HEAVY DUTY, TRUCK MOUNTED, HYDRAULIC OPERATED KNUCKLEBOOM TRASH LOADER

11/7/2013

City of Gallatin

1.0 Introduction

The City of Gallatin is seeking bids for **HEAVY DUTY, TRUCK MOUNTED, HYDRAULIC OPERATED KNUCKLEBOOM TRASH LOADER** for the Public Works Department. Bids will be due on November 21st, 2013 at 12:30 pm in a sealed envelope clearly marked: **HEAVY DUTY, TRUCK MOUNTED, HYDRAULIC OPERATED KNUCKLEBOOM TRASH LOADER 1.1 Scope of Work**

The City of Gallatin seeks to purchase an **HEAVY DUTY, TRUCK MOUNTED, HYDRAULIC OPERATED KNUCKLEBOOM TRASH LOADER.**

2.0 Technical Requirements

See Attached Spec Sheet.

3.0 Vendor Requirement

Meet minimum Truck Requirements.

4.0 Evaluation of Proposals

The City of Gallatin will award the contract to lowest responsible and responsive bidder meeting specifications, quality, and performance standards pursuant to the Municipal Purchasing Act of 1983. Response will be based on the following factors;

- Completeness of response
- Cost
- Meeting Truck requirement specs.
- Quality of service
- Quality of product

5.0 Contract Award

The City of Gallatin reserves the right to reject any or all proposals and to waive any informality found therein. The City of Gallatin will award a contract based on evaluations described above. In the event that the lowest bidder is not available at the time of need, the city reserves the right to go with the next lowest bidder.

6.0 Question Submissions

Public Works Office
Attn: Curtis Brummett
641 Long Hollow Pike
Gallatin TN 37066
Telephone: 615-451-5909
Email: curtis.brummett@gallatin-tn.gov

7.0 Proposal Submission

ALL SUBMISSIONS MUST BE SEALED AND CLEARLY MARKED

HEAVY DUTY, TRUCK MOUNTED, HYDRAULIC OPERATED KNUCKLEBOOM TRASH LOADER

BID DUE DATE: November 21st, 2013 at 12:30 pm

Proposals shall be directed to the attention of:
Finance Department
Attn: J.R.Smith, Jr
132 West Main Street
Gallatin, TN 37066
Telephone: 615-451-5899

PRICES

Price for Truck $_____

Name of Company: _____

Address: _____

Telephone: _____

Signature: _____

Print Name: _____

Title: _____

Date: _____

Model Profile

MISSION:	Requested GVWR: 35000. Calc. GVWR: 35000 Calc. Start / Grade Ability: 40.20% / 2.96% @ 55 MPH Calc. Geared Speed: 68.8 MPH
DIMENSION:	Wheelbase: 264.00, CA: 196.90, Axle to Frame: 75.00
ENGINE, DIESEL:	{MaxxForce DT} EPA 10, 285 HP @ 2200 RPM, 860 lb-ft Torque @ 1300 RPM, 2400 RPM Governed Speed
TRANSMISSION, AUTOMATIC:	{Allison 3500_RDS_P} 4th Generation Controls; Wide Ratio, 5-Speed, With Overdrive; On/Off Hwy; Includes Oil Level Sensor, With PTO Provision, Less Retarder, With 80,000-lb GVW & GCW Max.
CLUTCH:	Omit Item (Clutch & Control)
AXLE, FRONT NON-DRIVING:	{Meritor MFS-12-143A} Wide Track, I-Beam Type, 12,000-lb Capacity
AXLE, REAR, SINGLE:	{Meritor RS-23-160} Single Reduction, 23,000-lb Capacity, 200 Wheel Ends, Driver Controlled Locking Differential Gear Ratio: 5.63
CAB:	Conventional
TIRE, FRONT:	(2) 11R22.5 G661 HSA (GOODYEAR) 497 rev/mile, load range G, 14 ply
TIRE, REAR:	(4) 11R22.5 G182 RSD (GOODYEAR) 496 rev/mile, load range G, 14 ply
SUSPENSION, RR, SPRING, SINGLE:	Vari-Rate; 31,000-lb Capacity, With 4500 lb Auxiliary Rubber Spring
PAINT:	Cab schematic 100GA Location 1: 9219, Winter White (Std) Chassis schematic N/A

Vehicle Specifications

Description

Base Chassis, Model 4400 SBA 4X2 with 264.00 Wheelbase, 196.90 CA, and 75.00 Axle to Frame.

TOW HOOK, FRONT (2) Frame Mounted

FRAME RAILS Heat Treated Alloy Steel (120,000 PSI Yield); 10.250" x 3.610" x 0.375" (260.4mm x 91.7mm x 9.5mm); 456.0" (11582mm) Maximum OAL

BUMPER, FRONT Full Width, Aerodynamic, Steel; 0.142" Material Thickness

Includes
: BUMPER, FRONT Powder Coated Gray (Argent) Color

WHEELBASE RANGE 256" (650cm) Through and Including 311" (790cm)

AXLE, FRONT NON-DRIVING {Meritor MFS-12-143A} Wide Track, I-Beam Type, 12,000-lb Capacity

Notes
: The following features should be considered when calculating Front GAWR: Front Axles; Front Suspension; Brake System; Brakes, Front Air Cam; Wheels; Tires.

SUSPENSION, FRONT, SPRING Parabolic, Taper Leaf; 12,000-lb Capacity; With Shock Absorbers

Includes
: SPRING PINS Rubber Bushings, Maintenance-Free

Notes
: The following features should be considered when calculating Front GAWR: Front Axles; Front Suspension; Brake System; Brakes, Front Air Cam; Wheels; Tires.

BRAKE SYSTEM, AIR Dual System for Straight Truck Applications

Includes
: BRAKE LINES Color and Size Coded Nylon
: DRAIN VALVE Twist-Type
: GAUGE, AIR PRESSURE (2) Air 1 and Air 2 Gauges; Located in Instrument Cluster
: PARKING BRAKE CONTROL Yellow Knob, Located on Instrument Panel
: PARKING BRAKE VALVE For Truck
: QUICK RELEASE VALVE Bendix On Rear Axle for Spring Brake Release: 1 for 4x2, 2 for 6x4
: SLACK ADJUSTERS, FRONT Automatic
: SLACK ADJUSTERS, REAR Automatic
: SPRING BRAKE MODULATOR VALVE R-7 for 4x2, SR-7 with relay valve for 6x4

Notes
: Front and Rear Dust Shields not Included
: Rear Axle is Limited to 19,000-lb GAWR with Code 04091 BRAKE SYSTEM, AIR and Code 04NCL BRAKES, REAR, AIR CAM Regardless of Axle/Suspension Ordered.
: Rear Axle is Limited to 20,000-lb GAWR with Code 04091 BRAKE SYSTEM, AIR and Code 04NCG BRAKES, REAR, AIR CAM Regardless of Axle/Suspension Ordered.
: Rear Axle is Limited to 23,000-lb GAWR with Code 04091 BRAKE SYSTEM, AIR and Standard Rear Air Cam Brakes Regardless of Axle/Suspension Ordered.

AIR BRAKE ABS {Bendix AntiLock Brake System} Full Vehicle Wheel Control System (4-Channel)

AIR DRYER {Meritor Wabco System Saver 1200} with Heater

Vehicle Specifications

Description

Includes
: AIR DRYER LOCATION Inside Left Rail, Back of Cab

BRAKE CHAMBERS, FRONT AXLE {Haldex} 20 SqIn

BRAKE CHAMBERS, REAR AXLE {Haldex GC3030LHDHO} 30/30 Spring Brake

Includes
: BRAKE CHAMBERS, SPRING (2) Rear Parking; WITH TRUCK BRAKES: All 4x2, 4x4; WITH TRACTOR BRAKES: All 4x2, 4x4; 6x4 & 6x6 with Rear Tandem Axles Less Than 46,000-lb. or GVWR Less Than 54,000-lb.

BRAKES, FRONT, AIR CAM S-Cam; 15.0" x 4.0"; Includes 20 Sq. In. Long Stroke Brake Chambers

Notes
: Front Axle with 14,000-lb GAWR is Limited to 13,200-lb GAWR when used in Conjunction with 15" BRAKES, FRONT, AIR CAM.
: The following features should be considered when calculating Front GAWR: Front Axles; Front Suspension; Brake System; Brakes, Front Air Cam; Wheels; Tires.

BRAKES, REAR, AIR CAM S-Cam; 16.5" x 7.0"; Includes 30/30 Sq.In. Long Stroke Brake Chamber and Spring Actuated Parking Brake

Notes
: The following features should be considered when calculating Front GAWR: Front Axles; Front Suspension; Brake System; Brakes, Front Air Cam; Wheels; Tires.

AIR COMPRESSOR {Bendix Tu-Flo 550} 13.2 CFM Capacity

STEERING COLUMN Tilting

STEERING WHEEL 2-Spoke, 18" Diam., Black

STEERING GEAR {Sheppard HD94} Power

EXHAUST SYSTEM Single, Horizontal, Aftertreatment Device Frame Mounted Right Side Back of Cab, Includes Horizontal Tail Pipe

Includes
: NOTE: The Horizontal Tailpipe Includes a Temperature Control Device

ELECTRICAL SYSTEM 12-Volt, Standard Equipment

Includes
: BATTERY BOX Steel
: DATA LINK CONNECTOR For Vehicle Programming and Diagnostics In Cab
: FUSES, ELECTRICAL SAE Blade-Type
: HAZARD SWITCH Push On/Push Off, Located on Top of Steering Column Cover
: HEADLIGHT DIMMER SWITCH Integral with Turn Signal Lever
: HORN, ELECTRIC Single
: JUMP START STUD Located on Positive Terminal of Outermost Battery
: PARKING LIGHT Integral with Front Turn Signal and Rear Tail Light
: STARTER SWITCH Electric, Key Operated
: STOP, TURN, TAIL & B/U LIGHTS Dual, Rear, Combination with Reflector
: TURN SIGNAL SWITCH Self-Cancelling for Trucks, Manual Cancelling for Tractors, with Lane Change Feature
: TURN SIGNALS, FRONT Includes Reflectors and Auxiliary Side Turn Signals, Solid State Flashers; Flush Mounted
: WINDSHIELD WIPER SWITCH 2-Speed with Wash and Intermittent Feature (5 Pre-Set Delays), Integral with Turn Signal Lever
: WINDSHIELD WIPERS Single Motor, Electric, Cowl Mounted

Vehicle Specifications

Description

: WIRING, CHASSIS Color Coded and Continuously Numbered

CIGAR LIGHTER Includes Ash Cup

ALTERNATOR {Leece-Neville LBP2224H} Brush Type; 12 Volt 120 Amp. Capacity, Pad Mounted

BODY BUILDER WIRING Rear of Frame; Includes Sealed Connectors for Tail/ Amber Turn/Marker/ Backup/Accessory Power/Ground and Sealed Connector for Stop/Turn

BATTERY SYSTEM {International} Maintenance-Free, (2) 12-Volt 1850CCA Total

RADIO {International} AM/FM Stereo With Weatherband, Clock, Auxiliary Input, Includes Multiple Speakers

Includes
: SPEAKERS IN CAB (2) Dual-Cone with Deluxe Interior
: SPEAKERS IN CAB (4) Coaxial with Premium Interior

BACK-UP ALARM Electric, 102 dBA

SWITCH, AUXILIARY Accessory Control; for Wiring in Roof, With Maximum of 20 amp Load With Switches In Instrument Panel

HORN, AIR Black, Single Trumpet, Air Solenoid Operated

STARTING MOTOR {Delco Remy 38MT Type 300} 12 Volt; less Thermal Over-Crank Protection

INDICATOR, LOW COOLANT LEVEL With Audible Alarm

HEADLIGHTS Halogen; Composite Aero Design for Two Light System

GRILLE Chrome

FRONT END Tilting, Fiberglass, With Three Piece Construction

PAINT SCHEMATIC, PT-1 Single Color, Design 100

Includes
: PAINT SCHEMATIC ID LETTERS "GA"

PAINT TYPE Base Coat/Clear Coat, 1-2 Tone

CLUTCH Omit Item (Clutch & Control)

BLOCK HEATER, ENGINE {Phillips} 120 Volt/1250 Watt

Includes
: BLOCK HEATER SOCKET Receptacle Type; Mounted below Drivers Door

ENGINE, DIESEL {MaxxForce DT} EPA 10, 285 HP @ 2200 RPM, 860 lb-ft Torque @ 1300 RPM, 2400 RPM Governed Speed

Includes
: AIR COMPRESSOR AIR SUPPLY LINE Naturally-Aspirated (Air Brake Chassis Only)
: ANTI-FREEZE Red Shell Rotella Extended Life Coolant; -40 Degrees F/ -40 Degrees C; for MaxxForce Engines
: COLD STARTING EQUIPMENT Intake Manifold Electric Grid Heater with Engine ECM Control
: CRUISE CONTROL Electronic; Controls Integral to Steering Wheel
: ENGINE OIL DRAIN PLUG Magnetic
: ENGINE SHUTDOWN Electric, Key Operated

Vehicle Specifications

Description

: FUEL FILTER Included with Fuel/Water Separator
: FUEL/WATER SEPARATOR Fuel/Water Separator and Fuel Filter in a Single Assembly; With Water-in-Fuel Sensor; Engine Mounted
: GOVERNOR Electronic
: OIL FILTER, ENGINE Spin-On Type
: WET TYPE CYLINDER SLEEVES

Notes
: Recommend Code 12THT when using front mount obstructions (winches, cones, reels, etc.) that restrict air flow through the radiator.

FAN DRIVE {Borg-Warner SA85} Viscous Type, Screw On

Includes
: FAN Nylon

RADIATOR Aluminum; 2-Row, Cross Flow, Over Under System, 1045 SqIn Louvered, With 373 SqIn CAC, With 369 SqIn LTR, With In Tank Transmission Oil Cooler

Includes
: DEAERATION SYSTEM with Surge Tank
: HOSE CLAMPS, RADIATOR HOSES Gates Shrink Band Type; Thermoplastic Coolant Hose Clamps
: RADIATOR HOSES Premium, Rubber

FEDERAL EMISSIONS for 2010; MaxxForce DT Engines

AIR CLEANER With Service Protection Element

Includes
: GAUGE, AIR CLEANER RESTRICTION Air Cleaner Mounted

THROTTLE, HAND CONTROL Engine Speed Control; Electronic, Stationary, Variable Speed; Mounted on Steering Wheel

ENGINE CONTROL, REMOTE MOUNTED Provision for; Includes Wiring for Body Builder Installation of PTO Controls; With Ignition Switch Control for MaxxForce post 2007 Emissions Electronic Engines

FAN DRIVE SPECIAL EFFECTS Fan Cooling Ring with Fan Shroud Effects, Engine Mounted

EMISSION COMPLIANCE Federal, Does Not Comply With California Clean Air Regulations

TRANSMISSION, AUTOMATIC {Allison 3500_RDS_P} 4th Generation Controls; Wide Ratio, 5-Speed, With Overdrive; On/Off Hwy; Includes Oil Level Sensor, With PTO Provision, Less Retarder, With 80,000-lb GVW & GCW Max.

Includes
: OIL FILTER, TRANSMISSION Mounted on Transmission
: TRANSMISSION OIL PAN Magnet in Oil Pan

TRANSMISSION SHIFT CONTROL {Allison} Push-Button Type; for Allison 3000 & 4000 Series Transmission

TRANSMISSION OIL Synthetic; 29 thru 42 Pints

ALLISON SPARE INPUT/OUTPUT for Rugged Duty Series (RDS); General Purpose Trucks, Construction

Vehicle Specifications

Description

SHIFT CONTROL PARAMETERS Allison Performance Programming in Primary and Allison Economy Programming in Secondary

PTO CONTROL, DASH MOUNTED For Customer Provided PTO; Includes Switch, Electric/Air Solenoid, Piping and Wiring

AXLE, REAR, SINGLE {Meritor RS-23-160} Single Reduction, 23,000-lb Capacity, 200 Wheel Ends, Driver Controlled Locking Differential . Gear Ratio: 5.63

Notes
: The following features should be considered when calculating Rear GAWR: Rear Axles; Rear Suspension; Brake System; Brakes, Rear Air Cam; Brake Shoes, Rear; Special Rating, GAWR; Wheels; Tires.
: When Specifying Axle Ratio, Check Performance Guidelines and TCAPE for Startability and Performance

SUSPENSION, RR, SPRING, SINGLE Vari-Rate; 31,000-lb Capacity, With 4500 lb Auxiliary Rubber Spring

Notes
: The following features should be considered when calculating Rear GAWR: Rear Axles; Rear Suspension; Brake System; Brakes, Rear Air Cam; Brake Shoes, Rear; Special Rating, GAWR; Wheels; Tires.

FUEL TANK Top Draw; D Style, Non Polished Aluminum, 50 U.S. Gal., 189 L Capacity, 16" Tank Depth, With Quick Connect Outlet, Mounted Left Side, Under Cab

CAB Conventional

Includes
: ARM REST (2) Molded Plastic; One Each Door
: CLEARANCE/MARKER LIGHTS (5) Flush Mounted
: COAT HOOK, CAB Located on Rear Wall, Centered Above Rear Window
: CUP HOLDERS Two Cup Holders, Located in Lower Center of Instrument Panel
: DOME LIGHT, CAB Rectangular, Door Activated and Push On-Off at Light Lens, Timed Theater Dimming, Integral to Console, Center Mounted
: GLASS, ALL WINDOWS Tinted
: GRAB HANDLE, CAB INTERIOR (1) "A" Pillar Mounted, Passenger Side
: GRAB HANDLE, CAB INTERIOR (2) Front of "B" Pillar Mounted, One Each Side
: INTERIOR SHEET METAL Upper Door (Above Window Ledge) Painted Exterior Color
: STEP (4) Two Steps Per Door

GAUGE CLUSTER English With English Electronic Speedometer

Includes
: GAUGE CLUSTER (5) Engine Oil Pressure (Electronic), Water Temperature (Electronic), Fuel (Electronic), Tachometer (Electronic), Voltmeter
: ODOMETER DISPLAY, Miles, Trip Miles, Engine Hours, Trip Hours, Fault Code Readout
: WARNING SYSTEM Low Fuel, Low Oil Pressure, High Engine Coolant Temp, and Low Battery Voltage (Visual and Audible)

GAUGE, OIL TEMP, ALLISON TRAN

IP CLUSTER DISPLAY On Board Diagnostics Display of Fault Codes in Gauge Cluster

SEAT, DRIVER {National 2000} Air Suspension, High Back With Integral Headrest, Vinyl, Isolator, 1 Chamber Lumbar, With 2 Position Front Cushion Adjust, -3 to +14 Degree Angle Back Adjust

Vehicle Specifications

Description

Includes
: SEAT BELT 3-Point, Lap and Shoulder Belt Type

SEAT, TWO-MAN PASSENGER {Gra-Mag} Fixed Back, Two Integral Headrest, Vinyl, Less Under Seat Storage Compartment

Includes
: SEAT BELT (2) One 3-Point Shoulder Belt and One 2-Point Lap Belt (Center Position)

MIRRORS (2) {Lang Mekra} Rectangular, 7.44" x 14.84" & 7.44" sq. Convex Both Sides, 102" Inside Spacing, Breakaway Type, Heated Heads Thermostatic Controlled, Black Heads, Brackets and Arms

CAB MOUNTING HEIGHT EFFECTS Mid Cab in Lieu of Low Cab Mounting Height (Approx. 4") for Increased Cooling System Requirements

AIR CONDITIONER {Blend-Air} With Integral Heater & Defroster

Includes
: CLAMPS, HEATER HOSE Mubea Constant Tension Clamps
: HEATER HOSES Premium
: REFRIGERANT Hydrofluorocarbon HFC-134A

INSTRUMENT PANEL Center Section, Flat Panel

CAB INTERIOR TRIM Deluxe

Includes
: "A" PILLAR COVER Molded Plastic
: CAB INTERIOR TRIM PANELS Cloth Covered Molded Plastic, Full Height; All Exposed Interior Sheet Metal is Covered Except for the Following: with a Two-Man Passenger Seat or with a Full Bench Seat the Back Panel is Completely Void of Covering
: CONSOLE, OVERHEAD Molded Plastic; With Dual Storage Pockets with Retainer Nets and CB Radio Pocket
: DOOR TRIM PANELS Molded Plastic; Driver and Passenger Doors
: FLOOR COVERING Rubber, Black
: HEADLINER Soft Padded Cloth
: INSTRUMENT PANEL TRIM Molded Plastic with Black Center Section
: STORAGE POCKET, DOOR (1) Molded Plastic, Full-Length; Driver Door
: SUN VISOR (2) Padded Vinyl with Driver Side Toll Ticket Strap, Integral to Console

CAB REAR SUSPENSION Air Bag Type

WHEELS, FRONT DISC; 22.5" Painted Steel, 2 Hand Hole, 10 Stud (285.75MM BC) Hub Piloted, Flanged Nut, Metric Mount, 8.25 DC Rims; With Steel Hubs

Includes
: PAINT IDENTITY, FRONT WHEELS White

Notes
: Compatible Tire Sizes: 11R22.5, 12R22.5, 255/70R22.5, 255/80R22.5, 265/75R22.5, 275/70R22.5, 275/80R22.5, 295/75R22.5, 295/80R22,5

WHEELS, REAR DUAL DISC; 22.5" Painted Steel, 2 Hand Hole, 10-Stud (285.75MM BC) Hub Piloted, Flanged Nut, Metric Mount, 8.25 DC Rims; With Steel Hubs

Includes
: PAINT IDENTITY, REAR WHEELS White

Vehicle Specifications

Description

Notes
: Compatible Tire Sizes: 11R22.5, 12R22.5, 255/70R22.5, 255/80R22.5, 265/75R22.5, 275/70R22.5, 275/80R22.5, 295/75R22.5, 295/80R22,5

(4) TIRE, REAR 11R22.5 G182 RSD , 496 rev/mile, load range G, 14 ply

(2) TIRE, FRONT 11R22.5 G661 HSA 497 rev/mile, load range G, 14 ply

SPECIFICATIONS FOR A HEAVY DUTY TRASH LOADER

Extending Boom and Stabilizers

It is the intent of these specifications to describe a truck mounted, hydraulic operated knuckleboom trash loader. To be used in collection and loading of bulk trash, limbs, leaves and building materials of like nature. These specifications are describing and stating the minimum requirements of a truck mounted trash loader to perform this function.

	COMPLY YES	COMPLY NO	
1.	☐	☐	**A-Frame**. To be constructed of twenty-one (21) inch wide I-beams at 50 pounds per foot. Top of frame to be constructed of 1½" steel plate, surfaced and drilled to accommodate slewing ring bearing. Bottom of frame to be constructed of 1" plate steel drilled to accommodate (8) 1" tie bolts. A-frame to be enclosed with two removable steel cover plates which will shield hydraulic valve and other hydraulic components from operator. A-frame will incorporate manual stops to prevent continuous pedestal rotation. Stops to allow 280° rotation minimum.

Exception/Alternate _____

2.	☐	☐	**Pedestal Top**. To be constructed of a 1½" bottom steel plate surfaced and drilled to accommodate slewing ring bearing. Side uprights constructed of ¾" steel plate with bushings to accommodate main boom and main boom lift cylinder connections. The top of the pedestal will be bolted to the pedestal base utilizing a slewing ring bearing with a minimum of 40, 5/8" grade 8 bolts properly torqued. Grease fitting to be visible and accessible.

Exception/Alternate _____

3.	☐	☐	**Boom Rotation.** Rotation to be accomplished utilizing a slewing ring bearing 2¾" thick and 22-7/8" in diameter. Slewing bearing to have (40) 5/8" grade 8 top and bottom bolts properly torqued. Bearing grease fitting marked and easily accessible. A hydraulic motor will drive a pinion gear that will engage the outside diameter of the slewing ring producing boom swing. Pinion gear will attach to a 2¼" hardened tapered shaft minimum.

Exception/Alternate _____

4.	☐	☐	**Main Boom**. To be constructed of (2) 4" x 8" x 3/8" thick wall tubes. Main boom to be of twin design utilizing 2" ID replaceable bushings and 2" pin at hinge point. All through boom, hydraulic metal lines to be mounted between and below the top surface of main boom tubes.

Exception/Alternate _____

COMPLY

YES NO

5. ☐ ☐ **Tip Boom**. Outer boom to be heavy duty 5" x 7" x ¼" thick wall tube or equal. Inner tube to be 4" x 6" x ¼" thick wall tube or equal. Boom to be equipped with nylatron wear pad and bottom roller. Extension cylinder to 2½" x 52" stroke. Cylinder will be stopped hydraulically at 48". No mechanical stops allowed. Tip boom hinge point must be equipped with 2¼" hardened bushing and 2¼" hardened shaft.

Exception/Alternate _____

6. ☐ ☐ **Boom Length**. Total length of boom to be 16 feet. Boom to extend hydraulically to 20 feet when fully extended.

Exception/Alternate _____

7. ☐ ☐ **Lifting Capacity**. At sixteen feet (16') loader must lift 3,500 pounds "pay load" in addition to weight of grapple. Main boom must have two (2) cylinders with a minimum of 4" ID diameter with locking valves. Loader must be capable of lifting the 3,500 pound payload with a maximum hydraulic pressure reading of 2050 psi.

Exception/Alternate _____

8. ☐ ☐ **Loader Stabilizers**. Loader must be equipped with hydraulic operated stabilizers. Stabilizers to be positioned for maximum stability when lifting a 3,500 pound load at 16 feet. Stabilizers to be equipped with street pads and shall not be placed in such a manner to cause blocking of traffic, or create hazards in the street when in down position. Stabilizer cross tube to be mounted at the base of the A-frame and will be 7" x 7" x 3/8" thick with a 6" x 6" x 3/8" inside tube extending 12" using a 2" x 12" cylinder. Outside stabilizer will be 7" x 7" x ¼" tube. Inside slide will be 6" x 6" x 3/8" tube. Stabilizer cylinders will be mounted inside inner tubing and easily removed from the top of stabilizers. Cylinders will not be exposed. Stabilizers will have a maximum of 12 feet spread in the down position. Flop-down stabilizers are unacceptable.

Exception/Alternate _____

COMPLY

YES NO

9. ☐ ☐ **Power Source**. Unit to be mounted on any acceptable truck chassis utilizing a heavy duty hotshift PTO and direct mount single pump. Pump to produce a minimum of 24 gpm at 1500 rpm for smooth and efficient operation of loader. PTO controls will be integrated with truck chassis and will not engage unless truck chassis is in neutral and parking brake is set. An interruption of either of these conditions will terminate PTO operation.

Exception/Alternate _____

10. ☐ ☐ **Control Valve**. Unit to be equipped with 7-section and 4-section valve assemblies. Control valves to be equipped with main pressure reducers and adequate port pressure reducers. Valves to be capable of hydraulic flows up to 20 gpm and a main pressure setting of 2100 psi. Control valves to be mounted inside of pedestal base for operators safety. Valve to be controlled with manual pull levers.

Exception/Alternate _____

11. ☐ ☐ **Operators Station**. There will be a stand up type control operators platform on each side of the truck with a walkway between truck cab and loader pedestal for easy operator access.

Exception/Alternate _____

12. ☐ ☐ **Oil Tank Filters**. Hydraulic system must be equipped with a 50 gallon oil tank, oil level and temperature gauge utilizing a 50 gallon per minute externally mounted return oil filter with a replaceable 10 micron absolute filter element. Filter element must be easily accessible. Unit to be equipped with a 40 gpm pressure filter with a replaceable 10 micron absolute filter element. Pressure filter to be installed in hydraulic system after pump and prior to any other hydraulic components. Pressure filter to be equipped with a condition sensor and dash mounted light. Light will remain on when filter element needs servicing.

Exception/Alternate _____

13. ☐ ☐ **Throttle Control**. Unit to have a throttle control integrated with truck chassis to maintain proper engine speed while loader is in operation. Engine speed will not increase unless truck chassis is in neutral, parking brake is set and PTO is engaged. Engine speed will return to idle when any of these conditions are terminated. Throttle control parameters will be set in such a way as to prevent engine speeds being increased above 1500 rpm while PTO is engaged. An engine throttle control switch to be mounted at operators platform for operator convenience. Throttle control switch to be water tight.

Exception/Alternate _____

COMPLY
YES **NO**

14. ☐ ☐ **Trash Grapple**. Loader to be equipped with a continuous rotating bucket

by means of hydraulic operated rotator with no mechanical stops. Continuous rotator shaft must be 3" in diameter. Rotator to utilize a 3" top and bottom roller bearing. Rotator to have three easily replaceable seals. Trash grapple to have a closing pressure of 3,500 pounds. Grapple to be opened and closed by means of two (2) hydraulic cylinders a minimum of 3" in diameter with a heavy duty clevis on rod end. Bucket cylinder hinge pin to be 1½" minimum. Bucket cylinders and hoses to be enclosed in a removeable steel cover to prevent limbs and other debris from damaging cylinders and hoses. Grapple is to be 4 feet long and open to 60 inches, lip to lip. Center of bucket to be 18 inches from ground minimum at fully opened position. Bucket to be equipped with replaceable double edged grader blades at biting point.

Exception/Alternate _____

15. ☐ ☐ **Cylinders**. All cylinders to be of high quality utilizing chrome rods and replaceable bushings/bearings. Loader to be equipped with two main boom cylinders to be 4" bore x 24" stroke with 2½" rods with integrated locking valves, one tip boom cylinder to be 4½" bore x 32" stroke with 2½" rod with integrated locking valve, two bucket cylinders to be 3" bore x 8" stroke with 1¾" rods, two outrigger cylinders to be 3" bore x 20" stroke with 1¾" rods with integrated locking valves and (1) slide boom cylinder with 2½" bore x 52" stroke with 1¾" rod.

Exception/Alternate _____

16. ☐ ☐ **Paint.** All metal to be properly cleaned, primed and painted one standard color. Color choice: _____

Exception/Alternate _____

SPECIFICATIONS

HEAVY DUTY TRASH BODY

It is the intent of these specifications to describe a heavy duty trash body to be used in collection and hauling of bulk trash, limbs, leaves and building materials, etc. Material, workmanship, design and capacities are being specified for a piece of equipment that will be required to do a certain job.

COMPLY

YES **NO**

1. ☐ ☐ Minimum 23.70 cubic yard capacity.

Exception/Alternate _____

2. ☐ ☐ Minimum 20 foot body length.

Exception/Alternate _____

3. ☐ ☐ Body to have sub-frame of 3" x 4" x ¼" wall tubing. Main dump frame to be constructed of 4" channel @ 7.25 lbs with adequate cross bracing. Hoist brackets to be made with ½" thick metal plate. Hoist to have twin telescoping cylinders, trunion mount with a 60" stroke and lifting capacity of 30,000 lbs at 1500 psi. Lock-ring type cylinders are not acceptable.

Exception/Alternate _____

4. ☐ ☐ Body to be constructed with 4" structural channel cross sills. Cross sills to be placed on maximum 12" centers. Body floor to be built with 7 gauge steel, floor to be formed over and under the end of cross sills. Body inside width to be 91" and overall width not to exceed 8 feet.

Exception/Alternate _____

5. ☐ ☐ Body sides to be constructed with 10 gauge sheet metal. Side stakes to be 10 gauge formed channel placed on 24" centers. Body sides to have 10 gauge formed channel at top of sides. Side stakes to be interconnected and welded to top rail. Sides to be continuous welded to floor. Body headboard to be constructed of 10 gauge sheet metal with10 gauge formed stakes and 10 gauge formed top rail. Body sides to be standard 48 inches high .

Exception/Alternate _____

COMPLY

	YES	NO	
6.	☐	☐	Body to be equipped with heavy duty barn type doors with positive latch. Hinges to be a minimum of1¼" pins, with strap to be no less than 5/8" x 3" flat bar.

Exception/Alternate _____

7.	☐	☐	Body to be equipped with a DOT rear bumper. Rear bumper should not hit the ground when body is dumped to its fullest dump angle. Bumper to have conspicuity tape completely across rear side.

Exception/Alternate _____

8.	☐	☐	Body to be equipped with two screened openings in front of each operators station to aid operators view into body when loading. Opening to be 11" x 27" minimum.

Exception/Alternate _____

9.	☐	☐	Body to be equipped with clearance lights to meet all state and federal safety standards. All wiring to be protected with metal tubing. Two amber LED flashing lights (2" x 6") with seven flash patterns will be mounted in rubber grommets in the rear posts of body. Conspicuity tape applied to sides and rear of body.

Exception/Alternate _____

10.	☐	☐	Body to have one safety prop installed on pedestal base for operator safety and convenience when working underneath body.

Exception/Alternate _____

11.	☐	☐	All metal to be properly cleaned, primed and painted one standard color.

Indicate color choice: _____

Exception/Alternate _____