundred thousand hours (100,000 hrs.) six (6) LED amber lamps shall be mounted in sides and face of cabshield. Cab Shield - One left side near front, one right side near front and two in face not to interfere with clearance lamps. Rear corner post one each side. All lights shall be rubber shock mounted in a vinyl grommet and have a minimum of twelve (12) square inches lighting, oval design. Lens and housings shall be sealed polycarbonate. All lights shall be supplied via 18 ga. 3 conductor neoprene jacketed cable rated to 600 volts and wired to flash alternately. Entire light system shall be controlled via a cab mounted properly labeled lighted rocker switch. Switch shall be located within easy reach of operator.

Ref: Truck-Lite Super 60 Series

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

4.1.10 SPREADER PLATE

Provide a 8" bolt on spreader plate shall be supplied.

4.1.11 SPLASH SHIELDS

Provide a 3/16" steel 24" X 30 permanently attached to the body in front of rear wheels.

4.1.12 GRAB HANDLES AND LADDER

Provide 1/2" round stainless steel grab handles minimum both sides.

Provide two (2) aluminum stirrup type steps, securely attached below side rail on each side of the body. The steps on both sides shall be retractable design; these steps shall be able to hold a 250 pound person. Provide two (2) non-slip grab handles above the steps.

Ref: Bustin Slide-Away

4.1.13 WALK RAIL

Provide grip strut walk both sides full length.

4.1.14 TARP RAIL

Provide a 5/8" stainless steel round tarp rail both sides full length.

4.1.15 COAL CHUTE

Provide a coal chute door, center of tailgate with handle and locking chain.

4.1.16 SALT SPREADER PLATES

Provide bolt on removable baffle plates for salt spreader use.

4.1.17 MUD FLAPS

Provide rubber rear flaps, plain (No Logo) anti splash with angle bracket not to exceed 22 degree federal regulation.

4.4 HYDRAULIC SYSTEM (SEE OPTIONAL EQUIPMENT SECTION 36)

5.0 CAB & BODY EQUIPMENT

5.1 EQUIPMENT AND ACCESSORIES

5.1.1 Provide manufacturer's highest output integral heater/air conditioner and defroster system available. A/C auto shut down, if available.

MUST BE FILLED IN

FIRM (VENDORS) NAME _____ BID NUMBER _____

- 5.1.2 All gauges shall be electrical, illuminated, and shall include but not be limited to fuel, coolant temperature, oil pressure, ammeter / voltmeter, tachometer, speedometer and hour meter.
- 5.1.3 Provide two-speed electric windshield wipers with delay and windshield washer system.
- 5.1.4 Provide largest size dual, padded sun visors.
- 5.1.5 Provide dome light, door and switch activated.
- 5.1.6 Provide heavy duty turn signal indicator with transistorized flasher.
- 5.1.7 Provide assist handles, approx. 10 inches long, both sides, for ease of access and egress.
- 5.1.9 Provide a side-view mirror on both sides of vehicle. Equip with foldaway brackets and mirror surfaces of at least 90 square inches each side. Lower section of right side mirror to be convex, or mount a 6 inch spot convex mirror on a separate bracket.
 - 5.1.9.1 Provide hood / fender mounted mirrors, left and right side.
- 5.1.10 Rustproofing
 - Areas to be rustproofed (wet, airless spraying, no mist applications) shall include but not be limited to:
 - Light wells, doors, rocker panels, rear vertical door jambs, front pillars, fender and fender wells, entire underbody, etc.
 - The rustproofing compound shall be in accordance with MIL SPEC QPL 62218, or latest revision.
 - All surfaces shall be properly prepared and finished.
 - Note: If rustproofing option is other than the above, submit detailed specifications of materials and processes for prior approval.
- 5.1.11 see para. 5.1.7
- 5.1.12 Provide AM/FM stereo radio, complete with antenna and two speakers.
- 5.1.13 Provide non-skid design surfaces, Grip Strut Grating type, for all exterior step surfaces. Provide two step entry.
- 5.1.14 Provide four (4) keys per vehicle. All units keyed alike.

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

5.1.15 All glass to be tinted safety glass. Doors shall be provided with operating vent windows.

5.1.16 Provide full, heavy duty rubber floor covering throughout.

5.1.17 Provide a body builder connection box, with 4 OEM dash mounted switches.
ALL BODY WIRING CONNECTION SHALL USE OEM BOX

6.0 FRAME

Shall be heat treated 120,000 p.s.i. steel having a minimum resisting bending moment of not less than 2,592,000 inch lbs., (double frames not acceptable). Continuous frame side rails shall reach sufficiently ahead of radiator to allow mounting of hydraulic pump and snowplow equipment. Bolted, tapered, riveted or welded frame extensions are not acceptable.

6.2 Frame Attachments

6.2.2 Frame shall be huck fastened.

6.2.3 Provide front frame extension 24" for snow plow mounting.

7.0 AXLES & SUSPENSION SYSTEMS

7.2 Provide heavy duty shock absorbers.

7.4 Delete.

7.5 Provide a 14,000 lb front axle.
Provide a 23,000 lb rear axle.

7.6 Provide driver controlled locking differential, with auto shut off at 15/20 MPH.

7.7 Provide axles with piloted hubs.

7.8 Provide synthetic oil.

7.9 Provide a magnetic drain plug.

8.0 BRAKES

8.3 Provide anti-lock brakes, all wheels.

8.3.1 Front brakes, drum type, "S" cam type, non asbestos lining, bolt on two (2) section, inspection covers / dust shields.

MUST BE FILLED IN

FIRM (VENDORS) NAME _____ BID NUMBER _____

8.3.2 Rear brakes, drum type, "S" cam type, non-asbestos lining, bolt on two (2) section, inspection covers / dust shields.

8.3.3 Provide automatic slack adjusters.

8.3.4 Provide highest quality factory brake chambers.

8.3.5 Provide 13 c.f.m. water cooled air compressor, gear driven if available.

8.4 Provide an air dryer.

Ref: Bendix AD / IP or approved equal.

8.5 Provide a heated auto-bleeder on the wet tank.

Ref: Bendix DV-2 or approved equal.

9.0 ENGINE

9.2 Provide diesel engine, six (6) cylinder turbo charged, electronically controlled.
270 HP approx.
800 lbs. ft. approx.

9.3 Provide heated fuel-water separator, with primer pump (if available).

9.4 Provide vertical exhaust pipe with a rain shield and a stainless steel personnel guard, covering all exposed piping.

10.0 ENGINE EQUIPMENT

10.4 Provide an engine governor, to achieve a maximum road speed of approximately 60 mph. while fully laden (GVWR). The vendor shall supply performance curves or tables showing the proposed vehicle road speed and torque characteristics at various grades under fully laden conditions.

BIDDER INITIALS _____

10.6 Provide manufacturers engine protection/monitoring system.

10.7 Provide engine block heater with not less than 1,000 watt, 110 volt, single phase, water jacket preheater.

10.8 Provide a magnetic drain oil plug.

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

11.0 TRANSMISSION

- 11.1 Provide an automatic transmission, ALLISON 3500 RDSP, 5 speed, compatible with all other drive train components.
- 11.2 Provide **adequate transmission cooling for a severe snow plowing operation.**
 - 11.2.1 Provide an external transmission oil cooler, separate from radiator (if available from OEM.)
- 11.3 Transmission operating instructions shall be permanently mounted inside the cab near the transmission shift pad.
- 11.4 Transmission selector shall be electronically controlled and dash-mounted with ELECTRO-MAX, or equal, shift-shock mechanism and oil level indicator.
- 11.5 Transmission selector shall be equipped with a neutral range inhibitor.
- 11.6 Transmission power take-off shall be connected through the neutral safety switch with over-speed protection via chassis ECM.
- 11.7 Provide synthetic transmission oil.
- 11.8 Provide a magnetic drain plug.

12.0 STEERING

- 12.1 Provide and install power steering, manufacturer's standard.
- 12.2 Provide tilt steering column.

13.0 ENGINE COOLING SYSTEM

- 13.1 All coolant hoses shall be heavy duty type, equipped with steel clamps.
Ref: EPDM, GATES BLUE STRIPE or SILICONE
- 13.2 Provide long-lift antifreeze protection to -34 degrees Fahrenheit to meet Original Equipment Manufacturer's engine specifications.
- 13.3 Provide thermostatically controlled or viscous fan.

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

14.0 ELECTRICAL EQUIPMENT

14.1 Provide dual batteries group 31 with the highest reserve capacity, 800 CCA each, min.

Nominal System Voltage: 12 volt, negative ground

All circuits shall be protected by circuit breakers or fuses.

All wiring shall be color coded or number coded, protected by plastic loom and rubber grommets, where needed.

14.2 Provide a brushless alternator sufficient in capacity to support the electrical system specified, when used under severe conditions, 135 amps @1500 rpm, min.

14.3 Provide starter over-crank protection.

15.0 TIRES (ALL TIRES AND WHEELS SUPPLIED SHALL BE OF THE SAME MANUFACTURE)

15.2 - 15.5 Omit.

15.6 Tires shall be of the "FIRST LINE" type shown below:

Front tires: 12R22.5, steel belted, 16 PLY Steer Type

Rear tires: 11R22.5, steel belted, M/S

15.7 Provide BUDD type wheels only. Provide wheel spacer on between all hubs and wheels.

16.0 FUEL SYSTEM

16.1 Provide 50 gallon minimum, aluminum safety step fuel tank, complete with a chained tank cap. Fuel tank shall be labeled "DIESEL ONLY".

17.0 SAFETY EQUIPMENT

17.1 Provide fire extinguisher, ABC, 5 lb, cab mounted, including reflective triangle kit.

17.2 Provide back-up alarm, ECCO, SA 907 series, or approved equal.

17.3 OMIT

17.4 Provide an air horn, controlled from inside the cab.

MUST BE FILLED IN

FIRM (VENDORS) NAME _____

BID NUMBER _____

**18.0 (100% parts, labor and travel time with no deductible less wear items)
LIST OF WEAR ITEMS SHALL BE SUPPLIED WITH BID.
BIDDER INITIALS _____**

Engine

Base Coverage, Complete engine 2 years / 150,000 miles/ 10,800 Hours

Extended Coverage (After Base Coverage)

Covers all these components, including mounting hardware and gaskets; cylinder heads; rocker lever; injectors; turbo; ECM; ECM harness; pistons, rings and liners; lube oil cooler; cylinder block; water pump; oil pan; connecting rod assembly; lube pump assembly; camshaft and bushings; cam followers; major cooled EGR components 3 years / 150,000

Total Engine Coverage, base and extended 5 Years / 150,000 Miles / 10,800 Hours

Differential 5 years / 100,000 miles

Transmission 2 years / Unlimited

Propeller shafts 5 years / 100,000 miles

Cab & Chassis (Bumper /Bumper)

2 years / Unlimited

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

Body 2 years / Unlimited miles

All components: hardware, latches, wiring, lights, etc.

Cab & Chassis Structural 5 years / Unlimited miles

Body (Superstructure) 5 years / Unlimited miles

Hydraulic System 2 years / Unlimited miles

All components:valving, hoses, tubing, controls, pumps, pto, Tanks, etc.

All added equipment 2 years / Unlimited miles

MUST BE FILLED IN

FIRM (VENDORS) NAME _____

BID NUMBER _____

NOTE: 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.

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

BIDDER INITIALS _____

Transportation to and from the vendor's site, if required, is the successful bidders responsibility. If transportation is performed by City forces it will be invoiced at **\$100.00/hour each direction.**

BIDDER INITIALS _____

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.**

BIDDER INITIALS _____

Copies of Warranty Repair Orders shall be forwarded to the Office of Fleet Management within five (5) days after completion of each repair, including all cost for parts and labor.

BIDDER INITIALS _____

WARRANTY REGISTRATION

The City of Philadelphia requires the successful bidder supply **WARRANTY REGISTRATION** of all warrantable components.

The warranty registration forms shall be supplied to the City, by the successful bidder, listing component description and serial number and chassis serial number. Each form shall require the signature of a representative of the City (OFM), the successful bidder and the subcontractor, where applicable.

If the successful vendor or their subcontractor supply a standard warranty registration form which includes disclaimers, the City reserves the right to refuse to sign. If no other registration for can be supplied the City shall sign the standard form as a "**REGISTRATION ONLY**".

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

The City recognizes only the warranty terms cited in the Invitation to Bid and agreed to in the contract awarded to the successful bidder, under Warranty, section 18 and Engineering Responsibility & Chronic Complaints/Failures, Section 35.

The City reserves the right to hold final payment until all warranty registrations are completed and a copy of such registrations supplied to OFM.

BIDDER INITIALS _____

19.0 PRE-PRODUCTION INSPECTION:

19.1 Provide the Office of Fleet Management pilot inspection for the chassis at the manufacture plant, for one person on each inspection trip. 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 the Office of Fleet Management pilot inspection for the body manufacture at the manufacture plant, for one person on each inspection trip. The successful bidder shall incur all expenses for lodging, meals, and transportation (transportation will be via air if more than 125 miles one way).

21.0 QUESTIONS REGARDING BID

All questions regarding Bid Specification should be directed to the Office of Fleet Management.

Bud Lipski, 215-686-1875 / E-Mail - bud.lipski@phila.gov

Pete Baker, 215-686-1877 / E-Mail - pete.baker@phila.gov

22.0 ILLUSTRATIONS & DRAWINGS

REQUIRED FOR THIS BID **BIDDER INITIALS** _____

24.0 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.

MUST BE FILLED IN

FIRM (VENDORS) NAME _____

BID NUMBER _____

25.0 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.

26.0 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.

27.0 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.

30.0 SHIPMENT AND DELIVERY

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:

PETE BAKER (215-686-1877)
BUD LIPSKI (215-686-1875)
OFFICE OF FLEET MANAGEMENT
100 S. BROAD STREET, 3RD FLOOR
PHILADELPHIA, PA 19110

DELIVERY LOCATION:

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

MUST BE FILLED IN

FIRM (VENDORS) NAME _____

BID NUMBER _____

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 of 30 gallons of diesel fuel, equivalent amount of diesel engine fluid, if required. Battery shall be fully charged, tires properly inflated.

31.0 INSPECTION

31.1 Pennsylvania State Inspection (If Required)

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 (If Required)

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.

Upon **final delivery to the City**, any vehicle(s) not meeting the requirements of the specification and the Invitation to Bid will be rejected. All rejected vehicles must be removed from the City's equipment delivery location within 48 hours of notification to the bidder / vendor.

BIDDER INITIALS _____

Upon **final delivery to the City**, in addition to liquidated damages (if applicable), the City at its sole discretion will charge the vendor / successful bidder a re-inspection fee of \$150.00 for each occasion a vehicle(s) / equipment not meeting the requirements of the specification and the Invitation. This re-inspection fee will be assessed each occasion a unit must be re-inspected.

This re-inspection fee will be deducted from the invoice for unit(s) not meeting the requirements of the specification and the Invitation to Bid.

BIDDER INITIALS _____

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

31.4 OFM, Bureau of Quality Assurance, shall be notified when the Pilot or First Production Model is available for inspection.

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 (COMPLETED), COPY OF THE SECOND STAGE STICKER) ARE TO BE HAND DELIVERED FOURTEEN (14) DAYS PRIOR TO DELIVERY TO:

**CITY OF PHILADELPHIA
OFFICE OF FLEET MANAGEMENT
BUREAU OF QUALITY ASSURANCE
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 S. Broad Street 3rd Floor, Phila, Pa. 19110 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.

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.

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

32.3.1 One (1) set of manuals shall be furnished for each ordered.

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

- | | |
|--------------------------|--------------------------|
| Maintenance Instructions | Emission Diagrams |
| Repair Instruction | Electric Wiring Diagrams |
| Parts Information | Collision |

Provide an eight year subscription to all manufacturer 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.

32.3.1.2 SOFTWARE

Provide software package(s) for all components; ie: engine, transmission, brake, hydraulic systems. Cost shall include all required hardware (excluding computer) and licensing fees for one year.

BIDDER INITIALS _____

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 form 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.

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

Technical and field service support shall be provided by the vendor, if necessary. 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.

33.0 SIGNS

Signs, decals, and etc. showing dealer=s name and/or address, shall not be permitted on the outside of the unit.

33.1 Manufactures name (s), address and striping shall be removed before delivery.

34.0 INSTRUCTIONS & TRAINING (PER-ORDER)

The vendor shall furnish three (3) video training DVD's, covering the following subjects (if available):

- Operator Training
- Routine Maintenance
- Preventive Maintenance

If the vendor does not have video training DVD's available at the time of the bid opening, it shall be acceptable to the City that the vendor tape the training sessions at the time of the training, making three (3) copies available to the City.

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 (30) days after final acceptance of the first unit.

34.1 Operators Location to be determined
 One Day Program

34.2 Technician
Provide technician training for a class group of 10 technicians (per day) by a certified factory trainer on all components used in the manufacturing of the unit. All required training equipment and materials shall be supplied shall be included in the cost. The training facility shall be within the city limits.

BIDDER INITIALS _____

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

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.

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

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 OPTIONAL EQUIPMENT (INSTALLED AND PRICED SEPARATELY)

36.1 SNOW PLOW HITCH ASSEMBLY - The plow hitch shall be bumper to frame design and totally independent of the truck front axle, minimum ground clearance 13". Chassis shall be provide with a stationary grill and tilt hood. The design and installation shall allow the plow to be secured to the hitch while transferring no torsional force to the truck. The design of the quick hitch **must** incorporate a double lock, and allow the hood to be tilted without tilting the hitch. (or approved equal)

REFERENCE MODELS:

MONROE, MC 7111

HENKE, UQH

HENDERSON, HEN711

FLINK, FSP1036

VIKING/CIVES METROPOLITAN

PLOW LIGHTS - Two (2) plow lights with Hi-Lo rectangular sealed beams and turn signals, light housing and bezel shall be made of impact and corrosion resistant polycarbonate - plow lights. Plow lights shall be mounted on the tilt hood with aluminum brackets in a fashion not to interfere with the sufficient height to provide proper plow clearance. When plow lights are on, the truck headlights are to go off automatically. Plow lights must be capable with OEM system.

Ref: TRUCK-LITE Model 80800, or approved equal.

36.2 SNOW PLOW (SNOW PLOW HITCHES AND PLOW BLADES SHALL BE COMPATIBLE WITH THE PRESENT CITY HITCHES AND PLOW BLADES)

It is the intent to describe a integral snow plow, power up, power rotation. The plow assembly shall have quick hitch mounting. The moldboard shall be approx. 10 feet wide, 36 inches high and made of 10 gauge steel. The snow plow shall have replaceable carbide cutting blade. Provide a rubber cutting edge. Provide plow guide

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

poles, two 36" fluorescent orange. Provide bolt on type wrap around curb guards.

TRIP MECHANISM- The plow and plowing vehicle shall be protected from damage incurred when striking a fixed object by means of a compression type trip.

CASTER ASSEMBLIES - The plow shall be carried by means of carbide skid shoes. These shoes shall attach to the main horizontal tubular frame via bolt on adjustable spring loaded housing assemblies (welded on assemblies not acceptable). These assemblies shall be adjustable for track and height. The fork height adjustment shall be independently achieved by means of threaded support rod and crank.

PLOW ANGLE - The plow angle shall be a minimum of 351 in each direction, manual rotation.

REFERENCE MODELS:

MONROE, MP 36R10ISCT

HENKE, 36R10

HENDERSON, SNOWFOE

FLINK, FSP

VIKING/CIVES METROPOLITAN

36.3 TAILGATE MATERIAL SPREADER

TYPE - Hydraulically operated, direct drive, self cleaning precision type material spreader, compatible with ground speed hydraulics, mounting below the tailgate without interference with the existing tailgate and normal operation of the truck and dump body. All bearings shall be corrosion resistant. Complete spreader and all hardware (except auger and spinner disc) shall be made of 304 stainless steel, not painted.

AUGER - The auger shall be 7' long, dual flighted, 6" diameter, 4" pitch, 3/8" thick on the outer edge and welded to 2-7/8" O. D. pipe.

AUGER MOTOR - Shall have a built-in speed sensor with weatherpack connector back to spreader control panel.

Ref: White Motor, Model RS 24 series.

MOUNTING - Is fastened to the sides of the dump body with quick disconnect pins for rapid mounting and removal of spreader without need of nut, bolts, or special tools. All mounting hardware shall be 304 stainless steel.

SPINNER ASSEMBLY - Single left hand mounted spinner that remains parallel to road surface at all dump angles. Spinner disc 18" in. diameter with six formed radial flights, directly driven by a separate reversible low speed, high torque hydraulic motor, installed on underside of the spinner, moves from side to side for selection of

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

spreading pattern and direction, and removable from hopper by means quick disconnect pins and quick couplers on hydraulic lines to motor. Spinner guard-fully adjustable for positive control of width and direction of material spreading pattern. Spinner disc shall be of polyurethane material. All other material and hardware shall be stainless steel, 304.

QUICK COUPLERS - Four (4) couplers furnished for hydraulic lines connecting spreader to truck and for quick disconnecting of spinner assembly from assembly. AEROQUIP FD 49 series.

Provide a weather proof spinner light, cab controlled.

**Ref: MONROE, MS966RF-304
HENDERSON, AC620A (304)
WARREN TGSII (304)
BUYERS, 92429SS
FLINK, VCT SS**

Training: All of the above equipment includes instructor, driver and manager training, parts and maintenance manuals.

36.4 HEATED BODY (EXHAUST SYSTEM)

Provide a heated floor, dual floor with labyrinth support structure and entire surface of floor and wings shall be fully heated. Exhaust shall exit through the rear corner post. Heat to be supplied to the body in the down position. Heat box to be installed on exhaust system capable of being open or closed for winter or summer operation. Exhaust pipe to be of heavy wall construction, one-piece. Heat box on dump body shall have a replaceable gasket.

36.5 TARP

Provide a semi-automatic pull trap system with a steel rope, 18 oz. reinforced, heat resistant, nylon-coated tarpaulin with a minimum of 5 brass eyelets on each side and two in the rear for tight tie-down.

Ref: Pulltarps 105-0215 / Donovan 200SR or approved equal.

36.6 HYDRAULIC SYSTEM

The system shall include power take-off (PTO), hydraulic pump, reservoir, filter, and valves to operate a hydraulic dump body with electronic controls, rocker type switches. There shall be no live oil in the cab of the vehicle. The system shall included low oil protection system.

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

POWER TAKE OFF (PTO)

Provide a cast iron hot shift type PTO, compatible with transmission. Provide over speed protection via OEM / ECM, and a direct mounted pump flange for the hydraulic pump. Aluminum housing PTO'S will not be acceptable.

HYDRAULIC PUMP

Hydraulic pump shall be a cast iron, direct mount, bushing type pump, 15 G.P.M. minimum, capable of at least 2,000 PSI and a maximum rating of 3,500 PSI and a maximum rating of 3,000 RPM.

HYDRAULIC VALVE ASSEMBLY

Valve assembly shall be a stackable type valve body with direct flow to dump body, up and down. It will be solenoid actuated and have an internal relief valve, transition check valves, and spool travel limiters for up and down. Provide a sealed box approximately 29"L, 18"W, 14"H. The box shall be an N.E.H.M.A. type.

HYDRAULIC TANK

Reservoir shall be constructed of 12 gauge material. It shall have a visual sight/temperature gauge, breather type filler cap, internal baffle, and at least a 30 gallon capacity, and have a 1 2 inch gate valve to shut off oil to the pump.

FILTER

Hydraulic filter shall be a return line, minimum micron rating of 10, and shall have a condition indicator.

36.7 SPREADER CONTROLS

Provide electronic spreader controls with auger reverse, cab mounted.

36.8 CENTRAL HYDRAULIC SYSTEM:

Provide a flow and pressure compensated Central Hydraulic System to operate all functions (dump body, plow, plow angle, spreader, and wet system. All system operation shall be achieved from a single pump matching all required flow and pressure demands. All units shall be provided with valves to operate plow, material spreader and tool system. **The system shall include a low oil protection system.**

VALVES

All valves (directional, flow, relief valves) will be incorporated into the stackable valve assembly. The directional valve will be sized properly to provide flow to all functions as required, dump body, spreader, plow and tool system. The 5 function stackable control valve will be solenoid actuated for all functions, the spreader valves shall include 12 volt E.P.C. coils with valve spools capable of handling 20 G.P.M.

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

SPREADER CIRCUIT

The spinner and auger conveyor system shall include ground speed control capabilities to allow the departments the accountability for the amount of materials disbursed thru a winter season. Spreader circuits shall also incorporate an auger reverse and blast function.

HYDRAULIC VALVE ENCLOSURE

The above stackable valve assemblies shall be mounted in a N.E.M.A. type enclosure. The valve enclosure shall be fabricated out of at least 12 gauge steel. Valves shall be accessible thru all sides, and portions will exit thru the top of the enclosure. Portion will be labeled, and valve enclosure will be bolted shut. Cover shall be bolt on type.

PUMP

Provide a single flow and pressure compensated (load sense), direct mount. Variable volume pump shall be the sole source of power for all hydraulic equipment. The pump shall have a maximum pressure of 4,000 P.S.I. It shall be direct or remote mount type and will be driven from a power take off.

POWER TAKE OFF (P.T.O.)

Provide Hot Shift P.T.O. It shall incorporate over-speed protection thru the chassis ECM to protect the pump from excessive R.P.M. and will have a 1 3" out-put shaft. The P.T.O. shall be manufactured of cast iron. Aluminum P.T.O. housing will not be acceptable.

PLOW HOLDING VALVE

Provide a Plow Holding-Lock Valve, incorporated into the hydraulic circuit to protect the plow.

OIL RESERVOIR

The Oil Reservoir shall have a capacity of at least 50 gallons, it shall be frame mounting with brackets, it shall have a visual site/temperature gauge to allow operators to inspect the volume and condition of the oil. Provide a gate type shut off valve.

FILTER

Provide a return line filter shall be installed with condition indicator to notify operators when filters must be changed (dash mounted). Provide shut off valve to allow the filter to be changed without draining the tank.

HYDRAULIC HOSES

All hydraulic plumbing practices shall conform to JIC H11 standards.
All hydraulic components shall have SAE porting wherever possible.
All hydraulic hoses shall be covered with a nylon abrasion sleeve for protection.

MUST BE FILLED IN

FIRM (VENDORS) NAME _____

BID NUMBER _____

INSTALLATION

All component installation will conform to the latest recommendation, procedures and regulations of the following organizations. ASME-ASTM-AISI-API-FPS-ICC-ISO-JIC-MSS-NFPA-NEMA-OSHA-SAE-ACES.

All hydraulic hoses and wiring shall be securely clamped as described in the intent, shielded from exhaust and shall be covered if needed to prevent damage and or failure. All hoses shall have JIC swivel connections at each end and located in such a manner to aid in easy component replacement. All systems shall be thoroughly tested and tuned before delivery.

MICROPROCESSOR CONTROLS (SPREADER / PLOW / DUMP BODY)

The control shall have a battery back-up to protect memory functions. Unit must be protected from reverse polarity, as well as, be over voltage protected by using a 5 amp. reset circuit breaker. All circuit boards to be conformal coated. The control shall be capable of self diagnostics for system errors and correction procedures.

The control unit must have password protection to prevent unauthorized use of set up, complete operation , and calibration parameters. The control unit shall be capable of self calibration of auger/conveyor feed rates and require no additional time pieces to calibrate.

The control unit shall be state of the art, membrane type front panel with touch pad control or dual detented control dials, with adjustable backlit front panel and visual display of text. Text display shall inform the operator of spread rate information (US or Metric) and calibration parameters. The unit must be capable of displaying logged spread run information for intermediate reference, and be able to download data to a serial printer or PC computer when complete data is required. The unit shall provide real time and date.

Provide lighted rocker type switches for all operations. Switches shall be mounted in a box approximately 11" w X 4 2" h X 3 2" d, completely sealed. Box shall be mounted in a bracket with knob type screws for easy removal.

SPREADER / PLOW AND QUICK COUPLERS (FLUSH / FACE)

Provide plumbing for spreader and plow system.

Provide quick couplers, located to facilitate easy connection with a gloved hand. All connections shall be identified via a metallic label attached to the hydraulic hose or to a mounting bracket at coupler location. The chassis portion of the coupling system shall include an automatic dust cap for both connections.

MUST BE FILLED IN

FIRM (VENDORS) NAME

BID NUMBER

36.9 PINTLE HOOK

Provide pintle hook, mounted and braced to the chassis rails. Reinforce chassis rear cross-member to allow safe towing of trailer with 13,000 lbs. load. Provide an install trailer light socket, COLE HERSEE Socket 1232, with Bracket 11165, and Plug 1253, or equal. Provide a I.C.C. bumper shall be firmly attached at rear of frame, if required. Any non-factory frame modification shall require the approval of the OFM.
Ref: Holland T-90A, or approved equal

36.10 TRACTOR PACKAGE

Provide an OEM optional tractor air package with rear mount glad hands and light plug.

36.11 TOOL BOX

Provide a tool box behind the cab, mounted to frame. Tool box shall be constructed of 12 gauge 304 stainless steel. Tool box shall be 84" wide, 12" deep and 48" high with a separation in side at approx. 54" from the drivers side. Provide 3 shelves on left side, one shelve on right, lockable doors on both side keyed alike. Provide three spare keys per unit. Bottom of tool box shall have a 5/8" plywood cover. Box shall be mounted to the truck frame on a steel cradle. Provide support if needed. Cost shall include all chassis and dump body modifications.

36.12 BARN STYLE TAILGATE ((Steel Body / Stainless Steel Body))

Mechanical style barn gate with cast steel levers and HD hardware to support the gate when opened to the side. A chain style hold back shall be installed on the passenger side to lock gate when it is opened.

36.13 OPTIONAL COLOR

FAA Approved Safety Yellow, Complete Unit, except stainless steel body.

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