

MINIMUM SPECIFICATIONS FOR

NEW AND UNUSED
CLASS 8
DUMP TRUCK / PLOW TRUCK

FOR
CATTARAUGUS COUNTY DEPARTMENT OF PUBLIC WORKS
HIGHWAY DIVISION

OFFICE OF THE CLERK
CATTARAUGUS COUNTY LEGISLATURE
303 Court Street
Little Valley, NY 14755

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CATTARAUGUS COUNTY

DEPARTMENT OF PUBLIC WORKS

Development – Progress – Workmanship

*Joseph T. Pillittere
Commissioner*

*Ryan J. Ferguson
Deputy Commissioner*

*Mark C. Burr, P.E.
Director of Engineering*



*Jack Ellis Drive
8810 Route 242
Little Valley, New York 14755
Phone (716) 938-9121
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ADVERTISEMENT FOR BIDS

Sealed bids for the purchase of certain materials, equipment, and/or services, for the Cattaraugus County Department of Public Works, according to specifications, will be received by the undersigned, at the Department of Public Works Facility, 8810 Route 242, Little Valley, New York, until **Wednesday, November 23, 2016 at 1:45 P.M.** after which they will be publicly opened at 2:00 P.M. (at the same location), by the undersigned, under the direction of the Public Works Committee of the Cattaraugus County Legislature. Each bid, at the time it is received, will be stamped showing date and time of receipt.

ALL BIDS MUST BE SEALED AND CLEARLY MARKED:
Any bid not clearly marked will not be considered.

DPW BID #70 - New & Unused, Class 8, Dump Truck/Plow Truck

All bids must be sent or delivered to Cattaraugus County Department of Public Works, 8810 Route 242, Little Valley, NY 14755, Attention: Dawn Smith.

Bidding sheets and instructions may be obtained at the Cattaraugus County Department of Public Works, 8810 Route 242, Little Valley, New York, 14755. Phone Dawn Smith at 938-9121 Ext. 2465.

All bids received are subject to all federal and state controls concerning any such equipment.

All bids must be accompanied by a NON-COLLUSIVE BIDDING CERTIFICATE. Any bid submitted without such certification will not be accepted. Any bid not meeting ALL specifications will not be considered. The County Legislature reserves the right to reject any or all bids, to waive any informalities, and to accept the lowest responsible bid.

John Searles
County Administrator
County Center - 303 Court Street
Little Valley, New York 14755

INSTRUCTIONS TO BIDDERS

1. BID DEPOSIT:

For a bid amount of \$10,000 or LESS a certified check for Five Hundred dollars (\$500) must be submitted with the bid. For a bid amount GREATER than \$10,000 a BOND or certified check for five percent (5%) of bid amount must be submitted with the bid. The undersigned agrees that the bid security may be retained by the County until such time that the procuring department has received notice that the commodity/equipment has been delivered to and accepted by the County. When notification of delivery and acceptance is made, the bid security will be returned. Should the successful bidder to whom the bid is awarded fail to execute the agreement submitted by the county in accordance with the formal bid and other contract documents, or fails to deliver the commodity/equipment in acceptable condition to the County within the time provided in the contract documents, the certified check or the bid bond amount shall be forfeited to and retained by the County as liquidated damages. However, the bidder does not forfeit the deposit if the County finds that the bidder's failure is excused by extraordinary circumstances beyond the bidder's control.

2. PERFORMANCE BOND.

NOT REQUIRED

3. BID FORM:

Bid shall be submitted on these Cattaraugus County bid forms or bid will not be considered. Bid must be typed or printed in ink. Original autograph signatures in ink are required. Facsimile or rubber stamp signatures will not be accepted.

4. CHANGES:

Any change in wording or interlineation by a bidder of the inquiry as published by Cattaraugus County shall be reason to reject the proposal of such bidder, or in the event that such change in the Invitation to Bid is not discovered prior to entering into a contract, to void any contract entered into pursuant to such bid.

5. INFORMALITIES:

The County may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. The contract award will be made to the responsible bidder submitting the lowest acceptable bid. Conditional bids will not be accepted.

6. BID TIME:

Any bid may be withdrawn prior to the above scheduled time for the opening of bids, or authorized postponement thereof. Any bid received after the time specified shall not be considered.

7. INVESTIGATIONS:

The County may make such investigations as it deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the County all such information and data for this purpose as the County may request. The County reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the County that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein.

8. BID ENVELOPE:

Each bid must be submitted in a sealed envelope clearly marked as to contents therein, bearing on the outside the name and address of the bidder. If sent by mail, the sealed envelope containing the bid must be enclosed in another envelope labeled as specified.

9. NON-COLLUSIVE CERTIFICATION:

Non-collusive bidding certification shall be made by each bidder in the form provided and shall be submitted as a part of the bid. Bids submitted without non-collusive bidding certification will be considered irregular and may be rejected by the County.

10. CONTRACT AWARD:

Contract(s) or purchase order(s) will be awarded after due consideration of the suitability of goods and/or services bid to satisfy these specifications, the total cost of such goods and/or services including all cost elements, and the timeliness of the agreed upon delivery date.

11. CONTRACT TERM:

This contract can be extended for two (2) additional one year periods, or two additional model years.

12. EXECUTORY CLAUSE.

This EXECUTORY CLAUSE shall be a part of any agreement entered into pursuant to this bid: It is understood by the parties that this agreement shall be executory only to the extent of the monies available to the County of Cattaraugus and appropriated therefor, and no liability on account thereof shall be incurred by the County beyond the monies available and appropriated for the purpose thereof.

13. DELIVERY SCHEDULE.

Delivery must be made within the period of time set forth in specification. Delivery time is of the essence of the contract to be awarded pursuant to this bid. Failure to meet delivery schedule as per accepted bid may result in legal action by Cattaraugus County to recover damages.

14. PRICES.

Prices shall be quoted F.O.B. destination, delivered inside and installed, or as otherwise specified in the specifications. "Tailgate Delivery" will not be accepted unless specified by the County.

15. ESCALATOR CLAUSE:

The contract price must remain firm for one model year. An escalator clause with a guaranteed but not to exceed 3 percent (3%) maximum per model year can be requested in writing by the successful bidder prior to the County ordering any additional trucks off this contract for the next model year. A request for a price increase **MUST** be submitted in writing, to the Commissioner of Public Works before the vendor can invoice Cattaraugus County at a higher price.

16. TRANSPORTATION CHARGES.

Collect transportation charges will not be paid by the County. All freight, cartage, rigging, postage or other transportation charges shall be prepaid.

17. TAXES.

No taxes are to be billed to the County. Bid shall not include any Federal, State, or local excise, sales, transportation, or other tax unless Federal or State law specifically levies such tax on purchases made by a political subdivision. Any applicable taxes from which the County is not exempt shall be listed separately as cost elements, and added into the total net bid.

18. COMPLIANCE WITH LAWS.

The successful bidder shall comply with all laws, rules, regulations and ordinances of the Federal Government, the State of New York and any other political subdivision or regulatory body which may apply to its performance under this contract.

19. CONTRACT ASSIGNMENTS.

The bidder shall not assign, transfer, sublet, or otherwise dispose of this contract, or of its right, title or interest in the contract, or its power to execute the same, to any other person or corporation without the previous consent, in writing, of the Chairman of the Cattaraugus County Legislature.

20. CASH DISCOUNT.

ANY CASH DISCOUNT which is a part of a bid will be considered as a reduction in the bid prices in determining the award of the bid. Date of invoice must not precede date of delivery. The County policy is to pay all claims in a timely

manner within the specified time. However, if for some reason payment is delayed, the County will take the discount when payment is made. If this is unsatisfactory, please quote net. The County will not pay any interest charges.

21. ALTERNATE ITEMS:

If material or services other than those specified in this bid document are offered, the bidder must so state and furnish at the time of bid opening, if so requested, and as part of his bid the following information in duplicate:

- (a) Complete description of the item offered, and detailed explanation of the differences between the item specified and the item offered. If, in the opinion of the Department Head, sufficient detail is not presented as a part of the sealed bid to permit definite evaluation of any substitute item, the bid will not be considered.
- (b) Descriptive literature of item offered, for evaluation.
- (c) List of installations in Cattaraugus County of the item offered.
- (d) List of other installations.

22. ADDITIONAL INFORMATION.

Any additional information which bidder desires to add to the bid shall be written on a separate sheet of paper, attached to and submitted with the formal sealed bid, to be read at the formal opening.

23. WORKMANSHIP.

Workmanship must meet with the approval of the department head or heads involved, and shall be first class in every respect without exception and shall be equal to the best modern practices. Materials furnished are to be new and unused. All materials furnished or work performed are to be guaranteed free from defects. Anything found defective or not meeting specifications, no matter in what state of completion, may be rejected and shall be made good by the contractor at his own expense.

24. HOLD HARMLESS.

The successful bidder to whom the bid is awarded shall indemnify and hold harmless Cattaraugus County and its agents and employees from and against all claims, damages, losses or causes of action arising out of or resulting from such vendor's performance pursuant to this bid.

25. BID VALIDITY.

This bid is firm and irrevocable for a period of 45 days from the date and time of the bid opening. If a contract is not awarded within the 45 day period, a bidder to whom the bid has not been awarded, may withdraw his bid by serving written notice of his intention to do so upon the Clerk of the County Legislature. Upon withdrawal of the bid pursuant to this paragraph, the County will forthwith return the bidder's security deposit.

26. CONTRACT INTEREST.

No official, or employee of the County, who is authorized in such capacity, and on behalf of the County, to negotiate, make, accept or approve or to take part in negotiating, making, accepting, or approving this contract shall become directly or indirectly interested personally in this contract or in any part hereof. No officer or employee of, or for the County, who is authorized in such capacity, and on behalf of the County, to exercise any supervisory, administrative, or other function, in connection with this contract, shall become directly or indirectly interested personally in this contract or in any part hereof.

27. OTHER CUSTOMERS.

Prices charged to Cattaraugus County are to be no higher than those offered to any other governmental or commercial consumer. If a bidder has a New York State or a Federal GSA contract for any of the items covered in this bid or any similar items, he shall so indicate that he has said contract on these bid papers and supply a copy of this contract within 5 days if so requested by the County.

28. PRICE IS FIRM.

The unit prices bid shall remain firm, and any other charges bid shall also remain firm, for delivery of the equipment, material, work, or services described in this bid. No cost increase shall be charged for any reason whatsoever.

29. BIDDER AFFIRMATION.

In executing this bid, the bidder affirms that all of the requirements of the specifications are understood and accepted by the bidder, and that the prices quoted include all required materials and services. The undersigned has checked all of the bid figures, and understands that the County will not be responsible for any errors or omissions on the part of the undersigned in preparing this bid

30. INSURANCE

The (Contractor, Vendor, Etc.) shall secure and maintain, at its own cost and expense, insurance coverage specified in Appendix (A) attached hereto, complying with Classification "(selected on form)", with insurance companies licensed in the State of New York. Cattaraugus County must be named as an additional insured for purposes of coverage, but not for payment of premium. The (Contractor, Vendor, Etc.) shall file a certificate of insurance with the Cattaraugus County Risk Manager covering all acts performed by the (Contractor, Vendor, Etc.) prior to performing pursuant to this Agreement or receiving any payment thereunder and shall be responsible for updating the certificate as necessary throughout the term of the Agreement. All certificates of insurance shall provide that Cattaraugus County be given thirty (30) days' notice prior to non-renewal or cancellation of these policies. **Certificate of Insurance shall be furnished by the bidder within five**

(5) days of the "Intent to Award" and prior to signing of contract. Failure to supply a satisfactory certificate within five (5) days after the "Intent to Award" may result in the cancellation of award and for the forfeiture of the Contractor's bid security, in the sole discretion of the County.

31. STATE CONTRACTS:

The County reserves the right to purchase the commodity being bid, from State Contract when it is most beneficial to the County to do so.

32. LITIGATION:

In the event any litigation shall arise from this contract, the laws of the State of New York shall control any litigation, regardless of which party shall institute such action.

33. MUNICIPAL EXTENSION:

The contract if awarded will be to the lowest responsive/responsible bidder(s) in part or in whole who meet(s) all the terms of the specifications. The County guarantees no minimum or maximum purchases or contracts as a result of award of this bid. Cattaraugus County reserves the right to allow all municipal and not for profit organizations authorized under the General Municipal Laws of the State of New York, to purchase any goods (materials and equipment) and/or services awarded as a result of this bid in accordance with the latest amendments to NYS GML 100 through 104 and County Law Section 408-a. However, it is understood that the extension of such contracts are at the discretion of the vendor and the vendor is only bound to the contract between Cattaraugus County and the vendor.

34. ALTERNATE SOURCE:

Where a New York State bid or a bid from another municipality results in an award for an item herein at a total price which is more favorable than that of the bidder to whom an award is made herein, and such price is available to County, County reserves the right to purchase from the State bid or from such other, alternate bid, notwithstanding its award to the lowest responsible bidder herein, after offering the County bid awardee an opportunity to meet or better the item price.

MINIMUM SPECIFICATIONS FOR NEW AND UNUSED, 2016 OR NEWER TANDEM AXLE CAB & CHASSIS

IMPORTANT: PLEASE NOTE: INCLUDED IN THE PRICE OF THE TRUCKS

		YES	NO
<u>General:</u>	A) Manufacturer model and current specification data to be supplied with bid.[
	B) This contract can be extended for two additional one year periods, or two additional model years.		
	C) The contract price must remain firm for one model year. An escalator clause with a guaranteed but not to exceed three percent (3%) maximum per model year can be requested in writing by the successful bidder prior to the County ordering any additional trucks off this contract for the next model year. A request for a price increase MUST be submitted in writing, to the Commissioner of Public Works before the vendor can invoice Cattaraugus County at a higher price[
<u>Diagnostic:</u>	<u>SHALL BE OR HAVE:</u>		
	A) Dealer must Provide the software that matches these trucks that will perform all diagnostic, and service analysis, along with a parts on-line/web-based and programing software for the engine, transmission and chassis (body) computer systems. This software needs to be updated as updates come available[
	B) One (1) year on-line subscription per truck[
<u>Engine:</u>	<u>SHALL BE OR HAVE:</u>		
	State Engine Manufacturer and model:		
	A) DETROIT DD13 12.8L 450 HP @ 1625 RPM, 1900 GOV RPM, 1650 LB/FT @ 975 RPM[
	1) EPA Certified to current standard.....[
	B) Engine Compression Brake[
	1) Engine brake to work down to 5 mph.....[
	C) 7 year or 250K engine and electronics warranty including injectors, turbo and water pump 100% parts and labor. Including towing with 500.00 per occurrence coverage.[
	D) 120 volt 1500 watt block heater.....[
	E) Current emission standard required[
<u>Transmission:</u>	<u>SHALL BE OR HAVE:</u>		
	A) Automatic, 4500 RDS 6 Speed with PTO, Push Button Control Pad in Cab[
	B) Driver Ability to Check Level (Level Gauge)[
	C) In addition to standard program, transmission to be programmed for constant PTO usage, and 3 rd gear hold (i.e. Plow Mode)[
	D) Engine brake to work down to 5 mph.....[
<u>Front Axle:</u>	<u>SHALL BE OR HAVE:</u>		
	A) Capacity of 22,000 lbs. Meritor MFS-20-133A Wide Track I beam or equal[
	B) Brakes S-cam 16.6X6 including 24 inch long stroke chambers.[
	C) Axle position to be determined @ pre-build meeting.[
<u>Rear Axle:</u>	<u>SHALL BE OR HAVE:</u>		
	A) RS-30-185 30,000 lb. capacity with SYTHETIC OIL or equal.....[
	B) 30,000 lb. flat leaf spring rear suspension with helper and radius rod.....[
	C) Gear ratio to achieve 68 mph.....[
	D) Driver Controlled in-cab locking differential switches:		
	1) Separate Switches for each axle differential lock.....[
	E) Brakes S-cam quick change 16.5X7 with long stroke chambers[

		YES	NO
<u>Tires:</u>	Front) 425/65R22.5 Load range L 20 ply 10,200 lb., single load rating, Michelin "XZY-3" or equal	[]
	Rear) 11R24.5 Load range H 16ply Mud/Snow Michelin XDE M/S	[]
<u>Wheels:</u>	<u>SHALL BE OR HAVE:</u>		
	A) Front Disc Hub Piloted 10 Stud Heavy Duty 22.5X12.25 Aluminum rims with Outboard brake drums.	[]
	B) Dual Rear Disc Hub Piloted 10 Stud Heavy Duty 24.5X8.25 steel rims with Outboard brake drums.	[]
	C) Front and Rear Wheel guards between hub and rim and between rims in rear	[]
	D) One Rear Spare Wheel to be provided for EACH chassis ordered,	[]
<u>Slack adjusters:</u>	AUTOMATIC SELF ADJUSTING front and rear (MERITOR PREFERRED).....	[]
<u>Wheel Seals:</u>	Oil lubricated with SYNTHETIC OIL.....	[]
<u>Driveshafts:</u>	1810 main transmission to axle 1710 inter axle	[]
<u>Front Springs:</u>	<u>SHALL BE OR HAVE:</u>		
	A) Multi Leaf 22,000 lb. capacity single stage HD Shackle type.	[]
	B) Right hand auxiliary air bag spring for wing plow application with in-cab control (Not an extra spring leaf)	[]
<u>Frame:</u>	HD extended frame rails: 10-11/16 x 3-1/2 x 1/2 steel to 455in. Section modulus is 22.35, RBM is 2,683,000 in-lbs per rail. 20 inch extension. BOLT-ON EXTENSIONS WILL BE REJECTED	[]
	Single Frame – NO Double frames	[]
<u>Brakes:</u>	<u>SHALL BE OR HAVE:</u>		
	A) Air operated spring brake chambers at all 4 rear wheel positions.	[]
	B) Compressor 19 CFM dual Cylinder.	[]
	C) Air Dryer Bendix (Model and Location to be determined at Prebuild)	[]
	D) Drain valve Bendix DV-2 automatic with heater.	[]
	E) 4 Channel ABS.	[]
	F) Trailer connections with hand control valve and tractor protection valve plumbed to rear.	[]
	G) Rear brake chambers located inside tire envelope for paving operation.....	[]
	H) Brake Backing Plates	[]
<u>Steering:</u>	Power hydraulic Dual power Sheppard or Ross suited to front axle capacity.	[]
<u>Dimensions:</u>	<u>SHALL BE OR EQUAL TO:</u>		
	A) Final Dimensions to be determined at pre-build between the County and Vendors	[]
	B) Axle to end of frame 60 inches	[]
	C) Maximum Height 11' 3"	[]
<u>Air Cleaner:</u>	Heavy Duty Dual Element with integral snow valve with in cab control.....	[]
<u>Cooling System:</u>	<u>SHALL BE OR HAVE:</u>		
	A) Aluminum Cross flow radiator,.....	[]
	B) Radiator sight glass and translucent over flow tank,	[]
	C) Anti-Freeze Extended life coolant with - 40 degree protection,	[]
	D) Fan Drive Horton or equal direct drive two speed with nylon fan,.....	[]
	E) High mount radiator design to allow for PTO without alterations,.....	[]
	F) HD heater and defroster, with side window defroster outlets,	[]
	G) Manual fan override switch,	[]
	H) NO RADIATOR SHUTTERS ALLOWED,	[]

Electrical System: SHALL BE OR HAVE:

A)	12 volt Negative ground,	[]
B)	Minimum Three (3) 12 volt batteries, MIN 2600 CCA total with stud type threaded top posts,	[]
C)	Master Disconnect battery switch,	[]
D)	Alternator minimum 160 AMP capacity pad mounted brush type,	[]
E)	Starter 12 volt sized for engine,	[]
F)	Color coded and continuously numbered wiring,	[]
G)	Circuit breakers manual reset for all except 5 amp circuits,	[]
H)	Two (2) stop and taillights with integrated turn signals frame mounted,	[]
I)	Turn signals with flashing hazard feature,	[]
J)	AM FM radio with weather band and 4 coaxial speakers,	[]
K)	Five cab marker lights,	[]
L)	12 volt cigar lighter/power supply dash mounted,	[]
M)	Trailer wiring with socket 7 wire mounted at rear of frame,	[]
N)	Body builder wiring to rear of frame,	[]
O)	Data Link connector in cab for vehicle programming and diagnostics,	[]
P)	2 way radio power source wiring in cab with fused protection and 10 foot cable, ...	[]
Q)	Electric back up alarm 102 Db,	[]
R)	Factory installed wiring harness with dash switch for add on snow plow lights,	[]

Instrumentation: SHALL BE OR HAVE:

A)	Low oil pressure and High water temperature light and alarm warning system,	[]
B)	Speedometer,	[]
C)	Tachometer,	[]
D)	Water Temperature Gauge,	[]
E)	Oil Pressure Gauge,	[]
F)	Voltmeter,	[]
G)	Air Pressure Primary and Secondary,	[]
H)	Fuel Level,	[]
I)	Hour Meter,	[]
J)	Odometer,	[]
K)	Brake Application Gauge,	[]

Fuel Tank: Aluminum tank 90 Gallon minimum capacity mounted left side under cab. [|]

DEF Tank: Left side near fuel tank..... [|]

Muffler: Tailpipe Vertical stack NOT PROTRUDING OVER 3.5 inches behind cab. [|]

Bumper: Front bumper shall be furnished. [|]

Cab & SHALL BE OR HAVE:

Cab Related:	A)	Color: BRIGHT YELLOW ELITE - To be determined at pre-build, Polyurethane Base Coat Clear Coat with BLACK non-glare on hood ,	[]
	B)	Auxiliary dash mounted switch with wiring to roof and 20 amp fuse,	[]
	C)	Six (6) additional switches mounted in dash with in cab 80 amp max power module,	[]
	D)	Premium cab trim with additional insulation package for sound deadening,	[]
	E)	Factory hood access hatch to check and fill oil and coolant,	[]
	F)	Air horn with steering wheel mounted actuator,	[]
	G)	Two side mounted mirrors with convex spot mirrors all heads heated,	[]
	H)	Air Conditioning,	[]
	I)	Inside grab handles plus towel bar left hand outside grab handle,	[]
	J)	Driver air suspension seat,	[]
	K)	Passenger air suspension seat,	[]
	L)	Retractable seat belts with shoulder straps,	[]
	M)	Steering wheel mounted electronic throttle control,	[]
	N)	Low mounted HD electric windshield wipers with intermittent with positive park and washers,	[]

		YES	NO
O)	a.) Inner fenders to protect engine from road spray,	[]
	b.) PLASTIC Rear fenders mounted to box	[]
P)	Engine cover shall not extend farther back than dash,	[]
Q)	NO DAYTIME RUNNING LIGHTS,	[]
R)	Cab shall provide ample interior room to accommodate two suspension seats, all controls for plows and sander, plus adequate comfort for 6 ft. 4 inch driver and helper,	[]
S)	Steps on both driver and passenger side to be no more than 24 inches off ground, ..	[]
T)	Power windows with driver side control for passenger side window,	[]
U)	IF POWER LOCKS ARE PROVIDED DEALER MUST PROGRAM OUT AUTO LOCK FEATURE,	[]
V)	Swept back dash,	[]
W)	Cab air suspension,	[]
X)	Tilt telescoping steering column,	[]
Y)	Fire Extinguisher/Safety Triangles	[]
Z)	Differential Lock Switches One (1) per axle	[]
AA)	Cab Beacon brackets on each side (stainless steel)	[]
BB)	Heated windshield	[]

***VENDOR SHALL PROVIDE ONE ADDITIONAL COMPLETE SET OF
FILTERS FOR EACH UNIT PLUS ANY ADD ON COMPONENTS,
AT TIME OF DELIVERY.***

PERFORM WHEEL ALIGNMENT AFTER BODY AND EQUIPMENT IS INSTALLED.

ONE REAR SPARE WHEEL TO BE PROVIDED FOR EACH CHASSIS ORDERED.

OPTION: Tandem Rear Axle and Suspension

A)	RT-46-160P 46,000 lb. R- Series Tandem Rear Axles 4.89 Ratio	[]
B)	MXL 18T Meritor Main and 17T Interaxle Drive Lines	[]
C)	Driver Controlled Differential Lock Both Tandem Rear Axles	[]
D)	Hendrickson HN/Haulmaxx 46,000 lb. Rear Suspension	[]
E)	Wheelbase Tandem (206") To be determined @ pre-build meeting.	[]

HEAVY DUTY FRONT SNOW PLOW HITCH & WING SYSTEM

Hitch

Mast:	<u>SHALL BE OR HAVE:</u>	YES	NO
A)	Front mast constructed of not less than 4 x 3 x 1/4" structural, Rectangular Tubing, angle risers not acceptable	[]
B)	The Horizontal Member which is the base of the lift cylinder pins shall not be less than 4 x 4 x 3/8" Angle Boxed with 1/4" x 4 Bar	[]
C)	Plow attachment pin points are 31" centers with three (3) 1-1/4" dia pin locations At 15-1/2", 18" and 20-1/2" heights..	[]
D)	Lift arm, flame cut steel plate and braced with two steel flats.....	[]
E)	Hitch with 16" of lift with a 4" dia x 10".stroke double acting piston type cylinder Having a nitrided rod of 1-3/4" dia	[]
F)	Plow Lights mounted on angle brackets.....	[]
G)	Reinforcement lugs at tilting pin points, both upper and lower.....	[]
Lift Arm:	<u>SHALL BE OR HAVE:</u>		
A)	Must consist of an offset double juice harp as per Catt. Co. existing style design Allowing double chaining	[]
B)	Front Mast pinned to the mast support frame with four(4) 1-1/4" steel pins, Support frame welded to a 5/8" steel bumper plate.....	[]
C)	Front bumper bolted to chassis frame through two front frame brackets of 1/2" Steel plate and two lower cheek plate of 5/8" steel plate.....	[]
Bumper:	<u>SHALL BE OR HAVE:</u>		
A)	Must be full width of the chassis frame and full depth of check plate assembly	[]
Cheekplates:	<u>SHALL BE OR HAVE:</u>		
A)	2 1/2" thick upper cheek plates bolted to the front frame ends.....	[]
B)	2 1/2" x 24 frame rail reinforcement bolted to the frame above the front axle	[]
C)	5/8" thick reinforced cheek plate bolted between the lower bumper plate and the Frame rail reinforcement bracket to transfer plowing loads to the chassis rails.	[]
Hitch:	<u>SHALL BE OR HAVE:</u>		
A)	Must power tilt forward to allow servicing the engine compartment without removing the hitch from the chassis	[]
B)	Hitch to be readily removable for summer storage	[]
C)	Allow the installation of a wing system without modification of the hitch	[]
D)	Upper Cross Tube shall not be less than 4" x 4" x 3/8" Structural Tube and The Lower Horizontal Support member shall not be less than 7" x 4" x 3/8" Structural Tube	[]
E)	Plow lights mounted to front hitch with angle risers on both sides	[]

Wing System

YES NO

Rear Saddle: SHALL BE OR HAVE:

- | | | | | |
|----|--|---|--|---|
| A) | Basis of structure made of HSS section of 6 x 4 1/2" wall thickness, laterally mounted | [| |] |
| B) | Bolted to both rails of the truck frame..... | [| |] |
| C) | "L" shape cheek plates with tower end gusseted to form a box with the tower Attach bracket with 2-1/2" Sch. 80 pipe struts supplied to stabilize the tower base. [| [| |] |
| D) | Mounting framework for rear tower set at 25 degrees off the chassis centerline to Position the tower slider assembly parallel to wing plow during operation..... | [| |] |

Rear Mast Specifications:

SHALL BE OR HAVE:

- | | | | | |
|----|--|---|--|---|
| A) | The Rear Mast unit shall consist of hydraulic cylinders, oil reservoir, enclosed cabinet, rear support mast and all necessary hose lines and fittings for operating the equipment noted within the specifications..... | [| |] |
| B) | The power hydraulic control unit could be located within a clear space behind the cab and in front of the dump body..... | [| |] |
| C) | The control unit shall have valve and cylinder enclosures..... | [| |] |
| D) | The bottom of the enclosure shall serve as a cross member and to add strength to the general assembly, it shall be from not less than 3/8" thick steel plate | [| |] |
| E) | The vertical mast shall be fabricated from 10" x 20#/ft channel..... | [| |] |
| F) | The main bodies of the valve and cylinder enclosures shall be formed from 8 gauge hot rolled steel sheet and each shall be designed to be fitted with a cover..... | [| |] |
| G) | There shall be two (2) cylinders provided to control the rear of the wing..... | [| |] |
| H) | The rear of the wing lift cylinder shall be not less than 5" x 18" stroke single acting type and shall be located within the cabinet..... | [| |] |
| I) | It shall be reeved with wire rope cable over malleable iron sheaves which include bronze bushings turning on 1-3/8" cold rolled steel pins fitted with grease fittings [| [| |] |
| J) | Sheave heads bolt to the piston rod. Heads which weld to the piston rod are not acceptable..... | [| |] |
| K) | The rear slide cylinder shall not be less than 3" x 33" stroke double acting type which shall be located outside of the rear mast vertical support beam..... | [| |] |
| L) | It shall have a stationary barrel, which attaches to the bottom of the rear of the mast. Fully extended, it shall not project above the rear mast..... | [| |] |
| M) | Drive ribs at the rear mast shall be so positioned that they make it possible to place the wing arms at a 90° angle to the rear of the wing..... | [| |] |
| N) | The rear wing cabinet to set square with the back of the cab to ensure a tighter cab to axle Dimension..... | [| |] |

Wire Rope Cable:

SHALL BE OR HAVE:

- | | | | | |
|----|---|---|--|---|
| A) | The wire rope cable shall be 5/8" | [| |] |
| B) | The cable shall be formed around a 1/2" heavy duty wire rope thimble and shall be secured together with no less than (3) 1/2" cable clamps on each end..... | [| |] |
| C) | The wire rope cable shall be attached to the wing with (2) 3/8" mid links with a piece of chain in between..... | [| |] |

Cylinder Box Cover Polymer:

SHALL BE OR HAVE:

- | | | | | |
|----|---|---|--|---|
| A) | The cylinder box cover shall be made of 1/4" polymer..... | [| |] |
|----|---|---|--|---|

YES NO

- B) Two (2) 8 gauge steel straps, 3/8 washers and locknuts shall be used to secure the cover and limit warping of the poly.....[|]

Valve Box Cover Polymer:

SHALL BE OR HAVE:

- A) The valve box cover shall be made of 1/4" polymer.....[|]
B) Two (2) oversized 3/8" washers and locknuts shall be used to secure the cover.....[|]

40 Gallon RH Cabinet Mount:

SHALL BE OR HAVE:

- A) The cabinet mounted oil reservoir shall be of 40 gallon capacity.....[|]
B) fabricated from 8 gauge pickled and oiled sheet steel..... [|]
C) equipped with a vented fill cap with integral screen..... [|]
D) and include a 1/2" magnetic plug in the bottom for draining.....[|]
E) It shall also be fitted with a type 25 micron return line filter.....[|]
F) an oil level/temperature sight gauge and an internal 8 gauge baffle..... [|]

Oil Filter Condition Indicator:

SHALL BE OR HAVE:

- A) The oil filter condition indicator gauge shall mount to the oil filter housing.....[|]

Hydraulic Oil Line Shut Off:

SHALL BE OR HAVE:

- A) The hydraulic oil line shut off shall consist of a 1-1/4" standard nipple and an all iron cock which shall be capable of being shut off with an adjustable wrench.....[|]

Front Tower:

SHALL BE OR HAVE:

- A) Boxed section design totally enclosing the wing lift cylinder [|]
B) Front tower bolted to hitch cross tubes, easily removable in off-season..... [|]

Slide Tray & Track:

SHALL BE OR HAVE:

- A) Tray to be 8" I-beam at 18.4 lbs/ft..... [|]
B) Track to be 3/4" square bar extending full length of the slide tray [|]

Tower Structure:

SHALL BE OR HAVE:

- A) Three sided box section formed from 3/8" plate welded to the rear slide tray to Form the cylinder enclosure [|]
B) Internal bulk heads at stress points [|]
C) The front mast shall be fabricated from an 8" beam of 18.4#/ft. The front mast shall be bolted to, and supported by a lower cross member from not less than 7" x 4" x 3/8" wall rectangular tubing extending from the bottom of the truck attachment.
The front of the wing slide shall be raised and lowered using not less than 3" x 48" double acting cylinder connected directly to the slide with not less than a 1" grade 5 bolt with flat washers and locknuts. This cylinder shall be anchored to the front mast with not less than a 1" cold rolled steel pin..... [|]

Slider:

SHALL BE OR HAVE:

- A) Base plate of 3/4" x 7" x height of tower steel plate, front wing pivot "Dee" Attaches to slider with 3/4" section, wing "Dee" will be a "safety trip" model having a 1-1/2" dia. Bolt, grade 5 wing mounting bolt with a slotted hex nut and cotter pin..... [|]

Travel:

SHALL BE OR HAVE:

- A) Will be 48" of vertical lift. [|]

Safety Trip Front Section:

SHALL BE OR HAVE:

- A) Must be a torsion spring trip D-Block of Cattaraugus County's current design. [|]
 B) Safety "DEE" to have 10 degree offset for wing blade to ride at 45 degree angle with road surface. [|]
 C) Reinforce upper and lower pin lugs with double thick plate. [|]

Wing Arm:

SHALL BE OR HAVE:

- A) The stand-off arms shall be of an extremely heavy duty design of the full moldboard tripping style with the inner arms fabricated from 2-1/4" solid bar stock, and the outer arms fabricated from 3-1/2" outside diameter x 1/2" wall tube. The upper arm shall be equipped with a swivel with grease fitting so to prevent damage to the arms when the wing is lifted to the carry position. The upper arm shall also have a connecting collar for attaching the hydraulic cylinder used for lifting and lowering the wing. The lower arm shall be equipped with a compression spring so to provide a shock absorber. Both arms shall be adjustable in length from 61" to 76", offering four (4) positions of adjustment 5/8" cold rolled steel pins.
 The upper arm shall be fitted with a suspension spring not less than 3-1/4" outside diameter x 28-3/4" long from 19/32" diameter alloy wire. This suspension spring will allow for spring loaded telescopic action of the top arm, whenever the wings cutting edge encounters surface obstructions, and when used in conjunction with a 7/8" diameter wire x 3-3/4" O.D. alloy torsion spring loaded hinge at the front mast full tripping capability of the wing moldboard is possible. The upper arm shall also have a connecting collar for attaching the hydraulic cylinder used for lifting and lowering the wing. Both the rear suspension spring and the front torsion spring shall be load adjustable, and shall be equipped with lock-out pins so to provide a rigid wing when shelving operations so dictate. The arms shall attach to the rear mast and to the wing with 1-1/4" grade 5 bolts and locknuts. [|]

Front Plow

YES NO

Height:

SHALL BE OR HAVE:

- | | | | | |
|----|-----------------------------------|---|--|---|
| A) | Intake height to be 35". | [| |] |
| B) | Discharge height to be 64". | [| |] |
| C) | Cutting edge length 132". | [| |] |

Plow Skinplate:

SHALL BE OR HAVE:

- | | | | | |
|----|--|---|--|---|
| A) | Constructed of 8 ga. steel plate, break formed and high-speed curvature. | [| |] |
| B) | Moldboard extension ahead of the cutting edge shall be 20" @ 45 degrees, top edge of the moldboard will be reinforced with an angle section of 3"x 2-1/2" x 1/4" wall thickness, lower moldboard support angle shall be constructed from 6" x 4" x 3/4" angle..... | [| |] |

Plow Ribs:

SHALL BE OR HAVE:

- | | | | | |
|----|---|---|--|---|
| A) | Shall be vertical support to the moldboard with flame cut 1/2" grade 44W steel Plate and a total of 8 ribs attached to the moldboard..... | [| |] |
|----|---|---|--|---|

Nose Plate:

SHALL BE OR HAVE:

- | | | | | |
|----|---|---|--|---|
| A) | The nose plate shall be constructed from 3/8" grade 44W steel plate and Welded to the moldboard | [| |] |
|----|---|---|--|---|

Blade:

SHALL BE OR HAVE:

- | | | | | |
|----|--|---|--|---|
| A) | 6" three piece carbide blade with a 1/2" cover blade bolted on 12" centers. Blade 132" long and punched 11/16" round hole to accept 12" or 8" punched Center cutting edges. | [| |] |
|----|--|---|--|---|

Shoes:

SHALL BE OR HAVE:

- | | | | | |
|----|--|---|--|---|
| A) | There shall be two moldboard shoes and one nose shoe per plow. The shoes will be constructed from die-cast iron..... | [| |] |
|----|--|---|--|---|

Main Drive Tubes:

SHALL BE OR HAVE:

- | | | | | |
|----|---|---|--|---|
| A) | They shall be constructed from HSS tube of 5" x 5" x 1/4" wall thickness..... | [| |] |
|----|---|---|--|---|

Lateral Drive Angle:

SHALL BE OR HAVE:

- | | | | | |
|----|--|---|--|---|
| A) | Constructed from 6" x 6" x 3/4" thick angle. It shall be boxed in with a 1/2" grade 44W steel plate. The drive angle shall have connecting brackets at three places to attach moldboard assembly | [| |] |
|----|--|---|--|---|

Rear Pushbar:

SHALL BE OR HAVE:

- | | | | | |
|----|---|---|--|---|
| A) | Oscillating pushbar shall be flame cut from 1" x 9" thick grade 44W steel Plate. The pivot bolt shall be 1-1/2" diameter grade 5 bolt with a nylok fastener. | [| |] |
|----|---|---|--|---|

Pushframe Shoes:

SHALL BE OR HAVE:

- A) Consist of TWO NiHard Mushroom shoes with vertical adjustment provided. [|]

Compression Trip:

SHALL BE OR HAVE:

- A) The compression trip shall be a designed to provide a trip action, which minimizes shock impacts. There shall be two compression springs, radially mounted and wound from 5/8" wire to a 5-114" diameter and have 10 active coils. It shall have adjustable retainers allowing for custom tension settings as required. Three slotted weldments allow moldboard to trip rollers, not allowable. The moldboard connects to the push bar via two 1-1/4" diameter pins. The pins shall travel on an inclined plane throughout the trip cycle..... [|]

12ft Wing

YES NO

Moldboard:

SHALL BE OR HAVE:

- A) Wing plow moldboard skin plate shall be a one-piece paneled curvature of not less than 7 gauge material. It shall include two mounting locations at the nose for a 1-1/2" pivot (slider) bolt to attach to the front post of the chassis mounted wing system. The pivot bolt holes shall pass through the 1" thick nose plate and shall be reinforced with a 1/2" plate washer welded to the skin plate. The moldboard shall be supported by four (4) flame cut 1/2" thick plate ribs. The top edge of the moldboard is supported by a 3" by 3" by 1/4" HSS tube with intermediate supports of 1/2" by 4" flat bar and two (2) 1/2" by 4" by 4" angle arm bracket supports..... [|]
- B) The base angle shall be a 6" by 4" by 3/4" angle and shall be available with both 12" and 8" center-to-center punch hole patterns and gusseted as required with 3/8" triangular plate gussets. The discharge end of the skin plate shall have a 3/4" round stock reinforcement. The wing arm attaching bracket shall be bolted in place and adjustable laterally in position. There shall be an attachment point at the discharge end for the travel position safety chain and an intake end safety chain shall be supplied..... [|]

Cutting Edge and Wear Shoes:

SHALL BE OR HAVE:

- A) Shall be a rubber cutting edge overall length of 132" with a 1/2" thick one piece C-1085 steel cover blade. There shall be three (3) cast iron wear shoes bolted behind and through the base angle. Both edge and wear shoes shall be secured with 5/8" grade 5 plated carriage bolts. [|]

Height:

SHALL BE OR HAVE:

- A) Intake height to be a minimum of 29"..... [|]
- B) Discharge height to be a minimum of 40"..... [|]

Length:

SHALL BE OR HAVE:

- A) Blade length to be 132"..... [|]
- B) Overall Length to be 144"..... [|]

Hydraulic System

Hydraulic Pump & PTO (Automatic Transmission):

YES NO

SHALL BE OR HAVE:

- A) The hydraulic pump shall be an axial piston variable pump type. The pump shall have a displacement of 4.88 cubic inches per revolution at maximum stroke which will deliver 21.2 GPM @ 1000 engine RPM. The pump shall have a minimum 2" inch suction line and 12" control drain line plumbed directly back to the reservoir. The pumps compensator shall have side facing adjustments. The pump shall be rated for 6500 PSI maximum and 5000 PSI continuous. The pump shall have a Din type-mounting flange and a Din 5462 8-tooth shaft. The pump shall be Bosch Rexroth A18VO or prior approved equal. A Hotshift series Chelsea PTO model 890 H A FJ W B 5 XS with an extended shaft (Wetspline) that is mounted to the transmission, which shall drive the pump.....[|]

Shutdown System:

SHALL BE OR HAVE:

- A) Float which must be mounted in the hydraulic reservoir. Once the oil level drops below a safe operating level, this switch will disengage the PTO. Once this safety circuit is energized, a light and buzzer on the main low oil control panel will be activated. The low oil circuit will also incorporate a low oil 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 [|]

Filter:

SHALL BE OR HAVE:

- A) Hydraulic oil filter shall be mounted in the reservoir. Hydraulic filter shall be a 16-micron absolute and rated for no less than 60 GPM. Filter shall be model TEF31016VG16SP-UG60E115 or prior approved equal and include visual and electrical bypass indicators. A warning light shall be mounted in the cab and wired to the electrical indicator. The system shall be delivered with one spare filter element.. [|]

Hydraulic Control Valve:

SHALL BE OR HAVE:

- A) The central hydraulic system valve shall be a high-pressure load-sensing valve of sandwich plate design and constructed of cast iron.. [|]
- B) The valve shall be horizontally stackable and serviceable without disassembly..... [|]
- C) It shall be rated for a maximum pressure of 5000 psi on the pump side and 6000 psi at the work ports..... [|]
- D) It shall be rated for 40 GPM at the inlet and 34 GPM at the work. [|]
- E) The valve shall have one individual section for each function. [|]
- F) It shall have the ability to vary the working pressure for each individual work port by using built-in load sense reliefs..... [|]
- G) It shall have built-in load –pressure compensation to allow simultaneous activation of functions [|]
- H) The valve shall be capable of mechanical, pneumatic or electrical actuation.. [|]
- I) The pressure, tank and work ports shall be top ported.. [|]

		YES	NO
J)	All work ports shall be SAE #12. The pressure port shall be SAE #16. The Tank port shall be SAE #16 unless a mid-inlet is used then SAE #20..... []
K)	For ease of service, all electrical solenoids or pneumatic actuators shall be on the same side of the valve..... []
L)	All valving shall be mounted as one main valve assembly. Multiple valve assemblies are unacceptable. []
M)	Valve manufacturer shall be ISO 9001 and ISO 14001 certified. []
N)	The valve is to be arranged as follows:		
	1. Hoist 3-way		
	2. Plow lift 4-way		
	3. Plow Angle 4-way		
	4. Wing toe 4-way		
	5. Wing heel 4-way with 1500-psi (A) port relief valve		
	6. Wing slide 4-way		
	7. Auger 2-way		
	8. Spinner 2-way		
 []

Spreader & Valve Controls:

SHALL BE OR HAVE:

- A) Controls for all valve functions and electronic spreader control will be integrated into a single, self-contained control center. The control center shall be a padded armrest style that is ergonomically designed. Control center shall be modular in design for ease of installation and service and wiring and connectors shall be color coded throughout. A sealed, pre-wired harness for all valve controls must be provided. All components must be durable for long life and trouble free operation.. [|]
- B) CS-150 Joystick Armrest Console:**
 The CS-150 will be a CAN Joystick style and fully proportional for all functions. This will be accomplished using a micro controller. The connection between the CS-150 and the CS550 will be via a single CAN cable. The armrest console must incorporate a single 3 axis 6 button CAN joystick. The control must allow for up to 4 modes of operation. The six joystick buttons will be used for Hoist, Plow, Wing, Pause, Blast and Emergency. (Final joystick layout will be provided to selected manufacturer). The joystick functions must be indicated on CS-550 display. Nulling or Trimming of the joystick functions will be programmed on screen through the CS-550 no external computers or program devices will be required. Nulling or Trimming will be accomplished while the function is moving allowing the minimum and maximum function speeds to be set for each axis. The cable set for any valve function will have C4 Junior timer w/LED indication Connectors. On the main cable set and any valve extension cable..... [|]
- C) There shall also be six auxiliary switches available. The switches shall be located between the joystick and arm rest... [|]
- D) For ease of operation the single stick control shall include the following features:
1. A momentary trigger on the front of the stick to provide safety from accidental activation of any of the functions.
 2. An audible and visible indication of what function is being operated shall be displayed on the spreader controller screen.
 3. To insure longevity of performance, all lighting to be solid-state LED technology. The use of incandescent lamps or EL backlighting is unacceptable..... [|]

- E) Function joysticks shall be of contact less design and offer up to a 5-Million cycle life. The use of potentiometers is unacceptable. To insure safe operation, joystick communication hardware/software shall include the following standard features: input power monitor circuitry and output shut down during low- voltage conditions, power-on joystick input off center checking and output shutdown, joystick out of range checking and output shutdown and true outputs off with joystick centered. Joystick will be full Can Buss..... [|]
- F) **CS-550 Spreader Control:**
1. The CAN Bus spreader control system shall be ground speed oriented to maintain a pre-determined application rate. Control shall be by micro-processor for high control accuracy with the outputs being current compensated.
 2. In order to ensure there will be no electrical interference either to or from the controller, any controller bid shall comply with the following standards:
 - ISO 11452-2(2004-10) for RF Immunity
 - ISO 11452-4(1996) for RF Immunity
 - ISO 7637-2(2004) for Conducted Immunity
 - ISO 7637-2(2004-06) for Transient Emissions
 3. Controller shall comply with ISO 16750-5 for Resistance to Media. (resistance to spills of coffee, soda etc.)
 4. The controller shall be capable of operating in Manual, Automatic (Closed Loop), Open Loop, Ground Speed Triggered Manual and 12V triggered modes.
 5. Controller shall have a 7" wide VGA touch screen display with 262144 colors.
 6. The display shall be a glass/film/glass design with a hardness of 7H.
 7. The display shall have adjustable brightness with the maximum brightness being no less than 400 cd/m2.
 8. The display shall include a 1.5 watt speaker that announces rate changes, pause an blast.
 9. The controller shall be capable of having 4 different solid material calibrations, 4 different prewet liquid calibrations and 4 different anti-ice material calibrations for a total of 12 different materials. Each material shall have 9 programmable application rates.
 10. Controller shall have 3 detented rotary knobs for application rate selection. Each knob shall have stainless steel shafts and have a rotational torque of at least 8 oz-in.
 11. The controller shall be capable of operating Auger/Conveyer, Spinner, Pre-Wet, Anti-Ice, Cross Conveyer, Air Gate, Closed Loop Gate and Spinner Chute control.
 12. It must be capable of operating the Spinner, Auger/Conveyer, Pre-Wet, and Anti-Ice all at the same time.
 13. The controller shall have the following features:
 - a) **Gate Read Back:** Spreader control must be capable of reading a gate feedback signal to alert driver when gate is out of range and inaccurate spreading may be occurring. This requires optional feedback sensor.
 - b) **Closed Loop Hydraulic Gate:** The controller shall be capable of automatically controlling the opening of the gate in response to groundspeed and application rate changes through the use of an optional hydraulic gate cylinder with a built-in position sensor. Gate positioning range shall be from

fully closed to fully open and any setting in between. Controller shall be capable of detecting whenever the gate is fully closed and disable the conveyor output to prevent damage to the gate.

- c) **GPS Compatible:** The controller, as supplied, must be capable of passing data logging information directly to an external GPS system without having to purchase additional equipment from the spreader controller manufacturer.
- d) **Temperature Read Back and Temperature Compensation:** The controller shall be capable of displaying both road temperature and ambient air temperature on screen when an external temperature sensor is used. The controller shall be capable of automatically increasing the application rate in response to decreasing road temperature. The rate at which the controller increases the application shall be adjustable in the controllers programming.
- e) **Onboard Wi-Fi and GPS info:** The controller shall have built-in Wi-Fi and GPS for optional data downloading. This requires optional Wi-Fi and GPS antennas.
- f) **Auto Nulling:** The controller shall be capable of auto nulling spinner, conveyor/auger and liquid channels when feedback sensors are used. Manual Nulling must be available for all circuits including cross conveyor left and right.
- g) **System Programming:** Programming shall only be accessed by use of an encrypted USB key. All programming shall be done by using the touch screen display. The touch screen display shall have a pop-up keyboard for easy entering of information.
- h) **Material Set Back:** When using liquid to pre-wet granular material the controller must be capable of cutting back the granular material by predetermined percentage when the liquid is being applied. The percentage shall be programmable.
- i) **Trip Summary Information:** The driver must be able to access a trip summary screen that will show them miles traveled and material spread quantities. This information shall also be stored in the controller and used to calculate season totals.
- j) **On Screen Error Code Log:** For ease of troubleshooting, the controller shall have an on screen error log that is capable of displaying any error codes that have been generated. The error log shall not clear itself when the controller is powered off.
- k) **Data Logging:** The controller, as supplied, shall be capable of event based data logging such as Event time, Date, Material set-point and usage amounts, Spinner set-point, Pre-Wet set-point and usage amounts, Blast distance and amount used, Pause distance, Gate Setting, and Road Temperature. All the information will be transferred from the spreader control to a desktop/laptop computer via USB drive. All data logging information must be capable of being customized and exported. Summation reports are not acceptable.
- l) **Software Updates:** The spreader control software must be able to be upgraded via desktop/laptop computer and by encrypted USB key. EPROM changes are not acceptable.

..... [|]

- G) The electronic spreader control shall have a field replaceable battery back up that protects memory functions. Data memory shall be 512K RAM. For data logging unit shall retain a minimum of four thousand (4000) events. The electronic spreader firmware shall be upgradeable by downloading files from the supplier's web site at no charge to the municipality for the life of the unit. The unit must be protected from reverse polarity, as well as be

over-voltage protected by using a five-amp reset circuit breaker. All circuit boards to be conformal coated. The spreader control is to be capable of self-diagnostics for system errors and correction procedures..... [|]

Hydraulic Lines & Plumbing:

SHALL BE OR HAVE:

- A) All hydraulic lines shall be stainless steel. All hydraulic lines and plumbing shall be of sufficient capacity so as not to create heat or turbulence within hydraulic system. Suction line between reservoir and pump shall be a minimum of 2 in. I.D. with a minimum SAE 100-R4 rating and shall be secured on both ends via heavy duty banding straps, radiator hose clamps unacceptable. All pressure hoses, including signal sense to pump shall have swivel fittings on both ends and have a minimum SAE 100-R2 rating. Return lines and case drain shall have minimum SAE 100-R1 rating..... [|]
- B) Hydraulic lines shall be routed to minimize interference with equipment and chassis components requiring periodic servicing. Support brackets, grommets, and tie wraps shall be provided where appropriate to protect lines from damage by abrasion, cutting or impact..... [|]
- C) Hoses shall not be routed near exhaust manifolds pipes, bolts, sharp edges, and exhaust system to prevent wear, fatigue, or fire. Pipe fittings are not acceptable in any high-pressure line. Maximum distance between support clamps on all hydraulic lines shall be 24in [|]
- D) All hose, which is supplied, is nylon reinforced PVC hose with a working pressure of not less than 200 psi with max temperature rating of 100°F. All fasteners will be 316 -stainless steel [|]
- E) Hydraulic quick couplers will be our standard [|]

SPECIFICATIONS FOR 10' DUMP BODIES

		YES	NO
<u>Body:</u>	<u>SHALL BE OR HAVE:</u>		
A)	10 foot length by 86 inch front inside width..... [
B)	Tapered to 88 inch at rear to assist in load break away,..... [
C)	All construction 304 stainless steel 7 gauge, except floor [
D)	ALL solid weld construction (NO exceptions). [
E)	3 inch one piece Hi-Tensile steel floor with inside radius, all one piece (sides to floor). AR225 [
F)	40 inch sides measured from top of rail to floor body. [
	1) Side sheets to be one piece, on outside with formed in "V" side brace. [
	2) Inside of body to have full width closure of side brace so as to form an integral horizontal "side beam" on body..... [
	3) No vertical side brace [
	4) Horizontal side brace only allowed both upper and lower [
	5) Smooth side [
G)	Side board pockets front, rear and center of body to include 2 inch thick by 8 inch high Hardwood sideboards. [
	1) Center side board pocket to be flush with the outside edge of top rail..... [
H)	Boxed top dirt shedding top rails..... [
I)	Sloped outside rub rails [
J)	Full depth rear corner post..... [
K)	Full depth front post, [
L)	Two (2) sets of banjo eyes per side made of 5/16 inch thickness steel [
	1) One at top of body [
	2) One in the middle of the body..... [
M)	Overhang from center of hinge pin to end of floor to be 18 inches [
N)	Dump Body Rear Hinge shall be 4 inch x 4 inch x 3/8 inch Structural angle with 2-1/4 inch nitrated hinge Pins and 4 inch nitrated hinge blocks with grease points on all bearing points,..... [
O)	Four (4) Lifting Lugs welded in each body corner for handling, Location to be determined at pre-build meeting..... [
P)	Fold up ladder, steps on driver's side in front of the box, outside and inside [
<u>Tailgate:</u>	<u>SHALL BE OR HAVE:</u>		
A)	1/4 inch Hi-Tensile stainless steel, 60 inches high..... [
B)	ALL other braces to be of 304 stainless steel 7 gauge..... [
C)	Double Acting tailgate..... [
D)	9 inch by 13 inch Coal Door, w/handle extended to drivers side of box..... [
E)	Two (2) 6 foot long 3/8 inch spreader chains supplied..... [
F)	Top hardware shall be 3/4 inch thick hinge, 1-1/4 inch nitrated cold rolled steel pins braced with 1/2 inch angle. [
G)	The Top hinges are equipped with removable pins, and bottom shall be a minimum of 10 inches long, 1 inch diameter. [
H)	Locking mechanism shall be operated by a double acting 3-1/2 inch air cylinder with 1 inch nitrated shaft (Location and Style will be discussed at Prebuild)..... [
I)	Air cylinder (Location and Style will be discussed at Prebuild) [
J)	D-Ring mounted outside tailgate to assist with removal..... [
K)	Locking mechanism shall be zinc plated with individual threaded locking clevises for each side. Both pivot bearing and locking adjustment thread will have grease points with 3/4 inch latch plates and 5/8 inch latch hooks with 1-1/4 inch locking pins [
<u>Understructure:</u>	<u>SHALL BE OR HAVE:</u>		
A)	10 inch x 1/4 inch thick Reinforced Hi tensile Steel Long members, MINIMUM..... [
B)	80,000 PSI continuously welded to the floor..... [
C)	Body shall be of cross member-less design [

YES NO

Hoist:

SHALL BE OR HAVE:

- | | | | | |
|----|---|---|--|---|
| A) | Front Mounted upright trunion telescopic hoist..... | [| |] |
| B) | DOUBLE acting B power up and power down all sections. | [| |] |
| C) | Dog house not to protrude into body more than 12 inches | [| |] |
| D) | Dog house wrapped around with 3/16 plate with 3/16 inch mounting
ears and 3/8 inch steel gussets | [| |] |
| E) | Oscillating collar with 2 inch diameter pins, top and bottom | [| |] |
| F) | Cylinder base tube to be a minimum of 8 inches, first sliding stage to be
7 inch, Second stage to be 6 inch, and third stage to be 5 inch..... | [| |] |
| G) | 30 ton capacity minimum and rated at class 130 | [| |] |

Electric Tarp

System:

SHALL BE OR HAVE:

- | | | | | |
|----|--|---|--|---|
| A) | Roll-Rite Model or equal to Fit 10ft Dump Body..... | [| |] |
| B) | Tarp fully automatic electric drive must be able to do from cab | [| |] |
| C) | Tarp drive Chrome plated 12 volt gear motor..... | [| |] |
| D) | One piece polished aluminum wind deflector..... | [| |] |
| E) | Tarp with gravity powered tensioning bow to assist in holding tarp down..... | [| |] |
| F) | Tarp bows to include flat offset elbows, to angle bows out of load zone..... | [| |] |
| G) | Pivots to be external mounted through the side rail of body..... | [| |] |
| H) | Tarp to be mounted and operational prior to delivery, location to be
determined @ pre-build meeting | [| |] |

Accessories:

SHALL BE OR HAVE:

- | | | | | |
|----|--|---|--|---|
| A) | WARNING LIGHT / Body Up Light..... | [| |] |
| B) | OSHA approved body prop. | [| |] |
| C) | Air operated switch to control operation of tailgate. (open/close). | [| |] |
| D) | 1/2 Cab shield of 304 stainless steel. | [| |] |
| E) | LED light: one (1) rear oval stop, tail & turn in each rear corner post,..... | [| |] |
| F) | One LED Amber Flashing light in each corner post,..... | [| |] |
| G) | One back up light in each corner post,..... | [| |] |
| H) | One (1) center, three (3) red-Light cluster with wiring harness
complying with FMVSS-108 lighting law,..... | [| |] |
| I) | One STAR LED 9016LEDV-AA-C, Amber magnet mount to cab roof. | [| |] |
| J) | Shovel holder on front left corner of body - to hold a 9 inch wide
flat nose shovel..... | [| |] |
| K) | Two (2) tarp rails/steps per side of body, which will also be used by operator
to look/inspect inside of dump body and sander/spreader, location to be
determined at pre-build meeting | [| |] |
| L) | Two (2) steps inside dump body B one each front corner. | [| |] |
| M) | Pintle Plate with "D" rings 25 TON Pintle & Chassis Lights built
into plate. | [| |] |
| N) | Front of Box "D" rings inside for sander tie down, placement will be
Determined at pre-build meeting. | [| |] |
| O) | Sander Hydraulic hook-up lines to be run to the rear of the cab & light
Hook-up, Pintle hitch airlines. | [| |] |
| P) | Work light mounted onto front hitch | [| |] |
| Q) | Mirror to be mounted onto front post | [| |] |
| R) | Wing light mounted at County desired location | [| |] |
| S) | Spinner light mounted at County desired location. | [| |] |
| T) | 7 way plug to rear of the truck..... | [| |] |

Bolt on Apron:
(Drizzle Board)

SHALL BE OR HAVE:

- | | | | | |
|----|--|---|--|---|
| A) | To be bolted to the OUTSIDE Corners and across the width both along
the top and under apron, | [| |] |
| B) | Full width of dump body | [| |] |
| C) | Constructed of 304 stainless steel 7 gauge thickness 8 inches deep | [| |] |
| D) | All joint shall be welded solid | [| |] |

SPECIFICATIONS FOR
10 FOOT STAINLESS STEELS V-BODY SALT & SAND SPREADER

SPREADER:	<u>SHALL BE OR HAVE:</u>	YES	NO
	A) Self-contained hopper type construction spreader, designed for mounting in a truck dump body.....	[]
	B) Complete and ready for mounting with all necessary equipment and parts to ready the unit for operation, <u>except</u> the hoses which connect from the front of the hopper to the truck.....	[]
	C) ALL new & current production.(the unit & all parts).....	[]
	D) Complete unit is to be primed and painted.....	[]
	E) Front corner hold downs, 2" x 3" opening welded on.....	[]
	F) Extra lifting lug center top of body.....	[]
HOPPER:	<u>SHALL BE OR HAVE:</u>		
	A) Body length - 10 feet inside length.....	[]
	B) Capacity water level - 6.4 yards.....	[]
	C) Overall width - 83 1/2 inches.....	[]
	D) Side Slope - 40 to 50 degrees.....	[]
	E) Body constructed of 10 gauge, type 304 stainless steel throughout.....	[]
	F) Sides supported by 8 gussets of 12 gauge material extending full length on sides.....	[]
CONVEYOR:	<u>SHALL BE OR HAVE:</u>		
	A) Conveyor trough overall width is to be 24 inches with 3/16" steel plates & sides.....	[]
	B) Inner edge of conveyor formed down to shield conveyor chain and prevent material from getting into chain.....	[]
	C) Conveyor chain will be Pintle type #D667X with a pitch of 2 1/4 inch and an average tensile strength of 42,000 lb.....	[]
	1) Chain to be 20 3/4 inches wide, from center of sprocket to center of sprocket.....	[]
	2) Cross bars welded to each link.....	[]
	D) Front chain idler roller. 3" tubular steel member welded to a 1-1/4 inch steel through shaft. Mounted to a spring loaded 1/4 inch plate with four (4) bolt flange bearing, 3" adjustment.....	[]
	E) Floor plate to be laterally braced in at least three (3) places with 3/8" x 2" ribs welded to under side.....	[]
GEAR BOX:	<u>SHALL BE OR HAVE:</u>		
	A) Fully enclosed and lubricated <u>50:1</u> wormgear type.....	[]
	B) 3 " tube assembly on 1-1/4 " stub shafts which drives the <u>SIX (6)</u> <u>TOOTH</u> chain drive sprockets, mounted in three (3) bolt flange bearing.....	[]
	C) Motor down facing rear of the sander	[]
SPREADING DISC & DISTRIBUTOR:	<u>SHALL BE OR HAVE:</u>		
	A) 20" Polyurethane sand & salt spinner disc	[]
	B) Adjustable spreader chutes to govern direction of spread.....	[]
	C) Adjustable Shields around disc to govern distance of spread and protect against overthrow of material.	[]
FEEDGATE:	<u>SHALL BE OR HAVE:</u>		
	A) 19" wide x 10" high of 1/4" steel.....	[]
	B) Flexible bottom edge to seal when closed.....	[]
	C) Self-locking control handle extended to the outside of hopper to control gate positioning, w/grease fitting.....	[]

		YES	NO
POWER SYSTEM:	<u>SHALL BE OR HAVE:</u>		
	A) Two (2) hydraulic motors.	[]
	1) One motor directly mounted to the rear of gear reducer, which is connected to the conveyor drive shaft. This motor shall be At least 20 gal. per min. 12" cu. in. displacement	[]
	2) A second motor mounted at bottom of the spinner platter.....	[]
TIE DOWN SYSTEM:	<u>SHALL BE OR HAVE:</u>		
	A) Stainless steel rear tailgate latch system (details to be determined at prebuild)	[]
	B) Front latch system to be binders or ratchet strap from the sander to the outside of the box.	[]
LIGHTS:	<u>SHALL BE OR HAVE:</u>		
	A) Light bar installed with two 7" round LED flashers at each end (example: Tarco Light Bar).....	[]
	B) Three 2" round marker lights in center (IPO ICC strip), mounted to the rear of the hopper at the very top, with dirt cover.....	[]
	C) Trailer plug cable and trailer plug connection used to power lights.....	[]
	D) Run by a 7-way trailer plug.....	[]
	E) Two (2) Spinner LED Spot Lights.....	[]

SPECIFICATIONS FOR 14' DUMP BODIES

		YES	NO
<u>Body:</u>	<u>SHALL BE OR HAVE:</u>		
A)	14 foot length by 86 inch front inside width..... []
B)	Tapered to 88 inch at rear to assist in load break away,..... []
C)	All construction 304 stainless steel 7 gauge, except floor []
D)	ALL solid weld construction (NO exceptions). []
E)	3 inch one piece Hi-Tensile steel floor with inside radius, all one piece (sides to floor). AR225 []
F)	40 inch sides measured from top of rail to floor body. []
	1) Side sheets to be one piece, on outside with formed in "V" side brace. []
	2) Inside of body to have full width closure of side brace so as to form an integral horizontal "side beam" on body..... []
	3) No vertical side brace []
	4) Horizontal side brace only allowed both upper and lower []
	5) Smooth side []
G)	Side board pockets front, rear and center of body to include 2 inch thick by 8 inch high Hardwood sideboards. []
	1) Center side board pocket to be flush with the outside edge of top rail..... []
H)	Boxed top dirt shedding top rails..... []
I)	Sloped outside rub rails []
J)	Full depth rear corner post..... []
K)	Full depth front post, []
L)	Two (2) sets of banjo eyes per side made of 5/16 inch thickness steel []
	1) One at top of body []
	2) One in the middle of the body..... []
M)	Overhang from center of hinge pin to end of floor to be 18 inches []
N)	Dump Body Rear Hinge shall be 4 inch x 4 inch x 3/8 inch Structural angle with 2-1/4 inch nitrated hinge Pins and 4 inch nitrated hinge blocks with grease points on all bearing points,..... []
O)	Four (4) Lifting Lugs welded in each body corner for handling, location to be determined at pre-build meeting..... []
P)	Fold up ladder, steps on driver's side in front of the box, outside and inside []

<u>Tailgate:</u>	<u>SHALL BE OR HAVE:</u>		
A)	1/4 inch Hi-Tensile stainless steel, 54 inches high..... []
B)	ALL other braces to be of 304 stainless steel 7 gauge..... []
C)	Double Acting tailgate..... []
D)	9 inch by 13 inch Coal Door, w/handle extended to drivers side of box..... []
E)	Two (2) 6 foot long 3/8 inch spreader chains supplied..... []
F)	Top hardware shall be 3/4 inch thick hinge, 1-1/4 inch nitrated cold rolled steel pins braced with 1/2 inch angle. []
G)	The Top hinges are equipped with removable pins, and bottom shall be a minimum of 10 inches long, 1 inch diameter. []
H)	Locking mechanism shall be operated by a double acting 3-1/2 inch air cylinder with 1 inch nitrated shaft (Location and Style will be discussed at Prebuild)..... []
I)	Air cylinder (Location and Style will be discussed at Prebuild) []
J)	D-Ring mounted outside tailgate to assist with removal..... []
K)	Locking mechanism shall be zinc plated with individual threaded locking clevises for each side. Both pivot bearing and locking adjustment thread will have grease points with 3/4 inch latch plates and 5/8 inch latch hooks with 1-1/4 inch locking pins []

<u>Understructure:</u>	<u>SHALL BE OR HAVE:</u>		
A)	10 inch x 1/4 inch thick Reinforced Hi tensile Steel Long members, MINIMUM..... []
B)	80,000 PSI continuously welded to the floor..... []
C)	Body shall be of cross member-less design []

Hoist:**SHALL BE OR HAVE:**

- | | | | | |
|----|---|---|--|---|
| A) | Front Mounted upright trunion telescopic hoist..... | [| |] |
| B) | DOUBLE acting B power up and power down all sections. | [| |] |
| C) | Dog house not to protrude into body more than 12 inches | [| |] |
| D) | Dog house wrapped around with 3/16 plate with 3/16 inch mounting
ears and 3/8 inch steel gussets | [| |] |
| E) | Oscillating collar with 2 inch diameter pins, top and bottom | [| |] |
| F) | Cylinder base tube to be a minimum of 8 inches, first sliding stage to be
7 inch, Second stage to be 6 inch, and third stage to be 5 inch..... | [| |] |
| G) | 30 ton capacity minimum and rated at class 130 | [| |] |

**Electric Tarp
System:****SHALL BE OR HAVE:**

- | | | | | |
|----|--|---|--|---|
| A) | Roll-Rite Model or equal to Fit 14ft Dump Body | [| |] |
| B) | Tarp fully automatic electric drive must be able to do from cab | [| |] |
| C) | Tarp drive Chrome plated 12 volt gear motor..... | [| |] |
| D) | One piece polished aluminum wind deflector..... | [| |] |
| E) | Tarp with gravity powered tensioning bow to assist in holding tarp down..... | [| |] |
| F) | Tarp bows to include flat offset elbows, to angle bows out of load zone..... | [| |] |
| G) | Pivots to be external mounted through the side rail of body..... | [| |] |
| H) | Tarp to be mounted and operational prior to delivery, location to be
determined @ pre-build meeting | [| |] |

Accessories:**SHALL BE OR HAVE:**

- | | | | | |
|----|--|---|--|---|
| A) | WARNING LIGHT / Body Up Light | [| |] |
| B) | OSHA approved body prop. | [| |] |
| C) | Air operated switch to control operation of tailgate. (open/close). | [| |] |
| D) | 1/2 Cab shield of 304 stainless steel. | [| |] |
| E) | LED light: one (1) rear oval stop, tail & turn in each rear corner post,..... | [| |] |
| F) | One LED Amber Flashing light in each corner post,..... | [| |] |
| G) | One back up light in each corner post,..... | [| |] |
| H) | One (1) center, three (3) red-Light cluster with wiring harness
complying with FMVSS-108 lighting law,..... | [| |] |
| I) | One STAR LED 9016LEDV-AA-C, Amber magnet mount to cab roof. | [| |] |
| J) | Shovel holder on front left corner of body - to hold a 9 inch wide
flat nose shovel..... | [| |] |
| K) | Two (2) tarp rails/steps per side of body, which will also be used by operator
to look/inspect inside of dump body and sander/spreader, location to be
determined at pre-build meeting | [| |] |
| L) | Two (2) steps inside dump body B one each front corner. | [| |] |
| M) | Pintle Plate with "D" rings 25 TON Pintle & Chassis Lights built
into plate. | [| |] |
| N) | Front of Box "D" rings inside for sander tie down, placement will be
Determined at pre-build meeting. | [| |] |
| O) | Sander Hydraulic hook-up lines to be run to the rear of the cab & light
Hook-up, Pintle hitch airlines. | [| |] |
| P) | Work light mounted onto front hitch | [| |] |
| Q) | Mirror to be mounted onto front post | [| |] |
| R) | Wing light mounted at County desired location | [| |] |
| S) | Spinner light mounted at County desired location. | [| |] |
| T) | 7 way plug to rear of the truck..... | [| |] |

**Bolt on Apron:
(Drizzle Board)****SHALL BE OR HAVE:**

- | | | | | |
|----|--|---|--|---|
| A) | To be bolted to the OUTSIDE Corners and across the width both along
the top and under apron, | [| |] |
| B) | Full width of dump body | [| |] |
| C) | Constructed of 304 stainless steel 7 gauge thickness 8 inches deep | [| |] |
| D) | All joint shall be welded solid | [| |] |

SPECIFICATIONS FOR 13 FOOT STAINLESS STEEL V-BODY SALT & SAND SPREADER

SPREADER:	<u>SHALL BE OR HAVE:</u>	YES	NO
	A) Self-contained hopper type construction spreader, designed for mounting in a truck dump body.....	[]
	B) Complete and ready for mounting with all necessary equipment and parts to ready the unit for operation, <u>except</u> the hoses which connect from the front of the hopper to the truck.....	[]
	C) ALL new & current production.(the unit & all parts).....	[]
	D) Complete unit is to be primed and painted.....	[]
	E) Front corner hold downs, 2" x 3" opening welded on.....	[]
	F) Extra lifting lug center top of body.....	[]
HOPPER:	<u>SHALL BE OR HAVE:</u>		
	A) Body length - 13 feet inside length.....	[]
	B) Capacity water level - 11 yards.....	[]
	C) Overall width - 83 1/2 inches.....	[]
	D) Side Slope - 40 to 50 degrees.....	[]
	E) Body constructed of 10 gauge, type 304 stainless steel throughout.....	[]
	F) Sides supported by 8 gussets of 12 gauge material extending full length on sides.....	[]
CONVEYOR:	<u>SHALL BE OR HAVE:</u>		
	A) Conveyor trough overall width is to be 24 inches with 3/16" steel plates & sides.....	[]
	B) Inner edge of conveyor formed down to shield conveyor chain and prevent material from getting into chain.....	[]
	C) Conveyor chain will be Pintle type #D667X with a pitch of 2 1/4 inch and an average tensile strength of 42,000 lb.....	[]
	1) Chain to be 20 3/4 inches wide, from center of sprocket to center of sprocket.....	[]
	2) Cross bars welded to each link.....	[]
	D) Front chain idler roller. 3" tubular steel member welded to a 1-1/4 inch steel through shaft. Mounted to a spring loaded 1/4 inch plate with four (4) bolt flange bearing, 3" adjustment.....	[]
	E) Floor plate to be laterally braced in at least three (3) places with 3/8" x 2" ribs welded to under side.....	[]
GEAR BOX:	<u>SHALL BE OR HAVE:</u>		
	A) Fully enclosed and lubricated <u>50:1</u> wormgear type.....	[]
	B) 3 " tube assembly on 1-1/4 " stub shafts which drives the <u>SIX (6)</u> <u>TOOTH</u> chain drive sprockets, mounted in three (3) bolt flange bearing.....	[]
	C) Motor down facing rear of the sander	[]
SPREADING DISC & DISTRIBUTOR:	<u>SHALL BE OR HAVE:</u>		
	A) 20" Polyurethane sand & salt spinner disc.....	[]
	B) Adjustable spreader chutes to govern direction of spread.....	[]
	C) Adjustable Shields around disc to govern distance of spread and protect against overthrow of material.	[]
FEEDGATE:	<u>SHALL BE OR HAVE:</u>		
	A) 19" wide x 10" high of 1/4" steel.....	[]
	B) Flexible bottom edge to seal when closed.....	[]
	C) Self-locking control handle extended to the outside of hopper to control gate positioning, w/grease fitting.....	[]

		YES	NO
POWER SYSTEM:	<u>SHALL BE OR HAVE:</u>		
	A) Two (2) hydraulic motors. []
	1) One motor directly mounted to the rear of gear reducer, which is connected to the conveyor drive shaft. This motor shall be At least 20 gal. per min. 12" cu. in. displacement []
	2) A second motor mounted at bottom of the spinner platter..... []
TIE DOWN SYSTEM:	<u>SHALL BE OR HAVE:</u>		
	A) Stainless steel rear tailgate latch system (details to be determined at prebuild) []
	B) Front latch system to be binders or ratchet strap from the sander to the outside of the box. []
LIGHTS:	<u>SHALL BE OR HAVE:</u>		
	A) Light bar installed with two 7" round LED flashers at each end (example: Tarco Light Bar)..... []
	B) Three 2" round marker lights in center (IPO ICC strip), mounted to the rear of the hopper at the very top, with dirt cover..... []
	C) Trailer plug cable and trailer plug connection used to power light..... []
	D) Run by a 7-way trailer plug..... []
	E) Two (2) Spinner LED Spot Lights..... []

OPTION #1 FULL TRIP REVERSIBLE SNOWPLOW

YES NO

MOLDBOARD: SHALL BE OR HAVE:

- A) The Moldboard shall be 11ft Long overall and 42" High at inside of Top radius. The Moldboard shall have an integral snow deflector that extends a minimum of 12" fore of the cutting edge. The Moldboard shall be brake formed not rolled from not less than 8gauge H.R.M.S. sheet. The Moldboard shall include an integral formed channel at the top leading edge of the snow deflector. To provide added rigidity. The Moldboard shall be supported by not less than (8) 1/2" thick vertical ribs, six of which serve as push frame Connection points. The Moldboard lower horizontal shall be 6 x 4 x 1/2" structural angle..... [|]

CARBIDE CUTTING SHALL BE OR HAVE:

EDGE: (12" punched)

- A) The primary cutting edge to be Carbide Insert Cutting Edge or Equal. All edges shall be punched with 11/16" square holes on 12" centers to AASHTO standards. Attaching hardware shall be not less than 5/8" grade 5 carriage bolts with locknuts..... [|]

TWIN CYLINDER CUSHION VALVE POWER REVERSE PUSHFRAME: SHALL BE OR HAVE:

- A) The reversing pushframe shall be fabricated from 4" x 4" x 3/8" square tubing and 4" x 3" x 1/4" rectangular structural tubing gusseted at key stress points. Two (2) 1-1/4" and two (2) 3/4" thick connecting lugs, spanning 88", shall be welded to the 4" x 4" x 3/8" member of the reversing circle. These lugs will serve as connection points to the moldboard. Three (3) 1-1/4" cold rolled steel pins shall connect the moldboard to the pushframe. The pivot frame shall be constructed from 3/8" formed plates and 3/8" x 1-1/2" bar stock gusseted at key stress points. Its swivel support plate shall be made from 1" steel plate. The pivot frame shall connect to the reversing frame with a 1-15/16" diameter cold rolled steel pin through a 3" O.D. x 1/2" wall tube. Provision shall be made for plow oscillation so to allow the plow to follow the road contour. The reversing mechanism shall be of the cushion valve protection type of design. It shall include two (2) 3-1/2" x 15" stroke double acting cylinders (piped in series) providing plowing positions up to 35 degrees, either right or left of center. A cushion valve shall be installed at the plow driveframe and plumbed in line before the cylinders, so to provide protection for both the plow and hydraulic components.[|]

TRIP SPRING ARM: SHALL BE OR HAVE

- A) The (2) trip spring arms shall serve as the trip mechanism on the plow. Limit stops shall be incorporated into the design of the arms to prevent the top portion of the plow from contacting the pavement when fully tripped. The arm assemblies are each pin connected under double shear load via a 3/4" thick connecting lug at the moldboard, and (2) 1/2" thick connecting lugs at the reversing frame. Arm assemblies shall be connected to the moldboard and the pushframe with no less than 1" pins. Trip spring arms shall be constructed from no less than the following; (2) 1/2" thick bars, (1)3/4" thick bar, enclosed by (1) compression spring with 3/4" diameter wire coils x 5 3/8" O.D. x 26" long. The arms shall also serve the dual purpose of allowing adjustment of the moldboard cutting edge angle from 25 degrees from vertical to 15 degrees from vertical. [|]

UQH HITCH FEMALE (PLOW HALF): SHALL BE OR HAVE

- A) The rear of the plow shall be fitted with a quick couple swivel bar. It shall oscillate about a 1-1/4" on a grade 5 bolt to allow the plow to follow the contour of the plowing surface. It shall consist of a minimum 7"x 23 lbs per foot structural channel x 35" long fitted with two (2) spring loaded clamp mechanisms on 30 1/2" centers. The clamp mechanisms are constructed to automatically couple and latch to special flared attaching lugs at the bottom of a truck mounted attachment hitch. Included shall be a manual de-latch handle to accommodate uncoupling of the plow.

..... [|]

LIFT LEVELING DEVICE LONG ROLLER: SHALL BE OR HAVE

- A) The two vertical supports of the lift leveling device shall be welded to the push frame and shall consist of (2) plates of 3/4" thick steel supported with (2) 1/2" thick steel bars and gussets. They support a 1-3/4" diameter piece of cold rolled steel. The slider assembly which rolls along this round stock consists of (2) 1/2" plates which support a grooved roller. The lifting chain shall be secured to the sliding collar with no less than a 3/8" midlink.

..... [|]

MOLDBOARD SHOE SPECIFICATIONS (25°): SHALL BE OR HAVE

- A) Moldboard shoe shall be manufactured from a wear plate of 1 1/2" steel plate. A mounting plate and gussets from 1/2" plate steel shall be welded to the top of the wear plate to allow a 25° attack angle when the shoe is flat on the ground. Moldboard shoe shall be secured with (2) 5/8" grade 5 carriage bolts and locknuts.

..... [|]

12" MUSHROOM SHOE (CARBIDE): SHALL BE OR HAVE

- A) Quantity two (2) 12" diameter mushroom shoes offering 63 square inches of bearing surface and a minimum Brinell hardness of 475. The shoes shall be vertically adjustable via threaded rods with folding lock type handles, which include compression type shock absorbing springs. The wheels shall be capable of horizontal swivel via an inner barrel rotating within an outer barrel. The barrel arrangements shall include a lubrication fitting. In addition, the shoes shall be capable of vertically oscillating to conform to varying pavement conditions.

..... [|]

RUBBER DEFLECTOR SPECIFICATIONS (11FT): SHALL BE OR HAVE

- A) Snow deflector shall be made of 3/8" x 12" x 132" rubber, and shall be held in place with an 8 gauge steel retaining strap and no less than 3/8" grade 5 hex head bolts washers and locknuts.

..... [|]

PLOW MARKER ONE-WAY MOLDBOARD: SHALL BE OR HAVE

- A) Plow Marker shall be fluorescent orange, flexible and 28" long.

..... [|]

SNOWFIGHTING EQUIPMENT
EXCEPTION SHEET

PLEASE STATE ON THIS SHEET, ALL EXCEPTION TAKEN TO THE SPECIFICATIONS THAT FOLLOW:
THIS SHALL INCLUDE ALL **“NO”** AND **“EXCEED”** INDICATIONS

COMPANY NAME

SIGNATURE

Please note: The successful Bidder will meet with Cattaraugus County Department of Public Works and provide engineering drawings and data insuring all proper dimensions to fully insure units will and do comply with county equipment, IE paving and shoulder machines

Manuals:	<u>VENDOR SHALL FURNISH:</u> FOR EACH TRUCKS, DUMP BODIES, PLOWS, WINGS, HYDRAULIC CONTROL UNITS, AND SPREADERS	
		YES NO
	A) On-line Web-based Illustrated parts manual	[]
	B) On-line Web-based Service manual.....	[]
	C) One Operator's Manual	[]
	D) One Electrical Diagnostic Trouble Shooting Guide.....	[]
	E) One Electrical Schematic Manual.....	[]

Training: The successful bidder shall provide four (4) hours training from factory authorized technician, to county employees, on basic operation & preventive maintenance checks of bid vehicles and equipment.

Warranty: Warranty shall be the manufacturer's standard warranty, a copy of which shall be submitted with bid.

All new vehicles and equipment shall comply with all NYS and Federal regulations and standards.

BID FORM

Any modifications to these specifications shall be listed on Exception Sheet.

DELIVERY OF CABS & CHASSIS TO INSTALLERS OF BODIES AND SNOWFIGHTING EQUIPMENT WITHIN _____ **DAYS** AFTER RECEIPT OF ORDER. **SUCCESSFUL BIDDER SHALL NOTIFY CATTARAUGUS COUNTY DPW WHEN DELIVERY OF CHASSIS IS MADE.**

DELIVERY WITHIN **90 DAYS** MAXIMUM AFTER RECEIPT OF CHASSIS BY INSTALLER OF BODIES AND SNOWFIGHTING EQUIPMENT, F.O.B. CATTARAUGUS CO. DPW, 8810 ROUTE 242. LITTLE VALLEY, NY. \$100.00 DAILY PENALTY WILL BE ASSESSED FOR LATE DELIVERY.

ALL PRICES ARE TO INCLUDE INSTALLATION AND DELIVERY (As Specified)

Year of Cab and Chassis _____ Make/Model of Cab & Chassis _____ / _____

PER UNIT COST for CAB & CHASSIS (SINGLE AXLE) \$ _____

Year of Cab and Chassis _____ Make/Model of Cab & Chassis _____ / _____

PER UNIT COST for CAB & CHASSIS (TANDEM AXLE) \$ _____

Make/Model of Snow Plow Equipment: _____ / _____

Make of Body: _____ Model of Body _____

Make of Hoist: _____ Model of Hoist: _____

**PER UNIT COST for COMPLETE PLOW EQUIPMENT,
FOR 10' DUMP BODY & HYDRAULICS** \$ _____

Make/Model of Snow Plow Equipment: _____ / _____

Make of Body: _____ Model of Body _____

Make of Hoist: _____ Model of Hoist: _____

**PER UNIT COST for COMPLETE PLOW EQUIPMENT,
FOR 14' DUMP BODY & HYDRAULICS** \$ _____

Make of Spreader: _____ / Model of Spreader: _____ Year _____

PER UNIT COST for 10' SANDER \$ _____

Make of Spreader: _____ / Model of Spreader: _____ Year _____

PER UNIT COST for 13' SANDER \$ _____

***** **Award will be determined by low bidder (without options).** *****

Option #1:

REVERSIBLE PLOW \$ _____

Option #2:

EXTENDED CAB

\$ _____

Option #3:

COST FOR ADDITIONAL TWO (2) YEAR EXTENDED
WARRANTY ON TRUCK

\$ _____

NOTE: By signing this bid form and submitting a bid, the vendor acknowledges that they have read, understand and agree to all aspects of this document as presented. Conditional bids will not be accepted.

NAME OF FIRM

SIGNATURE

Federal ID No. _____

PRINT/TYPE NAME: _____

ADDRESS

DATE

PHONE NO.

PAYMENT IS TO BE MADE TO OTHER THAN THE ABOVE NAMED COMPANY, PLEASE FILL IN COMPANY NAME AND ADDRESS HERE.

APPENDIX "A"
COUNTY OF CATTARAUGUS STANDARD INSURANCE REQUIREMENTS

The insurance companies providing these coverages acknowledge that the Named Insured is entering into a contract with the County of Cattaraugus in which the Named Insured agrees to defend, hold harmless, and indemnify the County, its officials, employees, and agents against all claims resulting from work performed, material handled, and services rendered. In some circumstances it will be necessary to require alternate coverage and limits which will be defined in the bid specifications, contract, lease or agreement. The alternate coverage and limits should be evidenced on the certificate in lieu of the standards printed below.

Minimum Coverage Limits are as Follows:

	A	C	Ca	D	F	G	Ga
	Construction & Maintenance	Professional	Low Risk Professional	Property Leased to Others or Use of Facilities	Livery	All Purpose Public Entity, Concessionaire	Low Risk All Purpose Public Entity
*** COMMERCIAL GENERAL LIABILITY	\$2,000,000 Agg. \$1,000,000 Occ.	\$2,000,000 Agg. \$1,000,000 Occ.	\$1,000,000 Agg. \$ 500,000 Occ.	\$2,000,000 Agg. \$1,000,000 Occ.	\$2,000,000 Agg. \$1,000,000 Occ.	\$2,000,000 Agg. \$1,000,000 Occ.	\$1,000,000 Agg. \$ 500,000 Occ.
Prem. - Ops.	Include	Include	Include	Include	Include	Include	Include
Prods. - Compl. Ops.	Include	Include	Include	Include	Include	Include	Include
Indep. Contractor	Include	Include	Include	Include	Include	Include	Include
Contractual	Include	Include	Include	Include	Include	Include	Include
BF Property Damage	Include			Include			
X,C,U	Include						
Personal Injury	Include	Include	Include	Include	Include	Include	Include
Liquor Law				Include			
Host Liquor				Include			
** AUTO LIABILITY	\$1,000,000 CSL	\$1,000,000 CSL	\$1,000,000 CSL	\$1,000,000 CSL	\$1,000,000 CSL	\$1,000,000 CSL	\$1,000,000 CSL
Owned	Include	Include	Include	Include	Include	Include	Include
Hired	Include	Include	Include	Include	Include	Include	Include
Non-Owned	Include	Include	Include	Include	Include	Include	Include
*** EXCESS LIABILITY	\$3,000,000	\$1,000,000		\$1,000,000	\$3,000,000	\$1,000,000	
WORKERS' COMP.	Statutory or Proof of Exemption	Statutory or Proof of Exemption	Statutory or Proof of Exemption	Statutory or Proof of Exemption	Statutory or Proof of Exemption	Statutory or Proof of Exemption	Statutory or Proof of Exemption
EMPLOYER'S LIABILITY	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
*** PROFESSIONAL LIAB.		\$3,000,000 Agg. \$1,000,000 Occ.	\$1,000,000 Agg. \$ 500,000 Occ.				

* The Comprehensive/Commercial General Liability limits can be met by one or more policies, or in combination with an Excess and/or Umbrella Liability policy. The COI must indicate if the coverage trigger in an 'Occurrence' form or a 'Claims-made' form.

All 'Claims-made' policies shall continue to provide evidence of coverage three (3) years after completion of work or product delivery.

** Cattaraugus County MUST be named as Additional Insured for all acts of Named Insured pursuant to this contract.

*** Professional Liability policies are not required to have the County as Additional Insured

Each policy, as allowed by law, shall be endorsed stating that the contractor's insurers agree to waive any rights of subrogation against the County of Cattaraugus because of payments for any injury or damages arising out of work performed under this contract.

The following statement must be subscribed by the bidder and affirmed by such bidder as true, under the penalties of perjury.

Pursuant to Section 103-d of the General Municipal Law.

NON-COLLUSIVE BIDDING CERTIFICATION

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

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 with any competitor;

Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor, and

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.

(For use of individual bidder)

IN WITNESS WHEREOF, I, _____, doing business under the style and name of _____ at _____ have hereunto subscribed my name under the penalties of perjury at _____ on this _____ day of _____, 20 _____.

d/b/a _____

(For use of partnership bidder)

IN WITNESS WHEREOF, this non-collusive bidding certification has been subscribed, under the penalties of perjury, at _____ on this _____ day of _____, 20 _____, by _____, one of the partners or co-partners of the partnership composed of _____ and _____ doing business under the style, partnership, and firm name of _____ at _____.

Partnership Name

By _____
Co-Partner

(For use of corporate bidder)

RESOLVED, that _____ (name of corporation) be authorized to sign and submit the bid or proposal of this corporation for the following project _____ and to include in such bid or proposal the certificate as to non-collusion required by Section 103-d of the General Municipal Law as the act and deed of such corporation, and for any inaccuracies or misstatements in such certificate, this corporate bidder shall be liable, under the penalties of perjury.

The foregoing is a true and correct copy of the Resolution adopted by _____ Corporation at a meeting of its board of directors held on the _____ day of _____, 20 _____.

Dated at _____ on this _____ day of _____, 20 _____.

(SEAL OF THE CORPORATION)

Secretary

Name of Bidder

By _____
Title

LEGAL STATUS INFORMATION

To facilitate correct drawing and execution of contract, bidder shall supply full information concerning legal status:

FIRM NAME: _____

Federal ID No.: _____

PRINCIPAL OFFICE:

Street _____

City, State, Zip _____

Telephone ____ (____) _____ Fax ____ (____) _____.

LOCAL OFFICE:

Street _____

City, State, Zip _____

Telephone ____ (____) _____ Fax ____ (____) _____.

CONTRACT TO BE SENT TO: Principal Office _____ Local Office _____

CHECK ONE: Corporation _____ Partnership _____ Individual _____

(Incorporated under the Laws of the State of _____)

(If foreign corporation, state if authorized to do business in the State of New York:

Yes _____ No _____ Not Applicable _____)

TRADE NAMES:

NAMES AND ADDRESSES OF PARTNERS:

NAME, TITLE, AND ADDRESS OF PERSON AUTHORIZED TO SIGN CONTRACT ON BEHALF OF BIDDER:

Name: _____

Title: _____

Address: _____

PLEASE TYPE OR PRINT

BID FOR PERFORMANCE OF CONTRACT WITH
CATTARAUGUS COUNTY LEGISLATURE
LITTLE VALLEY, NEW YORK

TO: Cattaraugus County Legislature, Little Valley, New York, herein after called the County.

The undersigned, desiring to interpose a bid to provide services for *New and Unused, Class 8, Dump Truck/Plow Truck* for Cattaraugus County Department of Public Works, does hereby accept all terms, conditions, and agreements contained and set forth in the Notice to Bidders, Instructions to Bidders, Minimum Specifications, Non-Collusive Bidding Certification, Legal Status Information and Bid for Performance of Contract with Cattaraugus County Legislature and does hereby certify, agree and propose as follows:

The undersigned declares that he/she has examined all of the attached documents, and hereby proposes and agrees that, if this bid is accepted, he/she will contract with the County, such contract incorporating the provisions of the documents attached hereto, to furnish all the materials and services and do all the work specified in the attached documents in the manner and time herein specified and according to the requirements as herein set forth, and to take in full payment therefore the bid prices set forth on the preceding specification sheets.

If this proposal is accepted by the County and the undersigned fails to contract as aforesaid, within ten days (not including Sunday) from the date of notice from the County to him/her, then the County may at its option, determine that the bidder has abandoned his/her right to enter into the contract and thereupon the bid and acceptance shall be null and void.

The full name and residences of all persons and parties interested in the foregoing bid as principals are as follows: (Individuals or partnership bids only)

INDIVIDUAL, PARTNERSHIP OR CORPORATE USE

The undersigned certifies, under penalty of perjury, that he is fully authorized to sign this bid.

Name and Address of Bidder:

Authorized Signature and Title:

Signature

Title

Date

“Iran Divestment Act of 2012” “Iranian Energy Sector Divestment”

Pursuant to State Finance Law §165-a, the Commissioner of General Services is required to develop a list of persons it determines engage in investment activities in Iran, which is defined as provision of goods, services or credit of \$20,000,000 or more, relating to the energy sector.

General Municipal Law §103-g(4) states as follows:

Every bid or proposal hereafter made to a political subdivision of the state or any public department, agency or official thereof where competitive bidding is required by statute, rule, regulation or local law, for work or service performed or to be performed or goods sold or to be sold, shall contain the following statement subscribed by the bidder and affirmed by such bidder as true under penalties of perjury.

The below signed bidder affirms the following as true under penalties of perjury:

- a. “By submission of this bid, the bidder identified herein and each person signing on behalf of the bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and behalf that this bidder is not on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the state finance law.”

Corporate or Company Name

By:

Signature

Title

Sworn to before me this

_____ day of _____, 20 _____

Notary Public