Department of Finance
515 North Avenue
New Rochelle, NY 10801

Tel (914) 654-2072
Fax (914) 654-2057

Howard Rattner
Commissioner

City of New Rochelle
New York

REQUEST FOR BID

To: All Prospective Bidders
For
One (1) Mack Single Axle
Dump/Spreader w/Plow

BID SPEC No. 4858
DATE SENT: April 27, 2010
DATE DUE: May 18, 2010
NOTE: Bids are due by 3pm
Late bids will NOT be accepted!

Respond to: City of New Rochelle
Purchasing Office/Dept of Finance
515 North Ave.
New Rochelle, N.Y. 10801

INSTRUCTION FOR RESPONDING TO THIS BID

1. Vendors interested in bidding on the referenced items should read the entire document. The vendor must complete all sections of this document including the VENDOR DATA SECTION and sign where indicated. Your signature identifies your acceptance of all terms and conditions herein.

2. All vendors must fill in the prices being requested in the places and formats indicated. All blank spaces in said bid shall be filled in and no changes shall be made in the phraseology, or in the items, terms and conditions contained therein.

3. Completed bids should be sent to the address identified at the top of this page.

4. Please indicated the bid specification number and due date on the outside of your submitted bid.

5. Faxed or emailed bids will not be accepted. Use US Mail, Special Delivery or Hand Delivery.

6. The City of New Rochelle is a sponsor of the Westchester Affirmative Action Equal Employment Agreement and encourages all minorities to submit bids. Firms qualified and certified as Minority Business Enterprises (MBE) and Women Business Enterprises (WBE) are strongly encouraged to submit bids.

Instructions, Terms and Conditions, Spec. # 4858

1. Submission of Bids Each bid must be in a separate sealed envelope, clearly labeled with vendor name, bid number and due date and addressed to City of New Rochelle, Department of Finance-Purchasing Office, City Hall, New Rochelle, New York 10801. All bids must be properly signed and received by the time and date specified in order to be valid.

2. Award of Bids Awards will be made, if at all, to the "lowest responsible bidder" meeting the specifications. The City reserves the right to reject any and all bids or portion thereof, or any bids that are vague, incomplete or indefinite.

3. Withdrawal of Bids The submission of the bid proposal shall constitute an irrevocable offer which shall remain in full force and effect until the bid proposals received by the City are either accepted or rejected. Proposals may be withdrawn at any time prior to the bid opening.

4. Bid Deposits Bid deposits, if required, will be returned to unsuccessful bidders after the bid has been awarded. A successful bidder's deposit will be returned after a written contract has been executed, or after a performance bond, if required, has been accepted by the City.

5. Bid Format Bidders are advised to become familiar with all conditions, instructions and specifications governing this bid. Once the award has been made, failure to have read all the conditions, instructions and specifications shall not be cause to alter the original bid.

   All bids must be priced per unit specified in the bid specifications or on the bid form submitted, and must be signed and dated. In the event of a discrepancy between the unit price and extension, the unit price will govern. No exceptions will be allowed with regard to errors made in the computation of a bid.

   Purchases by the City of New Rochelle are not subject to any federal, state or local taxes. Do not include any of these taxes when bidding or invoicing. Exemption certificates will be furnished upon request.

6. Substitutions Any deviation from specifications or indicated brand shall be clearly stated and fully explained by accompanying specification sheets with submitted bid. Samples shall be supplied by the vendor, at no charge to the City, upon request. The City reserves the right to accept equals approved by it. If exception to indicated brand is not noted, bidder is required to deliver brand specified.

7. Delivery of Product All delivery are to be considered inside delivery to locations as specified by the authorized City agent. All items must be guaranteed against faulty material and workmanship and delivered as such. Deliveries of incorrect or faulty items will be rejected and returned at vendors' expense. Failure to deliver within the specified time maybe cause for cancellation of the order.

8. Shipping Terms Shipping terms will be considered F.O.B. Destination and without charge for containers, packing, etc., unless specified on the bid and the cost thereof quoted.

9. Payment Terms The City of New Rochelle shall pay invoices at net 30 days after receipt of invoice and of material; whichever is later, unless alternate terms are indicated on the bid.

10. Collusion Clause By submission of this bid, each bidder and each person signing on behalf of any bidder certified, and in the case of a joint bid, each party thereto as to its own organization, under penalty of perjury, that to the best of its knowledge and belief:

    A. the prices in this bid have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or any competitor; and
    B. unless otherwise requires by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder prior to the opening, directly or indirectly, to any other bidder or to any competitor; and
    C. no attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

    The bidder certifies that this bid is made without any connection with any other person making a bid for the same purpose, and is in all respects fair and without collusion or fraud, and that no elected official or other officer or employee or person whose salary is payable in whole or in part from the city treasury is directly or indirectly interested therein, or in supplies materials and equipment to which it relates, or in any portion of the profits thereof.

11. The City of New Rochelle is a sponsor of the Westchester Affirmative Action Equal Employment Agreement and encourages all minorities to submit bids. Firms qualified and certified as Minority Business Enterprises (MBE) and Women Business Enterprises (WBE) are strongly encouraged to submit bids.

STATEMENT OF NO BID

RETURN THIS FORM ONLY IF YOU ARE SUBMITTING A "NO BID"

It is the intent of the City of New Rochelle to afford all suppliers an equal opportunity to bid on all commodities, operating supplies, equipment and/or services as listed in this specification.

In the event your firm declines to bid, kindly advise the City of New Rochelle Purchasing Department to that effect by completing and returning this document.

City of New Rochelle Purchasing Department,

We, the undersigned, have declined to bid on your Request for Quotation/Proposal Specification No. 4858 Mack Single Axel Truck- Dump/Spreader w/Plow *for the following reasons:*

_____*We do not offer this product/service*

_____*We are unable to supply the product/service at this time*

_____*We are unable to meet the specifications*

_____*We are unable to meet the bond requirements*

_____*Other:*

We understand that if the no bid letter is not executed and returned our name may be deleted from the list of qualified bidders for the City of New Rochelle.

COMPANY NAME:_____

ADDRESS:_____

TELEPHONE #:_____

EMAIL ADDRESS:_____

Misc/nobid (rev 2/98)

REQUEST FOR BID
SPEC. #4858

It is the intent of these specifications to describe a Mack chassis with a stainless steel dump/spreader combination body, with snow plow and hydraulic controls. The City of New Rochelle has standardized with Mack as per Section 62-7 of Chapter 62 of the Code of the City of New Rochelle. Only Mack chassis are acceptable.

TERMS OF PURCHASE

The City of New Rochelle reserves the right to award this bid to the lowest responsive and responsible bidder who presents a bid that best meets the specifications as listed herein and represents the most beneficial procurement as determined by the City. The quality of the equipment to be supplied, suitability of intended use, delivery terms, guarantee clauses and expected delivery date shall be taken into consideration in the award process.

The successful bidder must deliver to the City of New Rochelle new and previously unused unit(s) in complete working order, which meets or exceeds the various specifications and requirements described herein.

All documentation and specifications requested in the "SUBMITTAL" section of the bid must be sufficiently detailed so as to address this bid on an item-by-item basis. Specifications submitted by vendors shall be instrumental in substantiating compliance with this bid.

PAYMENT TERMS

The successful bidder shall be paid after receipt and acceptance of the vehicle by the City of New Rochelle Fleet Manager with submission of an invoice accompanied by a completed New Rochelle Standard Claim Form.

ADDITIONAL TERMS AND CONDITIONS

1) Equipment offered under this Request for Bid shall be new, standard production models of the latest design in current production.

2) Materials shall be of good commercial quality for the intended service and shall be produced by use of current manufacturing processes. Material shall be treated to resist rust, corrosion, and wear as per industry standards and as specified herein.

3) The design of the mechanical members shall be such that the stress imposed through normal shock loads at maximum engine torque shall not cause rupture or permanent deformation or undue wear on any member.

4) The City reserves the right to waive any minor deviation in proposal responses received when such waiver is in the best interests of the City.

BIDDER QUALIFICATION REQUIREMENTS

1) All terms, conditions and requirements as set forth in this request for bid must be satisfied as the date of bid submission.

2) Bids will only be accepted from thoroughly competent, experienced and financially qualified firms according to the qualification requirements as listed herein and successful fulfillment of said requirements as determined by the City of New Rochelle. Respondents are responsible for submission of accurate, adequate and clear descriptions of the information requested. Omissions, vagueness or inaccurate descriptions r responses shall not be interpreted in favor of the bidder and shall be grounds for bid rejection.

3) The bidder must submit documentation with their response demonstrating that they are an authorized dealer for the manufacturer's equipment specified including, but not limited to the chassis, body, hydraulic system, and snow plow.

4) All bidders must supply at least three (3) references, including contact persons name, address and phone number for which they have provided similar equipment.

Firm	Description	Contact Person	Phone #

5) The bidder must identify their service location or an authorized service facility within twenty-five (25) miles of the City of New Rochelle, staffed with qualified servicemen and with provisions for storing a representative supply of parts for the equipment offered and with provisions for securing parts from the manufacturer(s) within a reasonable length of time.

Service Location_____

Contact Person's name and phone number when service is required

_____

SUBMITTAL

The following list of items must be included with your bid response. Failure to provide any of the documentation requested may result in bid rejection.

a) The manufacturer standardized factory maintenance, parts and repair manual for all equipment supplied.

b) The manufacturer's Statement of Product Warranty shall be supplied.

c) All product specifications sheets.

d) All product brochures.

e) All product manuals.

f) One (1) parts book, and one (1) operator's operation and maintenance manual.

g) Allison Transmission Extended Warranty.

h) Two (2) copies of manufacturers color brochures depicting current production model, by means of photograph, of the unit and components he/she proposes to furnish. (Xerox, fax, copy, or artist sketch not acceptable.

i) A comprehensive list must be included with your response describing any and all deviations in your proposal from the terms, conditions, requirements and specifications detailed herein on your letterhead. This sheet shall be labeled "EXCEPTIONS" and shall be attached to your bid response. Each deviation listed must include a comparison of the detailed specification of the item proposed verses the item specified herein and a statement of how the item meets or exceeds the requirement.

DELIVERY TERMS

Delivery date is a factor of prime importance in the award of this bid. Vendors must state their best guaranteed delivery date in days. Failure to do so may result in disqualification of bid. Delivery date will be figured from the date of our award notification via fax or email.

The equipment offered must be quoted with all delivery charges included.

DELIVERY POINT: City of New Rochelle Central Garage
224 E. Main Street
New Rochelle, N.Y. 10801
Attn: Richard Fevang, Fleet Manager
914-235-3765

Each bidder must state the number of calendar days required for delivery of the completed equipment. In the event successful bidder fails to make delivery in specified time, the City reserves the right to cancel this contract and collect on the performance bond. If the contract is so canceled, the successful bidder will have no recourse nor be entitled to any remuneration for any expenditures or cost incurred prior to the date of such cancellation. The City of New Rochelle Commissioner of Public Works upon written petition may grant extensions of time required for delivery, if delays occur by bidder. **The City reserves the right to impose liquidated damages in the amount of one hundred (100) dollars per calendar day per vehicle for each day that the apparatus is delivered after the expected delivery date.**

BID DEPOSIT

Each proposal must be secured by a deposit of cash, certified check, bid bond, or annual guaranty bond from an approved bonding or insurance company, authorized to do business within the State of New York, in an amount not less than two percent (2%) of the TOTAL AMOUNT BID.

PERFORMANCE BOND

Upon award the City shall require from the contractor a satisfactory bond or security for the proper performance of the contract in an amount equal to the total amount of award. The Performance Bond shall be received in the Purchasing Office within 12 days (including weekends) of the date of award notification. Notification shall be via fax or email and date faxed/emailed shall be considered the date of award.

BIDDER SHALL COMPLETE BY CHECKING THE FOLLOWING.
IF NOT COMPLIANT, STATE SPECIFICALLY ITEM BEING OFFERED.

CHASSIS SPECIFICATION

2011 MODEL YEAR - MACK GU 712

		YES	NO	OFFERED
Gross Weight:	**35,000 Pounds - Minimum**	___	___	_____
Cab Dimensions:	**Bumper to back of cab not to exceed 116"**	___	___	_____
Axle to end of Frame:	**62 inch (Maximum) center of axle to end of Frame. Body specified should properly distribute weight.**	___	___	_____
Cab to Axle:	**Usable C.A. of 130" to accommodate the body Specified**	___	___	_____
Axle Front:	**18,000 Lbs., FXL 1800 or equal**	___	___	_____
Axle Rear:	**Mack RA 30, 30,000 Lbs. (Minimum) With axle ratio to allow sixty (60) M.P.H.**	___	___	_____
	Magnetic drain plugs	___	___	_____
	Double Reduction Gearing (No exceptions)	___	___	_____
	Supply synthetic lube in rear axle from factory	___	___	_____
	Five (5) year or 500,000 mile warranty – 100% Parts and Labor	___	___	_____

Specify Rear Axle – Make and Model_____

Steering:	**Power steering SD 110 Sheppard integral power with 18,000 Lbs. capacity or equal**	___	___	_____
	Front Wheel – sealed unit or equal 18N HD with coated splines	___	___	_____
	Front Shock Absorbers	___	___	_____
Brakes / Parking:	**Anchor lock spring on both (2) wheels**	___	___	_____
	Type 30 / 30 brake chambers	___	___	_____
	Chambers – M G M TR-T tamper resistant	___	___	_____
Brakes / Service:	**Full air with Anti-Lock feature**	___	___	_____
	All lines to be heavy duty wire reinforced braided Hoses with SAE fittings	___	___	_____

BIDDER SHALL COMPLETE BY CHECKING THE FOLLOWING.
IF NOT COMPLIANT, STATE SPECIFICALLY ITEM BEING OFFERED.

		YES	NO	OFFERED
Brakes / Service con't:	**"S" cam brakes – front and rear**	___	___	_____
	Front brakes – 16.5" x 6" Q+ minimum	___	___	_____
	Rear brakes – 16.5" x 7" minimum	___	___	_____
	Auto Slack adjusters	___	___	_____
	Bendix AD-9-IP Heated Air Dryer	___	___	_____
Cab:	**Conventional type**	___	___	_____
	Heavy duty welded galvanized steel	___	___	_____
	Severe duty cab mountings and brackets	___	___	_____
	Two (2) air bag type suspension with shocks one on each side of frame rail, mounted to cab	___	___	_____
	Custom interior to include padded doors, headliner, and rear panel. (No plastic or paper material type panels)	___	___	_____
	Painted manufacturers yellow polyurethane base with five (5) year rust through warranty.	___	___	_____
	Cab to be rust proofed	___	___	_____
	Chassis running gear to be black polyurethane	___	___	_____
	Overhead storage compartment	___	___	_____
	Rear storage pouch	___	___	_____
	5lb. Fire Ext, mounted L H side of drivers seat	___	___	_____
	Hood air intake – Brite finish	___	___	_____
Cab Equipment:	**Brite finish Stainless Steel stationary grill – Radiator mounted**	___	___	_____
	Stationary steel grill guard – Hood must tilt without tilting grill	___	___	_____
	Automatic hood lock when hood is tilted to Forward position	___	___	_____
	Exterior sun visor	___	___	_____
	Dual air horns – with covers	___	___	_____
	Dual city horns	___	___	_____

BIDDER SHALL COMPLETE BY CHECKING THE FOLLOWING.
IF NOT COMPLIANT, STATE SPECIFICALLY ITEM BEING OFFERED.

		YES	NO	OFFERED
Cab Equipt. con't:	**Chrome roof marker lamps (bullet type)**	___	___	_____
	Cigar lighter	___	___	_____
	Single Vertical Exhaust – vertical muffler and stack. Heat-shield and lower elbow-standard finish.	___	___	_____
	Air suspension drivers seat – Model 915 Midback	___	___	_____
	Stationary passenger seat with tool box	___	___	_____
	Infinite adjustable steering column- Tilt/Telescopic	___	___	_____
	Steel front bumper, with tow hooks	___	___	_____
	AM / FM cassette with cowl mounted antenna	___	___	_____
	Automatic radio Shut-off, when shifted into reverse	___	___	_____
	Dash mounted 12 volt power sources, C B Hot Jack	___	___	_____
	Cab clean out floor panel	___	___	_____
	Exhaust pyrometer / Transmission temp. gauge, dash mounted	___	___	_____
	Replaceable filter – Cab air filtration system	___	___	_____
	Windshield wipers – two speed / intermittent	___	___	_____
	Rear cab window – 48" x 19" with safety grating over window hinged with water tight quick dis-connects	___	___	_____
	Passenger door visibility window 16 3/8" x 9 ¾"	___	___	_____
	Fender extensions – 5 inch	___	___	_____
	6" convex spot mirrors mounted on vertical posts, attached to front fenders and reinforced with two supports from posts to fenders-ALL BRITE FINISH	___	___	_____
	Heated West-Coast mirrors with 3 point fold/away, and 8.5" spot mirror on lower bracket	___	___	_____
	Floor mat with replaceable wear sections	___	___	_____
	Suspended brake and accelerator pedals	___	___	_____
	Three (3) interior dome lights	___	___	_____

BIDDER SHALL COMPLETE BY CHECKING THE FOLLOWING.
IF NOT COMPLIANT, STATE SPECIFICALLY ITEM BEING OFFERED.

		YES	NO	OFFERED
Cab equipt. con't:	**Full warning dash lamp system – central mounted LCD, with 8 standard gauges and 24 indicator lamps**	___	___	_____
	Maintenance due indicator, engine hour, ambient temp.	___	___	_____
Frame:	**5 MM inside "C" channel frame reinforcement Front bumper to end of frame**	___	___	_____
	120,000 PSI steel, all Huck bolted construction, RBM 3,320,000 minimum inch per rail	___	___	_____
	Heavy I-beam behind cab	___	___	_____
	FRAME RAILS SHALL BE TREATED WITH RUST PREVENTION UNDER COATING BEFORE ASSEMBLY	___	___	_____
Fuel Tanks:	**One steel 66 gallon- mounted on left side, under cab entry door, with open grated steps – battery boxes located in front of fuel tank.**	___	___	_____
Front Springs:	**18,000 lbs. minimum**	___	___	_____
Rear Springs:	**30,000 lbs. minimum Mulit-leaf suspension No air bag or parabolic type suspensions**	___	___	_____
Tires – Front:	**Tubeless 315 / 80 R 22.5, 20 ply, G/Y G-287**	___	___	_____
Wheels – Front:	**Steel 22.5", 10-Hole, Hub Piloted Protective nylon spacer between disc wheel to drum**	___	___	_____
Tires – Rear:	**Tubeless 11 R 24.5, 16 ply, G/Y G-286**	___	___	_____
Wheels – Rear:	**Steel 24.5", on cast spoke hubs**	___	___	_____
Transmission:	**Allison Automatic Model 4500RDS, PTO provisions**	___	___	_____
	Rugged Series Generation 4, including external oil cooler and internal filter	___	___	_____
	Dash mounted gear shifter, and temperature gauge	___	___	_____
	Aluminum flywheel housing	___	___	_____
	Factory installed synthetic fluid	___	___	_____
	Transmission fluid level sensor	___	___	_____
	Allison E.T.C. 5 yr. extended warranty	___	___	_____

BIDDER SHALL COMPLETE BY CHECKING THE FOLLOWING.
IF NOT COMPLIANT, STATE SPECIFICALLY ITEM BEING OFFERED.

		YES	NO	OFFERED
Engine:	**Turbo-charged diesel 405 HP @ 1500-1900 RPM**	___	___	_____
	1480 lb. ft. MaxTorque @ 1100-1300 RPM	___	___	_____
	High pressure unit injection system, one per cylinder	___	___	_____
	2000 bar pressure capability for fuel economy	___	___	_____
	Single overhead cam with roller followers, 4 valves per cylinder	___	___	_____
	Hand primer pump for fuel system	___	___	_____
	Electronic modules to monitor fuel timing, coolant Temperature, coolant level, and oil pressure	___	___	_____
	Electronic engine module shall monitor engine components, separate control module shall monitor cab controls and be mounted inside cab	___	___	_____
	Single poly "V" belt with automatic tensioner	___	___	_____
	Horton On-Off fan – or equal	___	___	_____
	Spin on fuel filters, coolant filter, two-full flow oil filters with centrifugal type oil filter canister – TFH spinner Model 60 with by-pass oil filters, 1-5 microns	___	___	_____
	Single variable geometry turbo charger	___	___	_____

Specify engine make and model:_____

Engine Equipt:	**Dual air intake with inside/outside air control switch**	___	___	_____
	Alternator – 12 Volt, 145 Amp. 24 SI, minimum	___	___	_____
	Batteries – (3) 12 Volt, 3000 CCA	___	___	_____
	Engine Shutdown System with manual override, warning lights and buzzer	___	___	_____
	In addition-this system must monitor fuel flow, RPM, timing – if any of these three exceed normal levels, the system will shutdown the engine, it shall also prevent engine run-away through the electronic module	___	___	_____
	Engine compression brake	___	___	_____
	Electric pre-heater	___	___	_____
	120 volt engine block heater, plug recessed under drivers side door	___	___	_____

BIDDER SHALL COMPLETE BY CHECKING THE FOLLOWING.
IF NOT COMPLIANT, STATE SPECIFICALLY ITEM BEING OFFERED.

		YES	NO	OFFERED
Engine Equipt:	**Racor heated fuel/water separator w/manual drain**	___	___	_____
	Maximum available cooling system	___	___	_____
	-34 degree coolant protection	___	___	_____
	Silicone hoses	___	___	_____
	Air cleaner restriction gauge – dash mounted	___	___	_____
	Diesel Particulate Filter, (DPF) right side under cab	___	___	_____
	Exhaust after treatment system w/ceramic catalyst	___	___	_____
	D P F regeneration control – fully automatic	___	___	_____
	Air compressor – gear driven, 18.7 cfm	___	___	_____
	Engine protection shutdown system to reduce power as condition worsens-Alert driver with Yellow, then Red warning lights	___	___	_____
Additional Equipt:	**Back up alarm, Pollack 41.722 constant audible**	___	___	_____
	Manual air tank drain valves with pull cords-All tanks	___	___	_____
	Rubber mud flaps – body and front fenders	___	___	_____
	Tether device / cap retainer for oil, radiator overflow tank, battery box cover, tool box cover	___	___	_____
	Six (6) extra dash mounted toggle switches	___	___	_____
	One (1) each: Parts Manual	___	___	_____
	Service Manual	___	___	_____
	Operators Manual	___	___	_____
	Electronic Engine Manual	___	___	_____
Paint:	**Dupont polyurethane – Highway Yellow**			

Snow Control Components

I. Intent

II. Technical Product Specification

1. Dump Body
2. Control System
3. Central Hydraulic System
4. Low Mount Custom Hitch
5. Poly Snow Plow
6. Lighting System
7. Pre-Wet System
8. Miscellaneous

III. Coating Specifications

1. Paint
2. Rust Preventing Abrasion Resistant Coating

IV. Vender Qualifications

V. Manufacturers Qualifications

VI. Warranty

VII. Bid Response Sheet

I. Intent

It is the intent of this document to describe a 10'Multi-Purpose Body, Power Reversible Plow, Custom Low Mount Hitch, Freedom (ACS) Control System, Pre-Wet System, Lighting System, and Central Hydraulic System

This unit shall be built to the manufacturer's standard. It shall be equipped with the manufacturer's equipment and accessories that are included in the advertised and published literature for the unit.

No such item of equipment or accessories shall be removed or omitted for the reason that it was not specified in the bid.

The successful bidder shall deliver to the City of New Rochelle, a new and previously unused unit in complete working order, which meets or exceeds the various specifications and requirements described herein. As per the New York State General Municipal law, all political subdivisions of New York State are allowed to make purchases through the resulting contract(s). Any other political subdivision will issue purchase orders directly to vendors within the specified contract period referencing the city's

contract and shall be liable for any payments due on such purchase orders; and shall accept sole responsibility for any payment due.

All components in this system shall be domestic manufacture. In addition, the items listed below shall be considered as part and parcel to the bid and the property of the City of New Rochelle.

1. Specifications - in the event an alternate is bid vendor shall at the time of the bid submit two (2) copies of the technical description of the unit and components he / she proposes to furnish. (i.e. chassis, hydraulic system, coating system,) Said representations should be sufficiently detailed so as to address this bid on an item-by-item basis. Specifications submitted by vendors shall be instrumental in substantiating compliance with this bid.

2. Brochures - for the purpose of evaluation each vendor shall at the time of the bid for each alternate proposed, submit two (2) copies of manufacturers color brochures depicting current production model, by means of photograph, of the unit and components he / she proposes to furnish. (Xerox, Fax Copy, or Artist sketch not acceptable.) Brochures should be sufficiently details so as to clearly illustrate general arrangement and fabrication of the chassis, hydraulic system, coating system.

3. Coating Samples - for the purpose of evaluation each vendor shall, at the time of the bid, for each alternate proposed, submit both wet and dry sample of the rust preventive, abrasion resistant coating he / she proposes to furnish.

4. Warranty- Copy of manufactures warranty shall be included at the time of bid.

Failure on the part of any bidder to comply with each of the aforementioned mandatory requirements may result in the rejection of his or her bid.

Vendors are cautioned to respond to this bid on an item-by-item basis in the area provided for this purpose ("Compliance/Exception") Submission of required product specifications and brochures does not qualify as a response.

In the event an alternate is bid, the City of New Rochelle reserves the right to request a demonstration within 10 days of notification. Demonstration will be conducted with the City of New Rochelle, free of charge.

Failure on the part of any vendor to comply with request for demonstration may result in disqualification of his / her bid.

Delivery may be a factor of prime importance in the award of this bid. Vendors bidding an alternate must state guaranteed delivery date in days. Failure to do so may result in disqualification of bid.

II. Technical Specifications

1. DUMP BODY

a.) Body Design

The overall length of the dump body shall be 10 ft. It shall have a struck capacity of 8 cubic yards without sideboards.

The straight vertical SIDES of the body shall be made of 10 Ga. Stainless steel. The top of the sides shall be boxed with a "C" section closure and full welded. The boxed top rail shall be 5" deep and 4-1/4" wide. The corner post shall be made from 10 Ga. Stainless steel and be 5" deep and 15" wide. It will run full depth from the top of the gate to the bottom of the longitudinal and be full welded. The sides are supported by vertical gussets that are 4-1/2" deep, 7" wide and full welded. The bottom of the sides will have a 45 degree sloped rub rail that is 5" wide.

The TAILGATE shall be constructed of 10 Ga. Stainless steel. There shall be four vertical gussets 6" wide, 2-3/4" deep and full welded. There will be a boxed top horizontal gusset running full width that is 3" x 3-3/4" and full welded. The bottom horizontal rail shall be full width and sloped 45 degrees.

The flat horizontal FLOOR shall be made from ¼" Mild steel. The center of the floor shall have a bar flight chain conveyor running the entire length of the body. The conveyor shall be flush with the floor of the dump body.

The flat horizontal FLOOR of the body and the bedplate of the conveyor shall be supported every 12" by Hot Extruded, American Standard 4" Structural Steel I-Beam which is 7.7 lbs. Per foot.

b.) Conveyor hood

The conveyor hood is mounted in a rear opening of the tailgate of the dump truck body.
It shall be capable of being shifted to a forward-extended position covering the rear end of the conveyor and to a rearward retracted position where a flat straight front face of the conveyor hood is flush with an inner face of the tailgate.

	COMPLIANCE YES	NO	EXCEPTION
A horizontally revolving feedgate is not acceptable.			
The **GATE LATCH** shall be made of 1/2" stainless steel and have 1-1/4" pin.			
There will be threaded rod adjustments and have two yokes with 5/8" pins.			
The gate handle shall be supported by two angle irons 1/4" x 2" x 3" with a 1-1/4" rod.			
This handle will have a safety chain with a ring that will slide over the handle.			
All moving joints shall be equipped with accessible grease fittings.			
c.) Top screens			
They shall be one piece removable with a center lift point and made of 3/8” interwoven steel wire with 2-1/2” openings.			
There shall be four sections and supported by at least (3) 4” I-beam structural channel.			
The top sail will be made of 4” I-beam.			
d.) Doghouse			
To position more of the load toward the front of the truck and leave less open space between the cab and the body, the body shall have a 10" deep by 2' wide lift cylinder doghouse.			
The body must be able to be mounted with no more than 5" between the cab and the front body panel.			
e.) Conveyor			
For ease of dumping operations, even tailgate spreading of aggregates, (i.e. spreader apron, side discharge, or stone spreader) - the conveyor shall end flush with the			

	COMPLIANCE YES	NO	EXCEPTION
rear of the body and shall not extend past the tailgate of the unit.			
When the conveyor chain is moving material toward the rear of the body, the material shall be fed through the doghouse opening in the tailgate. This movement of material through the tailgate shall be used for conveniently charging attachments such as paving hoppers and cross conveying shoulder machines. The rear of the floor and rear conveyor shall have no openings by which material shall pass through before it moves rearward through the doghouse in the tailgate. The rear of the floor and rear conveyor shall seal tight against the tailgate and doghouse in the tailgate when the coal door is closed. This tight seal shall eliminate any material leaking out of body.			
The **CONVEYOR** shall feed material rearward through the coal door of the tailgate. The conveyor shall be 34" minimum width. The sides of the conveyor which are also the longitudinal members of the body, shall be constructed of Hot Extruded American Standard 12" Structural Steel channel which is 20.7 lbs. Per foot.			
There shall be an adequate number of 3" channel bracing welded to the bottom of the channel iron longitudinales. This 3" channel bracing shall form the base of the unit that will rest on the truck chassis.			
The dump body floor shall be so formed that it fully covers the pintle chain links, #D667X. The bar flight shall be 1/2" x 1-1/2" and welded to every link.			
The bedplate of the conveyor shall be made of 1/4" abrasion resistant steel.			
The conveyor shall be powered by a 6:1 ratio spur gearboxes mounted to the side of the 2" drive shaft. The gearbox shall be powered by a hydraulic motor. There shall be one gearbox for the 9' & 10' Models and 2 gearboxes for anything larger.			

	COMPLIANCE YES	NO	EXCEPTION

f.) Drive assembly cover

Shall be bolted in position easily detached to allow for ease of maintenance of rear drive assembly.

g.) Cab shield

There shall be a 1/2 cab shield supplied made of 10 Ga. Stainless steel.

The 1/2 cab shield shall extend 22-1/2" from the front of the body and shall be reinforced vertically by (2) 2" x 2" x 3/16" angle iron.

h.) Telescopic hoist

The hoist shall be of telescopic design, double acting and have a trunion mounting.

The trunion mount shall have a 1-7/8” pin.

To position more of the load toward the front of the truck and leave less open space between the cab, calcium tanks, and the body, the body shall have a 10” deep by 2’ wide lift cylinder doghouse.

Capacity shall be 20 tons.

It shall be designed to operate up to 2500 PSI and shall be self bleeding.

It shall have ¼” wall construction with bronze glands and pistons to assure a smooth and durable bearing surface.

Each cylinder shall be internally sealed.

The inside seals shall have a U-cup design made of nitral packing.

	COMPLIANCE YES	NO	EXCEPTION
The piston rod shall be machined from ASI 4140 and nitrated using the QPQ method to establish the following mechanical properties: Surface Hardness: Rockwell C60-C65 Surface Finish: RMS 20 (using ASTM B117 salt spray Approximately 7% surface area corrosion in 88 hours (or 10 times better than hard chrome plating) Fatigue Strength: Approximately 80% to 100% increase using QPQ as compared untreated sample.			
i.) Chassis cover plate			
There shall be a 409 stainless steel cover plate bolted to the truck chassis protecting the chassis running gear from sand and salt that may fall from the returning conveyor assembly.			
j.) Cover plate			
There shall be a cover plate over the conveyor made of 7 gauge steel. This plate will slide into position over the conveyor and then be bolted in place at the rear of the body.			
k.) Tailgate			
The tailgate sides are supported by vertical gussets that are 4-1/2” deep, 7” wide and full welded. The tailgate shall be constructed of 7 Ga. steel. Tailgate height shall be 44”. There shall be four vertical gussets 6" wide, 2-3/4" deep and full welded. There will be a boxed top horizontal gusset running full width that is 3" x 3-3/4" and full welded.			

	COMPLIANCE YES	NO	EXCEPTION
The bottom horizontal rail shall be full width and sloped 45 degrees.			
The tailgate shall be double acting and capable of being placed in a horizontal position.			
l.) Gate Latch			
Shall be made of 1/2" steel and have 1-1/4" pin.			
There will be threaded rod adjustments and have two yokes with 5/8" pins.			
The gate handle shall be supported by two angle irons 1/4" x 2" x 3" with a 1-1/4" rod.			
This handle will have a safety chain with a ring that will slide over the handle.			
All moving joints shall be equipped with accessible grease fittings.			
m.) Hydraulic spinner assembly			
Note: Installation of spinner assembly requires air brake chambers/canisters on axles to be mounted in front of the rear axles			
The spinner disc shall be made of 10 gauge steel and be not less than 18” in diameter.			
It shall have 6 formed vanes.			
Spinner assembly shall have two (2) positions.			
In the extended position, the spinner assembly shall be positioned under the end of conveyor to receive spreading materials for ice control spreading.			

	COMPLIANCE YES	NO	EXCEPTION
In the stowed position, the spinner assembly must be fully retracted into the chassis rails for protection against impact.			
Spinner assembly shall be connected to at least two longitudinally extending rails of the truck frame.			
Spinner assembly to be hydraulically extended to proper spreading position using not less than two (2) hydraulic cylinders which must be enclosed in steel telescoping tubes for protection. Spinner assembly to have a substantial bumper incorporated into its design.			
Bumper to be made of 4" channel wide enough to protect spinner assembly from damage.			
Hydraulic cylinders shall have sufficient stroke to position spinner assembly for spreading and retracting same into chassis for protection.			
Cylinders shall have hardened and chromed rods and be easily re-buildable.			
Control station shall be at left rear side of spreader at a convenient height for operator and protected against impact damage.			
Control valve shall be incorporated into main hydraulic valve assembly.			
Rear bumper must extend and retract with spinner assembly.			
For protection and safety of spinner assembly, all structural components must be installed within the chassis frame rails.			
This assembly must extend and retract along the center line of the chassis.			
n.) Flushing system			

	COMPLIANCE YES	NO	EXCEPTION
To be used for cleaning of conveyor chain and conveyor housing.			
A hose and nozzle system consisting of 25’ of 2-1/2” hose and spray bar.			
System to be located at forward end of conveyor housing.			
Unit shall rinse sand, salt and debris from conveyor housing left over from spreading operation.			
Nozzle to be of non-clogging and maintenance free design.			
Hose storage shall be on curb side of body between first and second vertical member.			
Hose to have swivel coupling on hydrant end.			
o.) Ladder and Grab Handles			
Access to the body shall be by way of a spring ladder mounted on the drivers side of the body.			
The ladder shall be below body rail.			
Ladder to be approximately 12” wide x 27” long, framed of 3/8” x 1-1/4” flat steel.			
There are to be three (3) rungs approximately 9” apart with serrated or grip-strut surface.			
Two (2) grab handles shall be mounted mid body parallel to ladder.			
One (1) grab handle to be mounted near top of body near ladder.			
2. CONTROL SYSTEM			

	COMPLIANCE YES	NO	EXCEPTION

a.) Intent

The intent of this specification is to describe a complete control system that operates on a CAN Bus.

The system communicates over a CAN Open system bus using CAN Open protocol and not a proprietary communication protocol.

The system shall consist of four primary modules that reside on the Bus and allow flexibility in mounting configurations.

The system is completely expandable and allows for additional modules to be added to the CAN Bus.

All four primary components of the system are software upgradeable using a laptop and Component Technology interface cable.

The configuration file of a calibrated system can be saved for transfer to other systems or as a backup providing the ability to use specific configurations for varying vehicle use or operator skill level.

The original configuration is maintained at the factory as a secondary backup and is traceable by part number.

The in-cab control system panel can support up to 10 rocker switch inputs and up to 4 joysticks.

The display and/or an optional Component Technology TouchGuard switch bay can be attached to the system panel.

Joystick function is clearly labeled on a graphic overlay providing basic operator instruction.

The system panel can be positioned over a 360 degree rotation and 4 inches of vertical travel on its mounting tube.

b.) ACS Display

	COMPLIANCE YES	NO	EXCEPTION
The display shall be a minimum 4” x 6” TFT LCD graphic display with auto dimming backlight, user adjustable position, and Ethernet port for accessing a built in Web server.			
The Web server can be used to configure or troubleshoot a system by connecting to a PC.			
Interface shall utilize Internet Explorer and not require any proprietary software to connect to the system.			
The display provides a built in diagnostic feature allowing technicians to view all input signals real time.			
The display also provides error logging and system status change logging for reviewing operator inputs.			
The display automatically resizes to provide maximum readability with varying display content.			
A status window provides the operator with system status messages.			
The display shall incorporate “soft key” switches that are defined by the system program via the display.			
The keys shall include a “plus” pattern navigation buttons used to navigate in the system software easily.			
When configured the display will incorporate granular rates, both pre-wet and anti-ice rates, anti-ice lane indication, road/air temperature, hydraulic pressure where designated, system status, error messages, plow float indication, auto/manual mode indication and material currently being used.			
Active functions that are not in use shall show “off” and the graphic be “grayed out” for ease of operator interpretation.			
The ACS Operator panel:			

	COMPLIANCE YES	NO	EXCEPTION
The operator panel shall be of molded silicone rubber keypad utilizing high life magnetic snap action switches and three high life magnetic 16 position detented encoders used for Rate, Lane and Liquid control separately.			
The detented positions will be user programmable as to the value of each increment in the setup menu.			
The operator panel provides input capabilities to support RS232, RS422, truck speed input, and multiple digital I/O.			
The panel shall have provisions for the Roadwatch Road Air temperature sending unit.			
The panel has built in LED backlighting that automatically dims with the display for night viewing.			
The panel shall incorporate the already integrated functions of blast and pause.			
The panel shall also incorporate mode, product and select switches integrated in the panel.			
c.) ACS Valve driver module			
IP68 sealed assembly shall be mounted to the valve enclosure providing both interior and exterior electrical connections.			
The valve driver module drives up to 14 PWM channels, accepts a 4 – 20mA input, 4 closed loop feedback signals, and multiple digital inputs.			
All PWM outputs are software configurable and can be controlled by closed loop operation, proportional input devices, or digital input devices.			
The module has built in over temperature shutdown, over current shutdown, and low voltage shutdown.			
All electrical connections are IP68 sealed when mated utilizing threaded connections for positive retention.			

	COMPLIANCE YES	NO	EXCEPTION
The valve driver module will reside on the BUS as the "master" and all truck values and configurations will be saved in this module.			
d.) ACS Software			
The system shall incorporate three levels of security and access that is password protected and defined by the user.			
The three levels of access called operator, technician and administrator shall give the user varying levels of access to the system setup, data, configuration fields and parameters based upon access given.			
The "administrator" shall have full access to all menus in the system and have the ability to make system configuration changes as well as system parameter changes.			
Spreader and liquid functions when controlled utilizing closed loop feedback will incorporate and "auto trim" feature that will allow the system to automatically set the PWM minimums and maximums when engaged. The system shall have "over speed" protection for the liquid functions that will alert the operator and shut down the liquid function when the driver has exceeded a user defined speed.			
The software shall incorporate a "test speed" mode for use in testing the system safely without requiring the truck to be moving or the drive axles engaged.			
3. CENTRAL HYDRAULIC SYSTEM			
a.) Transmission mounted PTO/Shaft Extension/Pump			
Shall be a clutch shift PTO designed for Allison World Transmissions.			
Shall be engaged by means of a solenoid activated, wet clutch pack.			

	COMPLIANCE YES	NO	EXCEPTION
A PTO shaft extension shall be utilized to couple the hydraulic pump to the PTO.			
The hydraulic pump shall be a variable displacement, load sense pump with an 80cc output.			
Shall be self aspirating, for open circuit operation.			
Shall weigh no more than 45 lbs.			
Nominal pressure of 4350 PSI.			
Peak pressure of 5100 PSI.			
Maximum RPM shall be 3000.			
b.) Hydraulic stack valve			
The hydraulic valve must be capable of a nominal 35 GPM, with published flow curves to 40 GPM, valve must be pressure and flow compensated, load sensing type.			
Changing a section from single acting to double acting is done by replacing a shuttle cartridge.			
The valve is to be arranged as follows **(FREEDOM ACS CONTROLS)**			
- Inlet cap with pressure, tank and load sense ports.			
- Double acting cylinder spool for hoist.			
- Double acting cylinder spool for plow up/dwn.			
- Double acting cylinder spool for plow angling.			
- Double acting cylinder spool spinner slide section			
- Double acting section conveyor (with reverse)			

	COMPLIANCE YES	NO	EXCEPTION
- One section containing a 3 Function Aluminum manifold (PWM) containing sections for Spinner, Pre-Wet, and spare (to be manufactured by same manufacturer as control valve).			
- Outlet cap with pressure and load sense port.			
c.) Low oil shutdown			
A two position, two way, poppet type solenoid valve must be mounted in the hydraulic pumps discharge line in such a way as to stop all oil flow to the hydraulic system when energized.			
The solenoid valve must be wired directly to an in-tank mounted level indicator.			
The level indicator shall be of the float type and mounted from the top of the reservoir.			
When the float switch contacts close, the shut-down valve blocks pump flow and an annunciator on the main control will be activated.			
The momentary switch shall be mounted in a pump control panel with annunciator for low hydraulic oil shut-down override.			
This switch shall be wired in such a way as to de-energize the system shut-down to facilitate fault finding and equipment stowing.			
In the pump control panel there shall be diode suppression wired to the momentary pump override switch.			
A single normally closed solenoid is not acceptable due to the fact that the solenoid must be energized at all times to obtain proper hydraulic output.			

	COMPLIANCE YES	NO	EXCEPTION

d.) Combination Valve Enclosure/Hydraulic Reservoir

The combination valve enclosure/hydraulic reservoir is to be fabricated of 7 gauge steel plating, powder coat finish, baffled and chassis mounted.

Valve mount bulkhead design thereby eliminating internal tubing and hoses.

Valve enclosure to be weather tight by means of steel plates bolted over form fitted gaskets.

Tank to be a minimum of 30 gallons, with a 50 gpm intake filter with condition gauge, and include a stainless steel in tank strainer, magnetic plug, 40 micron filter breather cap, and a 5” level sight gauge.

Note:
In the interest of minimizing the amount of space required along the chassis rail, a separate valve enclosure and hydraulic reservoir is not acceptable

e.) Hydraulic Hoses

Chaffing protection/cover shall be installed on all hydraulic hoses.

4. LOW MOUNT CUSTOM HITCH

a.) Face plate

Shall have a height of not greater than 32" measured at the face of the hitch.

Shall have a width of not more than 48" measured across the face of the hitch.

Shall be not less than 1/2 thick with 5" crimped top and bottom edges formed for greater rigidity.

	COMPLIANCE YES	NO	EXCEPTION
Shall serve as the mounting surface for plow lift assembly, hinge ears, drive centers and all vertical reinforcements.			
Shall have (2) two outboard 5" x 1/2" vertical reinforcements which bolt to cheek plates and to frame extension on chassis.			
Shall have (2) two inboard 5" x 1/2" vertical reinforcements. These reinforcements shall serve as mounting points for the plow lift cylinder.			
Shall have two sets of 1/2 ears welded along top edge, and face for the purpose of securing plow lift assembly.			
Ears shall be drilled for 1/2" bolts grade 5 minimum.			
Shall have a slot cut into the face so as to allow lift cylinder to be recessed and stored vertically when not in use.			
Face plate shall not extend above the chassis frame rails more than thickness of face plate, so as to provide maximum clearance of tilt type hoods.			
b.) Plow Lift Assembly			
Shall have a main lift plate of not less than 1/2" thickness, supported by two (2) 3" x 1/2" thick arms.			
Shall have a center mounted receiving bracket of not less than 3/4" x 8" for the purpose of connecting lift cylinder and plow chain to lift arm assembly.			
Shall be configured so as to engage the plow lift cylinder by means of 3/4" bolt (Grade 5 minimum).			
Bolt shall pass through lift piston yoke and receiving bracket.			

	COMPLIANCE YES	NO	EXCEPTION
Shall be configured so as to store in a vertical position parallel to face plate.			
c.) Lift Cylinder			
Lift cylinder shall be pinned to the main inboard vertical supports at a point behind the face plate.			
Shall be double acting.			
Shall have 4" tube.			
Shall have 2" nitrate treated rod.			
Rod shall have a two (2) year written manufacturers warranty against corrosion.			
Cylinder shall have 12" of stroke.			
Cylinder shall have O-ring seals.			
Cylinders which feature chrome piston are not acceptable.			
4. **WAUSAU/SCHMIDT POLY SNOW PLOW- OR EQUAL**			
a.) Front Moldboard			
The moldboard shall be not less than 42” high nor less than 132” long.			
The moldboard sheet shall be formed from not less than 3/8” thick high molecular weight polyethylene sheet.			
The polyethylene sheet shall have a minimum tensile strength of 4000 P.S.I., and when tested in accordance with ASTM D638, it shall evidence a minimum of 600T (2”) elongation at break.			

	COMPLIANCE YES	NO	EXCEPTION
In addition, the sheet shall evidence no break following izod impact test conducted in accordance with ASTM D256A.			
The sheet shall be formed from a polyethylene material, which is made from new resin, (recycled material is not acceptable), and shall be color impregnated and ultra violet stabilized to a "Schmidt Blue" pigmentation.			
It shall attach to a frame work which includes not less than ten (10) steel reinforcing ribs at least ½" thick x 3-1/2" wide and a lower moldboard reinforcement from not less than 4" x 3" x ½" steel angle so as to form a rigid structure.			
The upper portion of the moldboard shall project over the cutting edge so as to form a continuous, solid, integral snow shield and shall include an upper reinforcement from not less than 3" x 2-1/2" x 3/8" steel angle.			
b.) Cutting Edge			
Shall be one (1) in number and shall be from ½" x 8" C1065 steel, punched to AASHO standards on 12" centers and supported by a reinforcement from not less than 4" x 4" x ¾" steel angle.			
The cutting edge shall be reversible for double wear.			
c.) Tripping Edge Mechanism			
Shall be of the single edge design, which shall activate whenever the cutting edge comes into contact with an obstruction on the pavement.			
Trip activation shall be achieved through five (5) torsion springs from not less than ¾" square wire, having a 3-3/4" O.D., with fifteen (15) active coils each.			

	COMPLIANCE YES	NO	EXCEPTION
Each spring shall be pinned in place in a horizontal position and shall butt to the lower moldboard reinforcement and to the cutting edge reinforcement. Spring adjustment shall be provided so as to alter the precharge of springs for varying plowing conditions.			
d.) Drive Frame and Reversing Mechanism			
The drive frame and reversing mechanism shall consist of an "A" frame, a truss frame and two (2) single acting hydraulic cylinders with 3-1/2" diameter x 16" stroke.			
The "A" frame shall be a triangular weldment with 3/8" thick steel plates (top and bottom), a rear member from not less than 1" thick steel plate and two (2) center reinforcements from not less than 3/8" thick steel plate, so to form a boxed center section.			
The height of the boxed center section shall be 5-3/4". The truss frame shall include a main drive member from 4" square tubing with 3/8" wall.			
The truss frame shall pin to the moldboard at not less than 4 points over a span of not less than 82" and shall include two (2) moldboard braces which allow for alternate moldboard positioning.			
Moldboard and truss frame shall pivot about the "A" frame on a lubricated pin, not less than 2-1/2" in diameter, up to 37 degrees either side of the chassis centerline.			
The pin shall be designed in such a way that it will be easily removed for maintenance.			
Each cylinder shall have 3-1/2" diameter pistons, which terminate with 2-1/2" diameter connecting lugs.			
Both the rods and lugs shall be from case hardened, chrome-plated steel and shall be protected by a hydraulic cushion valve.			

	COMPLIANCE YES	NO	EXCEPTION
The "A" frame shall be fitted with a three (3) point lift arrangement, which shall accommodate plow reversing operations with the plow either on the ground or at the carry position.			
This arrangement shall be of a design which prohibits plow list, when the moldboard is angled in the carry position.			
e.) Plow coupling bar			
Shall consist of a ¾" thick x 6" wide oscillating bar, fitted with two (2) 1" thick drive ears on 31" centers.			
The oscillating bar shall pivot about a 2-1/2" diameter C.R. steel at the rear of the drive frame, so to allow the plow to follow uneven surface contours.			
The oscillating bar shall be fitted with a ¾" safety bolt.			
f.) Miscellaneous			
Adjustable Castered Wear Shoes: Two (2) screw adjustable, castered steel wear shoes shall be supplied.			
They shall connect at each side of the plow. Moldboard Shoes: The cutting edge shall be fitted with two (2) fabricated steel moldboard shoes.			
Each moldboard shoe shall offer a minimum of 40 sq. in. of bearing surface and shall attach to the underside of the cutting edge reinforcement.			
Curb Shoe: An additional bumper shall be supplied at each end of the moldboard (qty. 2).			
They shall be from a minimum of ¾" x 6" steel, shall bolt at the cutting edge face and shall project 1" outside each end of the cutting edge.			
Markers: 36" fluorescent orange plow markers shall be installed at each end of the moldboard.			

	COMPLIANCE YES	NO	EXCEPTION

6. LIGHTING SYSTEM

FRONT LED HEAD ASSEMBLY PRODUCT DESCRIPTION:

The UltraStar-LED Beacon is a SAE J845, class 1 LED Beacon. It utilizes a unique light source with a built-in heat pipe to cool the LED dies and maintain high performance. The beacon has a built-in power supply for efficient drive of LEDs. The amber beacons have 24 LED chips. The dome is molded in polycarbonate. The base is an aluminum die casting.

The beacon has permanent/pipe mounting and comes with branch guard, as is a dust cover is available. The pipe mount is threaded as a 1" NPT. The permanent mount model may also be mounted using J-bolts.

This beacon flashes in one of ten available patterns. The flash patterns include: chopped double, random #1, triple, chopped single, quad, fast double, five flash, random #2, single, and long-on single.

OPERATION

The light can operate on a 12 or 24-volt power source. The power lead must be externally fused at 2 amperes (5 A fast blow is also acceptable). Reverse polarity protection is provided (fuse will not blow). The power supply is fully potted for protection against elements and for efficient heat management. It has two wires for power connections and two programming pins for flash pattern selection.

A flash pattern is selected by shorting the programming pins, which are found beneath the dome. Each time that the pins are shorted, the flash pattern will cycle to the next pattern. Allowing the unit to flash in a selected pattern for a minimum of 10 seconds after removing the short from the

programming pins, and before disconnecting power, will set that pattern as the one that will activate when power is connected again.

PERFORMANCE SPECIFICATIONS
ELECTRICAL SPECIFICATIONS

Input Voltage 11Vdc to 28Vdc.
Nominal 12.8 or 25.6Vdc.
Input Current (nominal) 1.2 amperes @ 12.8Vdc.
0.60 amperes @ 25.6Vdc.
FUSE RATINGS:
nominal 2.0
amps
fast blow 5.0
amps

TEMPERATURE
Operating
-30oC to +65oC
Storage -35oC
to +85oC

DIMENSIONS AND WEIGHTS
Dimensions:
Height 5.25 in. (18.0cm)
Diameter 6.5 in. (16.5cm)

Weight (magnetic mount)
Net 3.5 lbs. (1.61kg)
Shipping 4.4 lbs.
(2.0kg)
Weight (permanent mount)
Net 2.75 lbs. (1.25kg)
Shipping 3.65 lbs.
(1.66kg)

Pipe mount thread pitch 1.00”
NPT

REAR HEAD ASSEMBLIES:
3-UP OVAL STEEL MOUNTING BOX

	COMPLIANCE		
	YES	NO	EXCEPTION

PRODUCT SPECIFICATION
General

Steel boxes to be constructed of 3”X 4” structural tubing with 1/8” nominal wall thickness.

End plates to be 16 Ga. C.R. Steel. Plates are to be notch on one side to allow for drainage of enclosure. End plates are to be welded onto tubing section.

Entire mounting box assemble is to be plated with a zinc plate, yellow chromate finish for additional corrosion protection.

Mount box assemblies to include oval shape cutouts for mounting of Series 60 (6” oval) style lights.

These two (2) boxes shall be installed in the rear corner posts of the body.
Dimensions

Overall dimensions of the 3-up Box
3.00” X 4.00” x 25.18”
76mm x 102mm x 640mm

Net Weight
1. 3-up Box: 10.0 lbs /22.0 kgs

Stop/Tail/Turn LED Lights
PRODUCT DESCRIPTION

1.1 **GENERAL**

The LED lights are designed to fit into a standard Par-36 4” opening for truck lights with grommet.

The LED lights are designed to fit into standard oval openings for truck lights with grommet.

The light housing and lens are made of polycarbonate. Lens color and LED color match for each unit. Red lights have a red lens with red LED’s. Each LED is

mounted at the focus of a small parabolic reflector and soldered to a pc board. All units have 19 LED's.

The flash pattern is provided by and internal flasher circuit. The flasher's circuit board is potted into the housing.

The Stop/Tail/Turn LED lights shall have the "Weather-pack" connectors to light head.

1.2 OPERATION

The brake turn tail lights pins are labeled with the following: (The colors indicate those of the adaptor harness supplied with the lights)
"GND", white, Ground
"TAIL", black, Tail light
"STOP", red, Stop or tail light

The reverse lights pins are labeled with the following: (The colors indicate those of the adaptor harness supplied with the lights)
"GND", white, Ground
"Reverse Light", red, reverse light
The black wire is not utilized.

With a properly sized fuse, the units are reverse polarity protected. The fuse will blow.

2.0 PERFORMANCE SPECIFICATIONS

2.1 ELECTRICAL SPECIFICATIONS

DC-Input voltage (Warning Lights): 10 to 30 VDC
DC-Input voltage (BTT & Turn Lights): 12 to 24 VDC
Operating Current (Warning Lights):

	@12.8V	
Amber:	0.60 A pulsed	0.31 A pulsed
	0.26 A average	0.14 A average

Red: 0.69 A pulsed 0.35 A pulsed
0.30 A average 0.16 A average
Blue: 0.40 A pulsed 0.21 A pulsed
0.17 A average 0.09 A average

Operating Current (BTT, Turn, Reverse Lights):
@12.8V
Amber (Turn) 0.26 A average 0.14 A
average
White (Reverse): 0.26 A average 0.14 A
average
Red (BTT): 0.30 A average 0.16 A
average
Fuse Rating: 0.8 A for each unit in the
circuit
Flash Rate: 72 +/- 5 Flashes per
min. with internal
flasher.

2.2 **TEMPERATURE**

Operating Temperature: -30 to +65 □C
Storage Temperature: -30 to +85 □C

2.3 **DIMENSIONS AND WEIGHTS**

Dimensions:
Length Width Height
Oval models: 6.44” 2.36”
1.9”
Weights:
Oval models: 0.48 lbs. 0.179 kg

REAR POST WARNING LIGHTS:
PRODUCT SPECIFICATIONS

1.0 General

	COMPLIANCE YES	NO	EXCEPTION
The six-LED Module is a compact 1 ¾ by 4 inch, low current, oval emergency warning light with six high power LED's with an integrated PWM circuit for stable operation.			
The module incorporates a built-in flasher, capable of producing 10 user-selectable flash patterns.			
The electronic assembly uses an aluminum circuit board, which also serves as a back wall of the module for efficient heat management.			
The unit is supplied with five wires exiting the rear of the unit. Two of the wires (red & black) are reserved for power and ground. The three additional wires allow for patterns selection (10 patterns)and alternate or synchronous flashing..			
The module works on a dc voltage range of 11-16 volts.			
The module is completely sealed for protection against water, moisture, and foreign particles.			
LED module provides 60 degrees of horizontal beam angle.			
1.1 Dimensions Length: 4.53" / 115 mm Height: 2.16" / 55 mm Depth with wires: 1.50"/38 mm			
1.2 Net Weight 2.2 oz / 62 g (0.062 kg)			
1.3 Material Back: aluminum circuit board, sealed with sealant. Front Lens: Transparent Polycarbonate, clear or color.			

	COMPLIANCE		
	YES	NO	EXCEPTION

2.0 **ELECRICAL SPECIFICATION**

2.0 Input Voltage
11 VDC to 16 VDC
12.8 VDC nominal

2.1 Input Current

Amber - 0.37 average @ 12.8V at 50% duty cycle.

2.2 Light output

Amber w/30-deg. lens meets SAE595 Class 1

2.3 Temperature

Operating -30oC to +65oC
Storage -35oC to +85oC

2.4 Wire color designation

Black – Ground

Red – Power (12vdc)

Green – Pattern select (touch to red for 1 second)
- Mode select (touch to red over 3 second)

Yellow – Synchronized Output (in Smart/Master mode)
- Input (in dumb/slave mode)

Orange - Alternating output (in Smart/Master mode)

b.) Plow Lights

To be Truck-lite model 80800 on stainless brackets

c.) Auxiliary Lights

	COMPLIANCE YES	NO	EXCEPTION
One (1) lamp for spinner area (drivers side rear).			
7. PRE-WET SYSTEM			
a.) Calcium Unit			
Drive System shall be a hydraulic motor.			
Product pump shall be rated at not less than 3.0 g.p.m.			
Shall come equipped with an in-line relief valve.			
Frame Mounted Control Enclosure shall be fiberglass, gasketed, water proof, equipped with stainless steel continuous "piano" type hinge and twin stainless steel latches.			
Enclosure shall be secured to chassis (alongside hydraulic reservoir/valve enclosure) by means of 2 x 2 x ¼" angle.			
Enclosure shall house pump, hydraulic motor, solenoid, and flow meter.			
There shall be twin spray tank reservoirs fabricated of Stainless Steel.			
The tanks shall contain not less than a minimum of 60 gallons each.			
Shall be configured so as to mount between cab and body headsheet.			
Shall come equipped with replaceable in line screen strainer.			
Each tank shall come equipped with top fill and bottom fill ports, shutoff valves, top mounted overflow/vent tube plumbed to underside of chassis and sight tube.			

	COMPLIANCE YES	NO	EXCEPTION
All hardware and clamps shall be stainless steel.			
All plumbing, fitting, and fixtures shall be brass, or PVC.			
All hose shall be nylon reinforced flexible PVC.			
There shall be a 2” tank crossover line with (2) 2” ball valve shut offs.			
Controls shall be in cab mounted providing immediate on/off capability.			
Shall provide power on indicator light (green).			
Shall have two brass nozzles, equipped with cores, disc and mounting hardware positioned at a point below the body floor over spinner.			

8. MISCELLANEOUS

a.) Pintle Hook

Heavy Duty PH-T-100A or equal pintle hook installed at rear on a 1/2” thick, full width pintle plate with a 2” return bend at bottom of pintle plate.			
Pintle plate to be tapered with additional cross bracing reinforcements to truck frame.			
Two safety chain eyes (D-Rings) shall be permanently attached to the pintle hook plate, one on each side of the pintle hook.			

b.) Trailer Plug

A weather proof six (6) prong male and female trailer light plug shall be installed in the rear cross-member with the female wired and the male supplied.			

	COMPLIANCE YES	NO	EXCEPTION

c.) Load Cover (window shade type)

Shall be steel protector system with protector support and load climber rollers.
Tarp system shall be actuated by a single spring.

Spring tension shall be adjustable.

Spring shall be protected by means of an aluminum tube.

Tarp system shall not require the use of control arms, or crank handles.

Tarp system shall incorporate the use of two (2) tarp control ramps to hold the tarp fully extended.

Tarp material shall be heavy-duty, asphalt rated, tightly woven polypropylene fabric.

Tarp system shall be cab shield mounted.

d.) Back-up Alarm

Back up alarm to be ECCO model SA914.

Alarm to be operated by the vehicle's back up light switch.

e.) Mud Flaps

Rubber heavy duty mud flaps shall be installed behind the rear wheels.

III. Coating Specifications:

1.Paint:

Product Description-Dupont

	COMPLIANCE YES	NO	EXCEPTION
DuPont - Exterior of body shall be prepared, primed in DuPont Imron or equal.			
Paint shall be approved prior to use.			
Customer to supply paint code.			
2. Rust Preventive Abrasion Resistant Coating: Hitch assembly dump body underside, must be coated in Megaflex Preventive Abrasion Resistant Coating.			
Coating must be a one part acrylic base self-priming, thixotropic semi-paste coating that contains at least 36% highly elastic in water-dispersed polymers.			
Coating must be fluid applied and cure to form a seamless rubber anti-rust and waterproof coating that can be applied over clean dry surfaces of other tight coatings.			
V.O.C. (Volatile Organic Compound) shall be 0.01 or less.			
Coating must be 100% waterproof.			
Coating must be 100% ultra-violet resistant so as not to break down as a result of long-term exposure to sunlight.			
Coating must be capable of 200% elongation so as to completely prevent cracking due to expansion and contraction as well as dimpling resulting from impacts.			
Coating must afford excellent chemical resistance to acids alkalis, salts and fuels.			
Coating must be self-extinguishing.			
Coating must dry to a smooth texture.			
Coating dry film thickness shall be 14 mil.			
Specifications Coatings offered shall have been tested in the following areas.			

	COMPLIANCE YES	NO	EXCEPTION
Results shall be in the minimum acceptable to the City of New Rochelle.			
Test documentation must be available to the City of New Rochelle upon request.			
Specific Gravity Not less than 1.28			
Solids by Weight Not less than 67%			
Solids by Volume Not less than 57%			
Spread Rate 400 grams p/sq. meter, per coat at not less than 13 mils.			
Dry Time 30 minutes at 70 degrees F. and 50% relative humidity.			
Cure Time 48-72 hours after final coat			
Application Temperature Not less than 45 degrees on substrate.			
Primer 33% diluted Megaflex			
Elasticity 200% Water Tightness: 14 mils, waterproof			
Hardness Shore "A" hardness 70			
Vapor Permeability 5.5 grams pq vapor p/1 sq. meter per 24 hours			

	COMPLIANCE YES	NO	EXCEPTION

Fire Resistance
Self-extinguishing

High Temperature Stability
Unaffected by temperatures of 250 degrees F.

Salt Spray Test
100% resistant

Aging and Adhesion
Unaffected after 800 hours of testing from 60 degrees C. to minus 20 degrees C. with rain, frost, UV light and humidity

Sulfur Dioxide Resistance
Resistant to hot, humid atmosphere of 7% concentration of sulfur dioxide

Ozone Resistance
Unaffected by an environment containing 1 ppm ozone for 30 days

Hot Water Immersion
Unaffected after 1,000 hours immersion in 100 degrees F. water

Impact Resistance
90 Newtons, no damage
Alkalis Resistance
Resists 100% against sodium hydroxide at ph 14.

Coating shall be applied to the dump body underside, hoist frame, and hitch. Color black.

Important Safety Note: In the interest of eliminating harmful fumes which can result from welding procedures, coating used on Dump Body, Hoist & Hitch must be free of lead, Volatile Organic Compounds or any other hazardous materials as evidenced by MSDS/OSHA. Form 174 to be submitted at the time of the bid.

	COMPLIANCE YES	NO	EXCEPTION

IV. Vender Qualifications

Vender must be a factory-authorized representative for chassis being offered.

Vender must state best delivery available, delivery may be a prime factor in the award of this bid.

In order to qualify for warranty, coating must be applied by a certified applicator.

Vender must be available at time of delivery and placement to provide technical expertise.

Vendor bidding an alternate must submit a customer list containing not less than twenty (20) references, using current production models of the unit being supplied.

List should include agency, contact named and phone numbers.

V. Manufacturer's Requirements

The manufacturer shall provide standardized factory operator, maintenance and repair manuals for the unit supplied.

The manufacturer's Statement of Warranty shall be supplied.

VI. Warranty

Manufacturer Warranty - standard warranty shall be submitted at the time of the bid.

EXHIBIT A

COST SUMMARY, SPEC. # 4858

All terms, conditions, requirements and specifications as set forth in Request for Quotation are acceptable as specified herein. YES_____ NO_____
If "NO", please include with your response a detailed description and/or explanation of any deviation in your proposal from the terms, conditions, requirements and/or specifications detailed herein on your letterhead. Each deviation listed must include a comparison of the detailed specification of the item proposed verses the item specified herein and a statement of how the item meets or exceeds the requirements. Expected number of days for delivery upon receipt of order: _____days

Warranties Standard: **Chassis warranty _____Mos. _____Miles**
Powertrain warranty _____Mos. _____Miles

Optional Extended Warranties which MAY be ordered:

Chassis _____Mos. _____Miles - Cost $_____

Powertrain _____Mos. _____Miles - Cost $_____

PLEASE INDICATE YOUR COST FOR:

ONE (1) Mack Single Axel Truck- Dump/Spreader w/Plow or approved equal as specified herein $_____

Please indicate your price in words: _____

If quote is for "OR Equal", please indicate make and model of each component:

#_____

#_____

#_____

#_____

Submitted by:_____ as authorized

representative of _____
COMPANY NAME

have fully read, understand and recognize the requirements of this bid. I have enclosed complete copies of this specification, having been filled out in good faith and to the best of my knowledge for the items(s) being bid.

Signed:_____

Dated:_____