

NEBRASKA

Good Life. Great Service.

DEPT. OF ADMINISTRATIVE SERVICES

January 2, 2019

Dear Prospective Vendor:

The State of Nebraska Purchasing Bureau is issuing the following solicitation:

Solicitation Number: 5992 OF
Commodity: Tandem Axle Chassis Min 60,000 GVWR W/RDS Body and
Towplow
Opening Date: January 30, 2019 2:00 p.m. Central Time
Buyer: Julie Schiltz/Christie Kelly

Copies of 5992 OF and all information relevant to this solicitation to include addenda and/or amendments may be obtained from the State Purchasing Bureau web site at:

<http://das.nebraska.gov/materiel/purchasing.html>

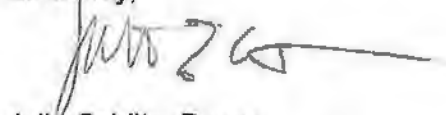
It is the responsibility of the bidder to check this site for other pertinent information and any mandatory requirements. All information relevant to this solicitation to include addenda and/or amendments that may be issued prior to the opening date will be posted to the web site.

Solicitation responses must be in a sealed envelope that indicates the Solicitation Number and Opening Date. Sealed responses must be received in the State Purchasing Bureau on or before the date and time indicated in the Schedule of Events, at which time responses will be publicly opened. Solicitation responses should be sent to:

State Purchasing Bureau
1526 K Street, Suite 130
Lincoln, NE 68508

Any problems accessing the website regarding the above solicitation should be e-mailed to the State Purchasing Bureau at as.materielpurchasing@nebraska.gov.

Sincerely,



Julie Schiltz, Buyer
State Purchasing Bureau

Shereece Dendy-Sanders, Interim Materiel Administrator

Department of Administrative Services | MATERIEL DIVISION

1526 K Street, Ste. 130
Lincoln, Nebraska 68508

OFFICE 402-471-6500
FAX 402-471-2089

das.nebraska.org

State of Nebraska - INVITATION TO BID CONTRACT

Return to:
State Purchasing Bureau
1526 K Street, Suite 130
Lincoln, Nebraska 68508

Telephone: 402-471-6500
Fax: 402-471-2089

1/9/19	Page	1 of 3
Solicitation Number	5992 OF REVISED	
Opening Date and Time	01/30/19	2:00 pm
Buyer	JULIE SCHILTZ (AS)	

DESTINATION OF GOODS
DEPARTMENT OF TRANSPORTATION
5001 S 14TH ST
PO BOX 94759
LINCOLN NE 68509-4759

Per Nebraska's Transparency in Government Procurement Act, DAS is required to collect statistical information regarding the number of contracts awarded to Nebraska contractors. This information is for statistical purposes only and will not be considered for contract award purposes.

NEBRASKA CONTRACTOR AFFIDAVIT: Bidder hereby attests that bidder is a Nebraska Contractor. "Nebraska Contractor" shall mean any bidder who has maintained a bona fide place of business and at least one employee within this state for at least the six (6) months immediately preceding the posting date of this ITB.

I hereby certify that I am a Resident disabled veteran or business located in a designated enterprise zone in accordance with Neb. Rev. Stat. §73-107 and wish to have preference, if applicable, considered in the award of this contract.

Contract to supply and deliver TANDEM AXLE CHASSIS MIN 60,000 GVWR W/RDS BODY AND TOWFLOW to the State of Nebraska as per the attached specifications for a one (1) year period from date of award. The contract may be renewed for four (4) additional one (1) year periods when mutually agreeable to the vendor and the State of Nebraska.

(vc 1/8/19)

INVITATION

Line	Description	Quantity	Unit of Measure	Unit Price	Extended Price
1	TANDEM AXLE CHASSIS MIN 60,000 GVWR W/14' RDS BODY & TOWFLOW	7.0000	EA	* 331,164	* 2,318,148
2	TANDEM AXLE CHASSIS MIN 60,000 GVWR W/14' BODY NO TOW PLOW	7.0000	EA	* 210,484	* 1,473,388
3	DEDUCT FULLER 13 SPEED TRANSMISSION	7.0000	EA	- * 7,091	- * 49,637
4	DEDUCT FULLER 10 TRANSMISSION	7.0000	EA	- * 7,152	- * 50,064

BIDDER MUST COMPLETE THE FOLLOWING

DISCOUNT PAYMENT TERMS: _____ % _____ DAYS

By signing this Invitation to Bid form, the bidder guarantees compliance with the provisions stated in this Invitation to Bid, agrees to the terms and conditions unless otherwise agreed to (see Section III) and certifies that bidder maintains a drug free work place environment. Vendor will furnish the items requested within _____ days after receipt of order. Failure to enter Delivery Date may cause quotation to be REJECTED.

Sign Robert Roane
Here (Authorized Signature MANDATORY - MUST BE SIGNED IN INK)

Enter Contact Information Below

VENDOR# 500095
DOR: Cornhusker International Trucks, Inc.
Address: 4502 South 110th Street
Omaha NE 68137

Contact Robert Roane
Telephone 402-331-8801
Facsimile 402-331-8802
Email rob.roane@cornhuskerinternational.com

State of Nebraska - INVITATION TO BID CONTRACT

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INVITATION

Line	Description	Quantity	Unit of Measure	Unit Price	Extended Price
5	DEDUCT EATON FULLER AUTO SHIFT TRANSMISSION	7.0000	EA	<u>- \$3,172</u>	<u>- \$22,204</u>
6	CHASSIS TECHNICAL REPAIR MANUAL PRICE FOR PAPER IF N/A ON LINE	7.0000	EA	<u>- 0 -</u>	<u>0</u>
7	ENGINE SHOP REPAIR MANUAL PRICE FOR PAPER IF N/A ON LINE	7.0000	EA	<u>- 0 -</u>	<u>0</u>
8	CHASSIS PARTS MANUAL PRICE FOR PAPER IF N/A ON LINE	7.0000	EA	<u>- 0 -</u>	<u>0</u>
9	ENGINE PARTS MANUAL PRICE FOR PAPER IF N/A ON LINE	7.0000	EA	<u>- 0 -</u>	<u>0</u>
10	PARTS CD-ROM FOR CHASSIS AND ENGINE	7.0000	EA	<u>- 0 -</u>	<u>0</u>
11	TRANSMISSION TECHNICAL REPAIR MANUAL	7.0000	EA	<u>\$ 200</u>	<u>\$ 1,400</u>
12	TRANSMISSION TECHNICAL REPAIR AUTOMATIC	7.0000	EA	<u>\$ 250</u>	<u>\$ 1,750</u>
13	ELECTRICAL WIRING DIAGRAM MANUAL PAPER PRICE IF N/A ON	7.0000	EA	<u>- 0 -</u>	<u>0</u>
14	P.C. DIAGNOSTIC COMPATABLE SOFTWARE W/DATA LINK CONNECTIO	7.0000	EA	<u>\$ 750</u>	<u>\$ 5,250</u>
15	V-PLOW WITH V-PLOW QUICK ATTAC HITCH PER ATTACHMENT PAGE	7.0000	EA	<u>\$ 15,360</u>	<u>\$ 107,520</u>
16	V-PLOW QUICK ATTACH HITCH WITH OUT V-PLOW PER ATTACHMENT PAGE	7.0000	EA	<u>\$ 3,112</u>	<u>\$ 21,784</u>
17	FRONT MOUNT PATROL WING PER ATTACHMENT PAGE	7.0000	EA	<u>\$ 10,910</u>	<u>\$ 76,370</u>
18	RIGHT HAND BENCHING WING PER ATTACHMENT PAGE	7.0000	EA	<u>\$ 15,282</u>	<u>\$ 106,974</u>
19	RIGHT HAND HIGH BENCHING WING PER ATTACHMENT	7.0000	EA	<u>\$ 16,722</u>	<u>\$ 117,054</u>

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INVITATION

Line	Description	Quantity	Unit of Measure	Unit Price	Extended Price
20	RIGHT SEVERE DUTY HIGH BENCHIN WING	7.0000	EA	<u>\$ 18,626</u>	<u>\$ 130,382</u>
21	PRE WET PER ATTACHMENT	7.0000	EA	<u>\$ 4,647</u>	<u>\$ 32,529</u>
22	RIGHT HAND MID-MOUNT WING PER ATTACHMENT	7.0000	EA	<u>\$ 7,289</u>	<u>\$ 51,023</u>
23	LEFT HAND MID-MOUNT WING PER ATTACHMENT	7.0000	EA	<u>\$ 7,546</u>	<u>\$ 52,822</u>
24	3 JOYSTICK CONTROL IN LIEU OF SINGLE JOYSTICK CONTROL	7.0000	EA	<u>\$ 3,500</u>	<u>\$ 24,500</u>
25	ADD TOW PLOW	7.0000	EA	<u>\$ 126,137</u>	<u>\$ 882,959</u>
26	CHASSIS ONLY: NO RDS, NO TOW PLOW HITCH OR HYDRAULICS	7.0000	EA	<u>\$ 104,500</u>	<u>\$ 731,500</u>
27	CHASSIS HYDRAULIC TO RUN BI-DIRECTIONAL TOW PLOW	7.0000	EA	<u>\$ 800</u>	<u>\$ 5,600</u>
28	ADD BI-DIRECTIONAL TOW PLOW	7.0000	EA	<u>\$ 160,567</u>	<u>\$ 1,123,969</u>
29	SAFETY LIGHTING INSTALL ON CHASSIS	7.0000	EA	<u>\$ 5,360</u>	<u>\$ 37,520</u>
30	PLOW BALANCE VALVE	7.0000	EA	<u>\$ 740</u>	<u>\$ 5,180</u>

INVITATION TO BID

Number 5992-OF

The State of Nebraska (State), Department of Administrative Services (DAS), Materiel Division, State Purchasing Bureau (SPB), is issuing this Invitation to Bid (ITB) for a Tandem Axle Chassis MIN 60,000 GVWR W/RDS Body and TOWFLOW contract, ITB Number 5992 OF for the purpose of selecting a qualified Bidder to provide Tandem Axle Chassis MIN 60,000 GVWR W/RDS Body and TOWFLOW. Specifications can be found in Section VI through XVII. The resulting contract may not be an exclusive contract as the State reserves the right to contract for the same or similar goods from other sources now or in the future.

INFORMATION PERTINENT TO THIS INVITATION TO BID CAN BE FOUND ON THE INTERNET AT:
<http://das.nebraska.gov/materiel/purchasing.html>.

A mandatory Pre-Bid Conference will be held on Monday, January 16, 2019, 10:00 AM at State Purchasing Bureau 1526 K Street, Suite 130 Lincoln NE 68508.

IMPORTANT NOTICE: Pursuant to Neb. Rev. Stat. § 84-602.04, State contracts in effect as of January 1, 2014, and contracts entered into thereafter, must be posted to a public website. The resulting contract, the ITB, and the successful Bidder's bid or response will be posted to a public website managed by DAS, which can be found at:

<https://statecontracts.nebraska.gov/>

In addition and in furtherance of the State's public records statute (Neb. Rev. Stat. § 84-712 et seq.) all bids or responses received regarding this ITB will be posted to the SPB website.

These postings will include the entire bid or response. Bidders must request that proprietary information be excluded from the posting. The Bidder must identify the proprietary information, mark the proprietary information according to state law, and submit the proprietary information in a separate container or envelope marked conspicuously using an indelible method with the words "PROPRIETARY INFORMATION". The Bidder must submit a **detailed written document showing** that the release of the proprietary information would give a business advantage to named business competitor(s) and explain how the named business competitor(s) will gain an actual business advantage by disclosure of information. The mere assertion that information is proprietary or that a speculative business advantage might be gained is not sufficient. (See Attorney General Opinion No. 92068, April 27, 1992) **THE BIDDER MAY NOT ASSERT THAT THE ENTIRE BID OR RESPONSE IS PROPRIETARY. COST WILL NOT BE CONSIDERED PROPRIETARY AND IS A PUBLIC RECORD IN THE STATE OF NEBRASKA.** The State will then determine, in its discretion, if the interests served by nondisclosure outweighs any public purpose served by disclosure. (See Neb. Rev. Stat. § 84-712.05(3)) The Bidder will be notified of the agency's decision. Absent a State determination that information is proprietary, the State will consider all information a public record subject to release regardless of any assertion that the information is proprietary.

If the agency determines it is required to release proprietary information, the Bidder will be informed. It will be the Bidder's responsibility to defend the Bidder's asserted interest in non-disclosure.

To facilitate such public postings, with the exception of proprietary information, the State of Nebraska reserves a royalty-free, nonexclusive, and irrevocable right to copy, reproduce, publish, post to a website, or otherwise use any contract, bid, or response to this ITB for any purpose, and to authorize others to use the documents. Any individual or entity awarded a contract, or who submits a bid or response to this ITB, specifically waives any copyright or other protection the contract, bid, or response to the ITB may have; and, acknowledges that they have the ability and authority to enter into such waiver. This reservation and waiver is a prerequisite for submitting a bid or response to this ITB, and award of a contract. Failure to agree to the reservation and waiver will result in the bid or response to the ITB being found non-responsive and rejected.

Any entity awarded a contract or submitting a bid or response to the ITB agrees not to sue, file a claim, or make a demand of any kind, and will indemnify and hold harmless the State and its employees, volunteers, agents, and its elected and appointed officials from and against any and all claims, liens, demands, damages, liability, actions, causes of action, losses, judgments, costs, and expenses of every nature, including investigation costs and expenses, settlement costs, and attorney fees and expenses, sustained or asserted against the State, arising out of, resulting from, or attributable to the posting of the contract or the bids and responses to the ITB, awards, and other documents.

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GLOSSARY OF TERMS

Acceptance Test Procedure: Benchmarks and other performance criteria, developed by the State or other sources of testing standards, for measuring the effectiveness of products or goods and the means used for testing such performance.

Addendum: Something to be added or deleted to an existing document; a supplement.

After Receipt of Order (ARO): After Receipt of Order.

Agency: Any state agency, board, or commission other than the University of Nebraska, the Nebraska State colleges, the courts, the Legislature, or any other office or agency established by the Constitution of Nebraska.

Agent/Representative: A person authorized to act on behalf of another.

Amend: To alter or change by adding, subtracting, or substituting.

Amendment: A written correction or alteration to a document.

Appropriation: Legislative authorization to expend public funds for a specific purpose. Money set apart for a specific use.

Award: All purchases, leases, or contracts which are based on competitive bids will be awarded according to the provisions in the ITB. The State reserves the right to reject any or all bids, wholly or in part, or to award to multiple Bidders in whole or in part. The State reserves the right to waive any deviations or errors that are not material, do not invalidate the legitimacy of the bid, and do not improve the Bidder's competitive position. All awards will be made in a manner deemed in the best interest of the State.

Best and Final Offer (BAFO): In a competitive bid, the final offer submitted which contains the bidder's (vendor's) most favorable terms for price.

Bid/Proposal: The offer submitted by a vendor in a response to written solicitation.

Bid Bond: An insurance agreement, accompanied by a monetary commitment, by which a third party (the surety) accepts liability and guarantees that the vendor will not withdraw the bid.

Bidder: A vendor who submits an offer bid in response to a written solicitation

Business: Any corporation, partnership, individual, sole proprietorship, joint-stock company, joint venture, or any other private legal entity.

Business Day: Any weekday, except State-recognized holidays.

Calendar Day: Every day shown on the calendar including Saturdays, Sundays, and State/Federal holidays.

Cancellation: To call off or revoke a purchase order without expectation of conducting or performing it at a later time.

Central Processing Unit (CPU): Any computer or computer system that is used by the State to store, process, or retrieve data or perform other functions using Operating Systems and applications software.

Change Order: Document that provides amendments to an executed purchase order.

Collusion: An agreement or cooperation between two or more persons or entities to accomplish a fraudulent, deceitful, or unlawful purpose.

Commodities: Any equipment, material, supply or goods; anything movable or tangible that is provided or sold.

Commodities Description: Detailed descriptions of the items to be purchased; may include information necessary to obtain the desired quality, type, color, size, shape, or special characteristics necessary to perform the work intended to produce the desired results.

Competition: The effort or action of two or more commercial interests to obtain the same business from third parties.

Confidential Information: Unless otherwise defined below, "Confidential Information" shall also mean proprietary trade secrets, academic and scientific research work which is in progress and unpublished, and other information which if released would give advantage to business competitors and serve no public purpose (see Neb. Rev. Stat. §84-712.05(3)). In accordance with Nebraska Attorney General Opinions 92068 and 97033, proof that information is proprietary requires identification of specific, named competitor(s) who would be advantaged by release of the information and the specific advantage the competitor(s) would receive.

Contract: An agreement between two or more parties creating obligations that are enforceable or otherwise recognizable at law; the writing that sets forth such an agreement.

Contract Administration: The management of the contract which includes and is not limited to contract signing, contract amendments and any necessary legal actions.

Contract Management: The management of day to day activities at the agency which includes and is not limited to ensuring deliverables are received, specifications are met, handling meetings and making payments to the Contractor.

Contract Period: The duration of the contract.

Contractor: Any individual or entity having a contract or awarded purchase order to furnish commodities or goods.

Cooperative Purchasing: The combining of requirements of two or more political entities to obtain advantages of volume purchases, reduction in administrative expenses or other public benefits.

Copyright: A property right in an original work of authorship fixed in any tangible medium of expression, giving the holder the exclusive right to reproduce, adapt and distribute the work.

Critical Program Error: Any Program Error, whether or not known to the State, which prohibits or significantly impairs use of the Licensed Software as set forth in the documentation and intended in the contract.

Customer Service: The process of ensuring customer satisfaction by providing assistance and advice on those products or goods provided by a Contractor.

Default: The omission or failure to perform a contractual duty.

Deviation: Any proposed change(s) or alteration(s) to either the terms and conditions or deliverables within the scope of the written solicitation or contract.

Evaluation: The process of examining an offer after opening to determine the vendor's responsibility, responsiveness to requirements, and to ascertain other characteristics of the offer that relate to determination of the successful award.

Evaluation Committee: Committee(s) appointed by the requesting agency that advises and assists the procuring office in the evaluation of bids/s (offers made in response to written solicitations).

Extension: Continuance of a contract for a specified duration upon the agreement of the parties beyond the original Contract Period. Not to be confused with "Renewal Period".

Free on Board (F.O.B.) Destination: The delivery charges are included in the quoted price and prepaid by the vendor. Vendor is responsible for all claims associated with damages during delivery of product.

Free on Board (F.O.B.) Point of Origin: The delivery charges are not included in the quoted price and are the responsibility of the agency. Agency is responsible for all claims associated with damages during delivery of product.

Foreign Corporation: A foreign corporation that was organized and chartered under the laws of another state, government, or country.

Installation Date: The date when the procedures described in "Installation by Contractor", and "Installation by State", as found in the ITB, ITB (written solicitation) or contract are completed.

Invalid Bid: i.e., a fax or email response for a term contract.

Invitation to Bid (ITB): A written solicitation utilized for obtaining competitive offers.

Late Bid: An offer received after the Opening Date end Time.

Licensed Software Documentation: The user manuals and any other materials in any form or medium customarily provided by the Contractor to the users of the Licensed Software which will provide the State with sufficient information to operate, diagnose, and maintain the Licensed Software properly, safely, and efficiently.

Mandatory/Must: Required, compulsory, or obligatory.

May: Discretionary, permitted; used to express possibility.

Module (see System): A collection of routines and data structures that perform a specific function of software.

Must: See Shall/Will/Must.

National Institute for Governmental Purchasing (NIGP): National Institute of Governmental Purchasing – Source used for assignment of universal commodity codes to goods and goods.

Open Market Purchase: Authorization may be given to an agency to purchase items above direct purchase authority due to the unique nature, price, quantity, location of the using agency, or time limitations by the AS Materiel Division, State Purchasing Bureau.

Opening Date and Time: Specified date and time for the public opening of received, labeled, and sealed formal bids.

Operating System: The control program in a computer that provides the interface to the computer hardware and peripheral devices, and the usage and allocation of memory resources, processor resources, input/output resources, and security resources.

Outsourcing: The contracting out of a business process which an organization may have previously performed internally or has a new need for, to an independent organization from which the process is purchased back.

Payroll & Financial Center (PFC): Electronic procurement system of record.

Performance Bond: An insurance agreement, accompanied by a monetary commitment, by which a third party (the surety) accepts liability and guarantees that the Contractor fulfills any and all obligations under the contract.

Platform: A specific hardware and Operating System combination that is different from other hardware and Operating System combinations to the extent that a different version of the Licensed Software product is required to execute properly in the environment established by such hardware and Operating System combination.

Point of Contact (POC): The person designated to receive communications and to communicate

Pre-Bid/Pre-Proposal Conference: A meeting scheduled for the purpose of clarifying a written solicitation and related expectations.

Product: Something that is distributed commercially for use or consumption and that is usually (1) tangible personal property, (2) the result of fabrication or processing, and (3) an item that has passed through a chain of commercial distribution before ultimate use or consumption.

Program Error: Code in Licensed Software which produces unintended results or actions, or which produces results or actions other than those described in the specifications. A program error includes, without limitation, any Critical Program Error.

Program Set: The group of programs and products, including the Licensed Software specified in the ITB, plus any additional programs and products licensed by the State under the contract for use by the State.

Project: The total scheme, program, or method worked out for the accomplishment of an objective, including all documentation, commodities, and goods to be provided under the contract.

Proposal: See Bid.

Proprietary Information: Proprietary information is defined as trade secrets, academic and scientific research work which is in progress and unpublished, and other information which if released would give advantage to business competitors and serve no public purpose (see Neb. Rev. Stat. § 84-712.05(3)). In accordance with Attorney General Opinions 92068 and 97033, proof that information is proprietary requires identification of specific named competitor(s) advantaged by release of the information and the demonstrated advantage the named competitor(s) would gain by the release of information.

Protest/Grievance: A complaint about a governmental action or decision related to an ITB or resultant contract, brought by a vendor who has timely submitted a bid response in connection with the award in question, to AS Materiel Division or another designated agency with the intention of achieving a remedial result.

Public Bid Opening: The process of opening correctly submitted offers at the time and place specified in the written solicitation and in the presence of anyone who wished to attend.

Recommended Hardware Configuration: The data processing hardware (including all terminals, auxiliary storage, communication, and other peripheral devices) to the extent utilized by the State as recommended by the Contractor.

Release Date: The date of public release of the written solicitation to seek offers

Renewal Period: Optional contract periods subsequent to the original Contract Period for a specified duration with previously agreed to terms and conditions. Not to be confused with Extension.

Request for Information (RFI): A general invitation to vendors requesting information for a potential future solicitation. The RFI is typically used as a research and information gathering tool for preparation of a solicitation.

Responsible Bidder: A Bidder who has the capability in all respects to perform fully and lawfully all requirements with integrity and reliability to assure good faith performance.

Responsive Bidder: A Bidder who has submitted a bid which conforms to all requirements of the solicitation document.

Shall/Will/Must: An order/command; mandatory.

Should: Expected; suggested, but not necessarily mandatory.

Software License: Legal instrument with or without printed material that governs the use or redistribution of licensed software.

Sole Source – Commodity: When an item is available from only one source due to the unique nature of the requirement, its supplier, or market conditions.

Sole Source – Service: A service of such a unique nature that the vendor selected is clearly and justifiably the only practical source to provide the service. Determination that the vendor selected is justifiably the sole source is based on either the uniqueness of the service or sole availability at the location required.

Specifications: The detailed statement, especially of the measurements, quality, materials, and functional characteristics, or other items to be provided under a contract.

Statutory: These clauses are controlled by state law and are not subject to negotiation.

Subcontractor: Individual or entity with whom the contractor enters a contract to perform a portion of the work awarded to the contractor.

System (see Module): Any collection or aggregation of two (2) or more Modules that is designed to function, or is represented by the Contractor as functioning or being capable of functioning, as an entity.

Termination: Occurs when the contract expires or either party, pursuant to a power created by agreement or law puts an end to the contract prior to the stated expiration date. All obligations which are still executory on both sides are discharged but any right based on prior breach or performance survives.

Third-Party: Any person or entity, including but not limited to fiduciaries, shareholders, owners, officers, managers, employees, legally disinterested persons, and sub-contractors or agents, and their employees. It shall not include any entity or person who is an interested Party to the contract or agreement.

Trade Secret: Information, including, but not limited to, a drawing, formula, pattern, compilation, program, device, method, technique, code, or process that (a) derives independent economic value, actual or potential, from not being known to, and not being ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use; and (b) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy (see Neb. Rev. Stat. §87-502(4)).

Trademark: A word, phrase, logo, or other graphic symbol used by a manufacturer or vendor to distinguish its product from those of others, registered with the U.S. Patent and Trademark Office.

Upgrade: Any change that improves or alters the basic function of a product or service.

Vendor: An individual or entity lawfully conducting business in the State, or licensed to do so, who seeks to provide goods or goods under the terms of a written solicitation.

Vendor Performance Report: A report issued to the Contractor by SPB when products or goods delivered or performed fail to meet the terms of the purchase order, contract, and/or specifications, as reported to SPB by the agency. The SPB shall contact the Contractor regarding any such report. The vendor performance report will become a part of the permanent record for the Contractor. The State may require vendor to cure. Two such reports may be cause for immediate termination.

Will: See Shall/Will/Must.

Work Day: See Business Day.

ADDENDUM ONE, REVISION TO ITB

Date: 1/4/19
To: All Bidders
From: Julie Schiltz, Buyer
AS Materiel State Purchasing Bureau
RE: Addendum for Invitation to Bid Number 5992 OF to be opened January 30, 2019 at
2:00 p.m. Central

Scope of Addendum

Revised posted ITB with Invitation to Bid Contract

This addendum will become part of the ITB/proposal and should be acknowledged with the Invitation to Bid response.

ADDENDUM TWO, REVISED ITB and SCHEDULE OF EVENTS

Date: 1/9/19

To: All Bidders

From: Julie Schiltz, Buyer
AS Materiel State Purchasing Bureau

RE: Addendum for Invitation to Bid Number 5992 OF to be opened January 30, 2019 at 2:00 p.m. Central

Scope of Addendum

Revised posted ITB with Invitation to Bid Contract and Schedule of Events

	ACTIVITY	DATE/TIME
1	Release ITB	01/02/2019
2	Last day to submit "Notification of Intent to Attend Pre-Bid Conference"	01/14/2019
3	Last day to submit written questions	01/14/2019
4.	<p>Mandatory Pre-Bid Conference Location: State Purchasing Bureau 1526 K Street, Suite 130 Lincoln, NE 68508 10:00 A.M. to 11:30 A.M., Central Time</p> <p><i>* Registration Advisement: Bids will only be accepted from those Companies/Firms which properly register their attendance at this meeting by completing all of the required information on the State Registration Sheet.</i></p>	01/16/2019
5.	Last day to submit written questions after Pre-Bid Conference	01/17/2019
6.	<p>State responds to written questions through ITB "Addendum" and/or "Amendment" to be posted to the Internet at: http://das.nebraska.gov/materiel/purchasing.html</p>	01/23/2019
7.	<p>Bid opening Location: State Purchasing Bureau 1526 K Street, Suite 130 Lincoln, NE 68508</p>	01/30/2019 2:00 PM Central Time
8.	Review for conformance of mandatory requirements	TBA

ACTIVITY		DATE/TIME
9.	Evaluation period	TBA
10.	Post "Letter of Intent to Contract" to Internet at: http://das.nebraska.gov/materiel/purchasing.html	TBA
11.	Contract finalization period	TBA
12.	Contract award	TBA
13.	Contractor start date	TBA

This addendum will become part of the ITB/proposal and should be acknowledged with the Invitation to Bid response.

ADDENDUM THREE, QUESTIONS and ANSWERS

Date: January 23, 2019

To: All Bidders

From: Julie Schiltz, Buyer
AS Materiel State Purchasing

RE: Addendum for Invitation to Bid Number 5992 OF Pre-Bid Conference to be opened January 30, 2019 at 2:00 p.m. Central Time.

Questions and Answers

Following are the questions submitted and answers provided for the above mentioned Invitation to Bid. The questions and answers are to be considered as part of the Invitation to Bid. It is the Bidder's responsibility to check the State Purchasing Bureau website for all addenda or amendments.

<u>Question Number</u>	<u>ITB Section Reference</u>	<u>ITB Page Number</u>	<u>Question</u>	<u>State Response</u>
1.	A	37	On VII.Body A.Bodies 12. Side brace support. Can we remove this side brace? We have removed this on our standard bodies. We can now get more liquid capacity with this removed. Monroe can provide 270 gallon tanks per side for liquid.	No: Please comply with specifications as written
2.	G		Transmission / Can verbiage be change to HD4000 or HD4500 as these are current models?	Yes NDOT will use the HD4000 and HD4500 as the models for Allison transmission
3.	J.		Brakes / AD-IP not available. As the OEM standard, is the Wabco System Saver HP with integral air governor acceptable?	Yes NDOT will accept the Wabco System Saver with integral air governor.
4.	K.		Fuel Tanks / Davco 384 is not available. Is the Davco 487 Fuel/Water Separator With ESOC and 12 Volt Preheater	Yes NDOT will accept the Davco 487 Fuel/Water separator with ESOC and 12 volt preheater.
5.			Will the State of Nebraska accept an automated manual transmission in lieu of the Allison 4500 RDS? The technology has evolved to where they are now better and more fuel efficient than the Allison. Every OEM now offers a 12 speed automated transmission.	No: Please comply with specifications as written

6.			<p>Will the State increase the CFM requirement of the air compressor to 30+ due to the tow plow and the additional air volume requirement it creates? 18 CFM is less than the standard on all OEMs.</p>	<p>No NDOT will not increase Minimum CFM.</p> <p>Per Viking Tow Plow this is the minimum need.</p> <p>This is just minimum we will accept higher CFM's.</p>
7			<p>Will the State give consideration to production turnaround in the event that a bid is nominally higher? Some OEMs have lead times in excess of 365 days which is NOT conducive to the State's truck purchasing needs.</p>	<p>Per section I.DD ... bids will be awarded according to the provisions in the ITB Price; Location; Quality; Delivery time; and, NDOT will review all build lead times of all bidders.</p>
8.			<p>Will the State accept unitized front axles?</p>	<p>No: Please comply with specifications as written</p>
9.			<p>There isn't a cross auger section in the valve spec. If we quote what you need, we won't be priced the same as those who quote what is specified. If we quote what is asked for, it won't be correct on the truck. Are these still the functions you want? Hoist*-Tow Plow Steer**-tow plow lift**-Priority**-plow lift**-plow angle**-conveyor reversing**-cross auger**-pre-wet**-spinner**-tow plow pre-wet.</p> <p>Wing-Wing-Wing on different valve section per options requested.</p>	<p>NDOT will change this to read: for the correct bidding.</p> <p>Valves is to be arranged as follows:</p> <ul style="list-style-type: none"> a. Closed center inlet with relief b. Hoist=4 way, 26 GPM,500 psi down port relief. c. Plow lift=4 way, 16gpm d. Plow angle=4 way, 10gpm e. Wing toe=4way, 10gpm, 500 psi down port relief f. Wing heel=4 way, 10gpm, 500 psi down port relief, 2000 psi up port relief (required) g. Auger=4 way, 17gpm motor spool h. Spinner=4 way, 10gpm motor spool i. Prewet=4 way, 6gpm motor spool j. Tow Plow steering=4 way, 10 gpm k. Tow Plow raise/lower=3 way, 10gpm l. Trailer spreader=4 way,

				<p>15gpm motor spool</p> <p>m. Trailer spinner=4 way, 10gpm motor spool</p> <p>n. Trailer prewet=4 way, 6gpm motor spool</p> <p>o. Endcover</p>
10.			<p>Will the State increase the minimum CFM of the air compressor since the addition of the tow plow more than doubles the air volume required for safety in case of an air leak being able to maintain brake pressure and avoid an accident. 18 CFM is less than the standard CFM of a 6.7 liter medium duty engine. The CFM really needs to be a minimum of 30 CFM to avoid accidents.</p>	<p>Please refer to question #6 for NDOT's answer</p>
11.			<p>Will the State allow for automated transmissions to be bid as a direct competitor to the Allison in lieu of as an option price? PTO is off of the crankshaft so there is no reason to require a torque converted transmission. Fuel economy is 10-15% better with an automated transmission. Automotive OEMs are ALL moving to an automated transmission because the technology has made them better than the torque converted gearboxes. The 10 speed transmission that both Ford and General Motors use in their pickups is a dual clutch automated manual.</p>	<p>Please refer to question # 5 for NDOT's answer</p>
12	VII.Body A	14	<p>The bid it calls out for Whelen light boxes in the dump body on Page37 VII.Body A. 14. We have been installing the complete Whelen light package on the other trucks but it doesn't call that out in the spec. I would just like clarification if we are to include the Whelen lights in the base bid.</p>	<p>On primary bid we just call out for the Whelen light boxes to be part of the body</p> <p>There is a line item for the installation of the Whelen Safety light systems.</p>

This addendum will become part of the ITB and should be acknowledged with the Invitation to Bid response.

Registration Advisement:

Bids will only be accepted from those Companies/Firms which properly register their attendance at this meeting by providing all of the required information below.

Registration Advisement:

Bids will only be accepted from those Companies/Firms which properly register their attendance at this meeting by providing all of the required information below.

State of Nebraska Mandatory Pre-Bid/Proposal Meeting Registration Sheet

Date: January 16, 2019 10 AM to 11:30 AM Central Time

Project: 5992 OF, Tandem Axle Chassis Min 60,000 GVWR
W/RDS Body and Towplow

Please Print Legibly:

Name	Company/Firm Representing*	Complete Address (Street, City, State, Zip)*	Phone* Fax	E-mail Address
1 Terry Navatny	Wilks Stealy Truck	10502 S. 147 th ST	402-740-4936 402-845-3953	TNavatny@wilksstealy.com
2 Kevin Coen	NEAR TRUCK CENTER	P.O. Box 1887 4747 Svergel Rd GRAND ISLAND NE 68802	308-384-0130 308-388-8916	KCoen@NebraskaTruck.com
3 Rob Roane	Cornhusker International Trucks	4502 SO. 110 th Street Omaha NE 68137	402-331-8801 402-331-8802	rob.roane@cornhuskerinternational.com
4 Bill Collier	TRUCK CENTER COMPANIES	5701 Harbor Road Lincoln, NE 68517	402-464-2444 402-464-9164	bcollier@truckcentercompanies.com
5 Jason Clinton	Monroe Truck Equipment	1051 W 7 th Street monroe WI 53566	608-851-1009	Jclinton@monroetruck.com
6 Wayne Reed	Force America	30 North 25 th ST Fort Dodge Iowa 50501	406-670-1150	wreed@ForceAmerica.com
7 Michael Stewart	Force America	30 North 25 th ST Fort Dodge Iowa 50501	816-289-5322	MStewart@ForceAmerica.com
8 Brian Ashew	Volvo Trucks of Omaha	11351 S 753 rd Street Omaha, NE 68138	402-861-2583 402-866-6909	brian.ashew@nathinc.com
9				

I. PROCUREMENT PROCEDURE

A. GENERAL INFORMATION

The ITB is designed to solicit bids from qualified Bidders who will be responsible for providing Tandem Axle Chassis MIN 60,000 GVWR W/RDS Body and TOWPLOW at a competitive and reasonable cost. A detailed description can be found in Section IV through XVIII.

Bids shall conform to all instructions, conditions, and requirements included in the ITB. Prospective Bidders are expected to carefully examine all documents, schedules, and requirements in this ITB, and respond to each requirement in the format prescribed. Bids may be found non-responsive if they do not conform to the ITB.

B. PROCURING OFFICE AND COMMUNICATION WITH STATE STAFF AND EVALUATORS

Procurement responsibilities related to this ITB reside with the SPB. The point of contact (POC) for the procurement is as follows:

Name: Julie Schiltz
Agency: State Purchasing Bureau
Address: 1526 K Street, Suite 130
Lincoln, NE 68508
Telephone: 402-471-6500
E-Mail: as.materiel purchasing@nebraska.gov

C. COMMUNICATION WITH STATE STAFF

From the date the ITB is issued until the Intent to Award is issued communication from the Bidder is limited to communication with the State Purchasing Bureau (SPB). Only SPB is empowered to make binding statements regarding this ITB. SPB will issue any clarifications or opinions regarding this ITB in writing. Only SPB can modify the ITB, answer questions, render opinions, and only the SPB can award a contract. Bidders shall not have any communication with, or attempt to communicate or influence any evaluator involved in this ITB. After the intent to award is issued the Bidder may communicate with individuals the State has designated as responsible for negotiating the contract on behalf of the State.

The following exceptions to these restrictions are permitted:

1. Contact made pursuant to pre-existing contracts or obligations;
2. Contact required by the schedule of events or an event scheduled later by the SPB; and
3. Contact required for negotiation and execution of the final contract.

Violation of these conditions may be cause to reject a Bidder's bid and/or withdraw an Intent to Award, or terminate a contract if the State determines there has been a violation of these procurement procedures.

D. SCHEDULE OF EVENTS

The State expects to adhere to the procurement schedule shown below, but all dates are approximate and subject to change.

	ACTIVITY	DATE/TIME
1.	Release ITB	01/02/2019
2.	Last day to submit "Notification of Intent to Attend Pre-Bid Conference"	01/14/2019
3.	Last day to submit written questions	01/14/2019
4.	Mandatory Pre-Bid Conference Location: State Purchasing Bureau 1526 K Street, Suite 130 Lincoln, NE 68508 10:00 A.M. to 11:30 A.M., Central Time <i>* Registration Advisement: Bids will only be accepted from those Companies/Firms which properly register their attendance at this meeting by completing all of the required information on the State Registration Sheet.</i>	01/16/2019
5.	Last day to submit written questions after Pre-Bid Conference	01/17/2019
6.	State responds to written questions through ITB "Addendum" and/or "Amendment" to be posted to the Internet at: http://das.nebraska.gov/materiel/purchasing.html	01/23/2019

ACTIVITY		DATE/TIME
7.	Bid opening Location: State Purchasing Bureau 1526 K Street, Suite 130 Lincoln, NE 68508	01/30/2019 2:00 PM Central Time
8.	Review for conformance of mandatory requirements	TBA
9.	Evaluation period	TBA
10.	Post "Letter of Intent to Contract" to Internet at: http://das.nebraska.gov/materiel/purchasing.html	TBA
11.	Contract finalization period	TBA
12.	Contract award	TBA
13.	Contractor start date	TBA

E. WRITTEN QUESTIONS AND ANSWERS

Questions regarding the meaning or interpretation of any ITB provision must be submitted in writing to the SPB and clearly marked "ITB Number 59920F; Tandem Axle Chassis MIN 60,000 GVWR W/RDS Body and TQWPLOW Questions". SPB is not obligated to respond to questions that are received late per the Schedule of Events.

Bidders should present, as questions, any assumptions upon which the Bidder's bid is or might be developed. Bids will be evaluated without consideration of any known or unknown assumptions of a Bidder. The contract will not incorporate any known or unknown assumptions of a Bidder.

It is preferred that questions be sent via e-mail to as.materielpurchasing@nebraska.gov, but may be delivered by hand or by U.S. Mail. It is recommended that Bidders submit questions using the following format.

ITB Section Reference	ITB Page Number	Question

Written answers will be posted at <http://das.nebraska.gov/materiel/purchasing.html> per the Schedule of Events.

F. PRE-BID CONFERENCE

A pre-bid conference will be held per the Schedule of Events. Attendance at the pre-bid conference is mandatory. Bidders will have an opportunity to ask questions at the conference to assist in the clarification and understanding of the ITB requirements. Questions that have a material impact on the ITB or ITB process, and relevant to all Bidders will be answered in writing and posted at <http://das.nebraska.gov/materiel/purchasing.html>. An answer must be posted to be binding on the State. The State will attempt to provide verbal answers to questions of interest to an individual Bidder during the conference. If a Bidder feels it necessary to have a binding answer to a question that was answered verbally, the question should be submitted in writing per the Schedule of Events.

G. NOTICE OF INTENT TO ATTEND MANDATORY PRE-BID CONFERENCE

Bidders should notify the SPB of their intent to attend by submitting a "Notification of Intent to Attend the Pre-Bid Conference Form" (see Form B) by hand-delivery, U.S. Mail, or email at as.materielpurchasing@nebraska.gov

H. SECRETARY OF STATE/TAX COMMISSIONER REGISTRATION REQUIREMENTS (Statutory)

All Bidders must be authorized to transact business in the State and comply with all Nebraska Secretary of State Registration requirements. The Bidder who is the recipient of an Intent to Award will be required to certify that it has complied and produce a true and correct copy of its current (within ninety (90) calendar days of the intent to award) Certificate or Letter of Good Standing, or in the case of a sole proprietorship, provide written documentation of sole proprietorship and the United States Citizenship Attestation Form, available on the DAS website at <http://das.nebraska.gov/materiel/purchasing.html>. This must be accomplished prior to execution of the contract.

I. ETHICS IN PUBLIC CONTRACTING

The State reserves the right to reject bids, withdraw an intent to award or award, or terminate a contract if a Bidder commits or has committed ethical violations, which include, but are not limited to:

1. Offering or giving, directly or indirectly, a bribe, fee, commission, compensation, gift, gratuity, or anything of value to any person or entity in an attempt to influence the bidding process;
2. Utilize the services of lobbyists, attorneys, political activists, or consultants to influence or subvert the bidding process;

3. Being considered for, presently being, or becoming debarred, suspended, ineligible, or excluded from contracting with any state or federal entity;
4. Submitting a bid on behalf of another party or entity;
5. Collude with any person or entity to influence the bidding process, submit sham bids, preclude bidding, fix pricing or costs, create an unfair advantage, subvert the bid, or prejudice the State,

The Bidder shall include this clause in any subcontract entered into for the exclusive purpose of performing this contract.

Bidder shall have an affirmative duty to report any violations of this clause by the Bidder throughout the bidding process, and throughout the term of this contract for the successful Bidder and their subcontractors.

J. SPECIFICATIONS

Any manufacturer's names, trade names, brand names, information and/or catalog numbers listed in a specification are for reference and not intended to limit competition, but will be used as the standard by which equivalent material offered will be judged. The Materiel Administrator will be the sole judge of equivalency. The Bidder may offer any brands which meets or exceeds the specification. When a specific product is required, the ITB will so state. Any item bid is to be the latest current model under standard production at the time of order. No used or refurbished equipment will be accepted, unless otherwise stated.

K. BID PREPARATION COSTS

The State shall not incur any liability for any costs incurred by Bidders in replying to this ITB, including any activity related to bidding on this ITB.

L. DISCOUNTS

Prices quoted shall be inclusive of ALL trade discounts. Cash discount terms of less than thirty (30) days will not be considered as part of the bid. Cash discount periods will be computed from the date of receipt of a properly executed claim voucher or the date of completion of delivery of all items in a satisfactory condition, whichever is later.

M. PRICES

Prices submitted on the cost proposal form shall remain fixed for the first one hundred eighty (180) days of the contract. Any request for a price increase subsequent to the first one hundred eighty (180) days of the contract shall not exceed percent (5%) of the previous Contract period. Increases will be cumulative across the remaining periods of the contract. Requests for an increase must be submitted in writing to the State Purchasing Bureau a minimum of 120 days prior to the end of the current contract period. Documentation may be required by the State to support the price increase.

N. DEVIATIONS FROM THE INVITATION TO BID

The requirements contained in the ITB (Sections IV through XVIII) become a part of the terms and conditions of the contract resulting from this ITB. Any deviations from the ITB in Section IV through XVIII must be clearly defined by the Bidder in its bid and, if accepted by the State, will become part of the contract. Any specifically defined deviations must not be in conflict with the basic nature of the ITB, mandatory requirements, or applicable state or federal laws or statutes. "Deviation", for the purposes of this ITB, means any proposed changes or alterations to either the contractual language or deliverables within the scope of this ITB. The State discourages deviations and reserves the right to reject proposed deviations.

O. ALTERNATE/EQUIVALENT BIDS

Bidder may offer bids which are at variance from the express specifications of the ITB. The State reserves the right to consider and accept such bids if, in the judgment of the Materiel Administrator, the bid will result in goods and/or services equivalent to or better than those which would be supplied in the original bid specifications. Bidders must indicate on the ITB the manufacturer's name, number and shall submit with their bid, sketches, descriptive literature and/or complete specifications. Reference to literature submitted with a previous bid will not satisfy this provision. Bids which do not comply with these requirements are subject to rejection. In the absence of any stated deviation or exception, the bid will be accepted as in strict compliance with all terms, conditions and specification, and the Bidder shall be held liable therefore.

P. LUMP SUM OR 'ALL OR NONE' BIDS

The State reserves the right to purchase item-by-item, by groups or as a total when the State may benefit by so doing. Bidders may submit a bid on an "all or none" or "lump sum" basis, but should also submit a bid on an item-by-item basis. The term "all or none" means a conditional bid which requires the purchase of all items on which bids are offered and Bidder declines to accept award on individual items; a "lump sum" bid is one in which the Bidder offers a lower price than the sum of the individual bids if all items are purchased, but agrees to deliver individual items at the prices quoted.

Q. BID REQUIREMENTS

The bids will first be examined to determine if all requirements listed below have been addressed and whether further evaluation is warranted. Bids not meeting the requirements may be rejected as non-responsive. The requirements are:

1. Original Commodity ITB form signed using an indelible method (electronic signatures are not acceptable);
2. Clarity and responsiveness of the bid;
3. Completed Sections IV through XVIII;
4. Completed ITB Form or State's Bid Sheet.

R. FAILURE TO COMPLY WITH INVITATION TO BID

Violation of the terms and conditions contained in this ITB or any resultant contract, at any time before or after the award, shall be grounds for action by the State which may include, but is not limited to, the following:

1. Rejection of a Bidder's bid;
2. Withdrawal of the Intent to Award;
3. Withdrawal of the Award;
4. Termination of the resulting contract;
5. Legal action; or,
6. Suspension of the Bidder from further bidding with the State for the period of time relative to the seriousness of the violation, such period to be within the sole discretion of the State.

S. SUBMISSION OF BIDS

ALL BIDS MUST BE SUBMITTED IN A SEALED ENVELOPE OR CONTAINER!

Only one (1) original bid shall be submitted. Each bid should be in a separate envelope or container. Bid responses should include the completed Form A, "Bidder Contact Sheet". Bids must reference the ITB number and be sent to the specified address. Please note that the address label should appear as specified in Section II, Part A on the face of each container or Bidder's bid response packet. If a recipient phone number is required for delivery purposes, 402-471-6500 should be used. The ITB number must be included in all correspondence.

Emphasis should be concentrated on conformance to the ITB instructions, responsiveness to requirements, completeness, and clarity of content. If the Bidder's bid is presented in such a fashion that makes evaluation difficult or overly time consuming the State reserves the right to reject the bid as non-conforming.

Sealed bids must be received in the State Purchasing Bureau by the date and time of the bid opening per the Schedule of Events. No late bids will be accepted.

It is the responsibility of the bidder to check the website for all information relevant to this solicitation to include addenda and/or amendments issued prior to the opening date. Website address is as follows: <http://das.nebraska.gov/materiel/purchasing.html>

By signing the "ITB" form, the Bidder guarantees compliance with the provisions stated in this ITB.

T. EMAIL SUBMISSIONS

The SPB will not accept bids by email except for one-time purchases under \$50,000.00.

U. BID CORRECTIONS

A bidder may correct a mistake in a bid prior to the time of opening by giving written notice to the State of intent to withdraw the bid for modification or to withdraw the bid completely. Changes in a bid after opening are acceptable only if the change is made to correct a minor error that does not affect price, quantity, quality, delivery, or contractual conditions. In case of a mathematical error in extension of price, unit price shall govern.

V. LATE BIDS

Bids received after the time and date of the bid opening will be considered late bids. Late bids will be returned unopened, if requested by the Bidder and at Bidder's expense. The State is not responsible for bids that are late or lost regardless of cause or fault.

W. BID OPENING

Anyone may attend the opening. It is considered a public opening. The Buyer will read the names of the respondents. Depending upon the complexity of the bid, the buyer may read the bids aloud or allow bids be available for viewing by the public during the bid opening. Once the bid opening has concluded, the bids will not be available for viewing until the Intent to Award has been posted. An initial bid tabulation will be posted to the website as soon as feasible. Information identified as proprietary by the submitting vendor, in accordance with the RFP/ITB and state statute, will

not be posted. If the state determines submitted information should not be withheld, in accordance with the Public Records Act, or if ordered to release any withheld information, said information may then be released. The submitting bidder will be notified of the release and it shall be the obligation of the submitting bidder to take further action, if it believes the information should not be released.

X. BID TABULATIONS

Bid tabulations are available on the website at: <http://www.das.state.ne.us/materiel/purchasing/bidtabs.htm>.

Y. ORAL INTERVIEWS/PRESENTATIONS AND/OR DEMONSTRATIONS

N/A

Z. BEST AND FINAL OFFER

The State reserves the right to request Best and Final Offers. However, a Bidder should provide its best offer in its original bid. Bidders should not expect that the State will request a best and final offer.

AA. REFERENCE AND CREDIT CHECKS

The State reserves the right to conduct and consider reference and credit checks. Reference or credit checks may be grounds to reject a bid, or withdraw an intent to award or award of a contract. The State reserves the right to use third parties to conduct reference and credit checks.

BB. REJECTION OF BIDS

The State reserves the right to reject any or all bids, wholly or in part, in the best interest of the State.

CC. RESIDENT BIDDER

Pursuant to Neb. Rev. Stat. §§ 73-101.01 through 73-101.02, a Resident Bidder shall be allowed a preference against a Non-resident Bidder from a state which gives or requires a preference to Bidders from that state. The preference shall be equal to the preference given or required by the state of the Nonresident Bidders. Where the lowest responsible bid from a resident Bidder is equal in all respects to one from a nonresident Bidder from a state which has no preference law, the resident Bidder shall be awarded the contract. The provision of this preference shall not apply to any contract for any project upon which federal funds would be withheld because of the provisions of this preference.

DD. AWARD

All purchases, leases, or contracts which are based on competitive bids will be awarded according to the provisions in the ITB. The State reserves the right to reject any or all bids, in whole or in part, or to award to multiple Bidders in whole or in part, and at its discretion, may withdraw or amend the ITB at any time. The State reserves the right to waive any deviations or errors that are not material, do not invalidate the legitimacy of the bid, and do not improve the Bidder's competitive position. All awards will be made in a manner deemed in the best interest of the State. The ITB does not commit the State to award a contract. If, in the opinion of the State, revisions or amendments will require substantive changes in bids, the bid opening date may be extended.

By submitting a bid in response to this ITB, the Bidder grants to the State the right to contact or arrange a visit in person with any or all of the Bidder's clients.

Once the Intent to Award decision has been made, an Intent to Award will be posted to the Internet at: <http://das.nebraska.gov/materiel/purchasing.html>

The protest procedure is available on the Internet at: [http://das.nebraska.gov/materiel/purchase_bureau/docs/vendors/protest/ProtestGrievanceProcedureForVendors%20\(2\).pdf](http://das.nebraska.gov/materiel/purchase_bureau/docs/vendors/protest/ProtestGrievanceProcedureForVendors%20(2).pdf)

Any protests must be filed by a vendor within ten (10) business days after the Intent to Award is posted to the Internet.

The State reserves the right to award contracts in a manner, and utilizing methods, selected in the State's best interest and discretion. The State may waive informalities or irregularities in bids if the waiver is in the best interest of the State and such waiver does not prejudice other Bidders in the State's discretion. After evaluation of the bids, the State may take, in the State's discretion, one or more of the following actions:

Accept or reject a portion of or all of a bid;
Accept or reject all bids;
Withdraw the ITB;
Elect to rebid the ITB;
Award single lines or multiple lines to one or more Bidders; or,
Award one or more complete contracts.

The State reserves the right to make awards that are in the best interest of the State. The State may consider, but is not limited to, one (1) or more of the following award criteria:

Price;
Location;
Quality;
Delivery time; and,
State contract management requirements and/or costs.

II. TERMS AND CONDITIONS

Bidders should complete Section IV through XVIII as part of their bid. Bidder is expected to read the Terms and Conditions and must initial either accept, reject, or reject and provide alternative language for each clause. The Bidder should also provide an explanation of why the Bidder rejected the clause or rejected the clause and provided alternate language using 'Track Changes'. Upon request an electronic copy of the bid with 'Track Changes' must be submitted in an editable Word format. By signing the ITB Bidder is agreeing to be legally bound by all the accepted terms and conditions, and any proposed alternative terms and conditions submitted with the bid. The State reserves the right to negotiate rejected or proposed alternative language. If the State and Bidder fail to agree on the final Terms and Conditions, the State reserves the right to reject the bid. The State is soliciting bids in response to the ITB. The State reserves the right to reject bids that attempt to substitute the Bidder's commercial contracts and/or documents for this ITB.

The Bidder should submit with their bid any license, user agreement, service level agreement, or similar documents that the Bidder wants incorporated in the Contract. Upon notice of Intent to Award, the Bidder must submit a copy of these documents in an editable Word format. The State will not consider incorporation of any document not submitted with the Bidder's bid. These documents shall be subject to negotiation and will be incorporated as addendums if agreed to by the Parties.

If a conflict or ambiguity arises after the addendums have been negotiated and agreed to, the addendums shall be interpreted as follows:

1. If only one (1) Party's document has a particular clause then that clause shall control;
2. If both Party's documents have a similar clause, but the clauses do not conflict, the clauses shall be read together;
3. If both Party's documents have a similar clause, but the clauses conflict, the State's clause shall control.

A. GENERAL

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

The contract resulting from this ITB shall incorporate the following documents:

1. Invitation to Bid and Addenda;
2. Amendments to the ITB;
3. Questions and Answers;
4. Contractor's bid (ITB);
5. Award;
6. The executed Contract and any Addenda; and,
7. Amendments to the Contract

These documents constitute the entirety of the contract.

Unless otherwise specifically stated in a future contract amendment, in case of any conflict between the incorporated documents, the documents shall govern in the following order of preference with number one (1) receiving preference over all other documents and with each lower numbered document having preference over any higher numbered document: 1) Amendment to the executed Contract with the most recent dated amendment having the highest priority, 2) executed Contract and any attached Addenda, 3) Amendments to ITB and any Questions and Answers, 4) the original ITB document and any Addenda, and 5) the Contractor's submitted Bid.

Any ambiguity or conflict in the contract discovered after its execution, not otherwise addressed herein, shall be resolved in accordance with the rules of contract interpretation as established in the State.

B. NOTIFICATION

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

Contractor and State shall identify the contract manager who shall serve as the point of contact for the executed contract.

Communications regarding the executed contract shall be in writing and shall be deemed to have been given if delivered personally or mailed, by U.S. Mail, postage prepaid, return receipt requested, to the parties at their respective addresses set forth below, or at such other addresses as may be specified in writing by either of the parties. All notices, requests, or communications shall be deemed effective upon personal delivery or five (5) calendar days following deposit in the mail.

Either party may change its address for notification purposes by giving notice of the change, and setting forth the new address and an effective date.

C. GOVERNING LAW

Notwithstanding any other provision of this contract, or any amendment or addendum(s) entered into contemporaneously or at a later time, the parties understand and agree that, (1) the State of Nebraska is a sovereign state and its authority to contract is therefore subject to limitation by the State's Constitution, statutes, common law, and regulation; (2) this contract will be interpreted and enforced under the laws of the State of Nebraska; (3) any action to enforce the provisions of this agreement must be brought in the State of Nebraska per state law; (4) the person signing this contract on behalf of the State of Nebraska does not have the authority to waive the State's sovereign immunity, statutes, common law, or regulations; (5) the indemnity, limitation of liability, remedy, and other similar provisions of the final contract, if any, are entered into subject to the State's Constitution, statutes, common law, regulations, and sovereign immunity; and, (6) all terms and conditions of the final contract, including but not limited to the clauses concerning third-party use, licenses, warranties, limitations of liability, governing law and venue, usage verification, indemnity, liability, remedy or other similar provisions of the final contract are entered into specifically subject to the State's Constitution, statutes, common law, regulations, and sovereign immunity.

The Parties must comply with all applicable local, state and federal laws, ordinances, rules, orders, and regulations

D. CHANGE ORDERS OR SUBSTITUTIONS

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

The State and the Contractor, upon the written agreement, may make changes to the contract within the general scope of the ITB. Changes may involve specifications, the quantity of work, or such other items as the State may find necessary or desirable. Corrections of any deliverable, service, or work required pursuant to the contract shall not be deemed a change. The Contractor may not claim forfeiture of the contract by reasons of such changes.

The State or Contractor may prepare a written description of the work required due to the change and the Contractor shall prepare an itemized cost sheet for the change. Changes in work and the amount of compensation to be paid to the Contractor shall be determined in accordance with applicable unit prices if any, a pro-rated value, or through negotiations. The State shall not incur a price increase for changes that should have been included in the Contractor's bid, were foreseeable, or result from difficulties with or failure of the Contractor's bid or performance.

No change shall be implemented by the Contractor until approved by the State, and the Contract is amended to reflect the change and associated costs, if any. If there is a dispute regarding the cost, but both parties agree that immediate implementation is necessary, the change may be implemented, and cost negotiations may continue with both Parties retaining all remedies under the contract and law.

Vendor will not substitute any item that has been awarded without prior written approval of SPB.

E. BREACH

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

Either Party may terminate the contract, in whole or in part, if the other Party breaches its duty to perform its obligations under the contract in a timely and proper manner. Termination requires written notice of default and a thirty (30) calendar day (or longer at the non-breaching Party's discretion considering the gravity and nature of the default) cure period. Said notice shall be delivered by Certified Mail, Return Receipt Requested, or in person with proof of delivery. Allowing time to cure a failure or breach of contract does not waive the right to immediately terminate the contract for the same or different contract breach which may occur at a different time.

In case of breach by the Contractor, the State may, without unreasonable delay, make a good faith effort to make a reasonable purchase or contract to purchased goods in substitution of those due from the contractor. The State may recover from the Contractor as damages the difference between the costs of covering the breach. Notwithstanding any clause to the contrary, the State may also recover the contract price together with any incidental or consequential damages defined in UCC Section 2-715, but less expenses saved in consequence of Contractor's breach.

The State's failure to make payment shall not be a breach, and the Contractor shall retain all available statutory remedies. (See Indemnity - Self-Insurance and Payment)

F. NON-WAIVER OF BREACH

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

The acceptance of late performance with or without objection or reservation by a Party shall not waive any rights of the Party nor constitute a waiver of the requirement of timely performance of any obligations remaining to be performed.

G. SEVERABILITY

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

If any term or condition of the contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and conditions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the contract did not contain the provision held to be invalid or illegal.

H. INDEMNIFICATION

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

1. GENERAL

The Contractor agrees to defend, indemnify, and hold harmless the State and its employees, volunteers, agents, and its elected and appointed officials ("the indemnified parties") from and against any and all claims, liens, demands, damages, liability, actions, causes of action, losses, judgments, costs, and expenses of every nature, including investigation costs and expenses, settlement costs, and attorney fees and expenses ("the claims"), sustained or asserted against the State for personal injury, death, or property loss or damage, arising out of, resulting from, or attributable to the willful misconduct, negligence, error, or omission of the Contractor, its employees, Subcontractors, consultants, representatives, and agents, resulting from this contract, except to the extent such Contractor liability is attenuated by any action of the State which directly and proximately contributed to the claims.

2. SELF-INSURANCE (Statutory)

The State is self-insured for any loss and purchases excess insurance coverage pursuant to Neb. Rev. Stat. § 81-8,239.01 (Reissue 2008). If there is a presumed loss under the provisions of this agreement, Contractor may file a claim with the Office of Risk Management pursuant to Neb. Rev. Stat. §81-8,829 through 81-8,306 for review by the State Claims Board. The State retains all rights and immunities under the State Miscellaneous (Section 81-8,294), Tort (Section 81-8,209), and Contract Claim Acts (Section 81-8,302), as outlined in Neb. Rev. Stat. § 81-8,209 et seq. and under any other provisions of law and accepts liability under this agreement to the extent provided by law.

I. ATTORNEY'S FEES

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

In the event of any litigation, appeal, or other legal action to enforce any provision of the contract, the Parties agree to pay all expenses of such action, as permitted by law and if order by the court, including attorney's fees and costs, if the other party prevails.

J. ASSIGNMENT, SALE, OR MERGER

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

Either party may assign the contract upon mutual written agreement of the other party. Such agreement shall not be unreasonably withheld.

The Contractor retains the right to enter into a sale, merger, acquisition, internal reorganization, or similar transaction involving Contractor's business. Contractor agrees to cooperate with the State in executing amendments to the contract to allow for the transaction. If a third party or entity is involved in the transaction, the Contractor will remain responsible for performance of the contract until such time as the person or entity involved in the transaction agrees in writing to be contractually bound by this contract and perform all obligations of the contract.

K. CONTRACTING WITH OTHER POLITICAL SUB-DIVISIONS OF THE STATE OR ANOTHER STATE

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

The Contractor may, but shall not be required to, allow agencies, as defined in Neb. Rev. Stat. §81-145, to use this contract. The terms and conditions, including price, of the contract may not be amended. The State shall not be contractually obligated or liable for any contract entered into pursuant to this clause.

The Contractor may, but shall not be required to, allow other states, agencies or divisions of other states, or political subdivisions of other states to use this contract. The terms and conditions, including price, of this contract shall apply to any such contract, but may be amended upon mutual consent of the Parties. The State of Nebraska shall not be contractually or otherwise obligated or liable under any contract entered into pursuant to this clause. The State shall be notified if a contract is executed based upon this contract.

L. FORCE MAJEURE

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

Neither party shall be liable for any costs or damages, or for default resulting from its inability to perform any of its obligations under the contract due to a natural or manmade event outside the control and not the fault of the affected party ("Force Majeure Event"). The Party so affected shall immediately make a written request for relief to the other party, and shall have the burden of proof to justify the request. The other Party may granted the relief requested; relief may not be unreasonably withheld. Labor disputes with the impacted party's own employees will not be considered a Force Majeure Event.

M. CONFIDENTIALITY

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

All materials and information provided by the Parties or acquired by a Party on behalf of the other Party shall be regarded as confidential information. All materials and information provided or acquired shall be handled in accordance with federal and state law, and ethical standards. Should said confidentiality be breached by a Party, the Party shall notify the other Party immediately of said breach and take immediate corrective action.

It is incumbent upon the Parties to inform their officers and employees of the penalties for improper disclosure imposed by the Privacy Act of 1974, 5 U.S.C. 552a. Specifically, 5 U.S.C. 552a (i)(1), which is made applicable by 5 U.S.C. 552a (m)(1), provides that any officer or employee, who by virtue of his/her employment or official position has possession of or access to agency records which contain individually identifiable information, the disclosure of which is prohibited by the Privacy Act or regulations established thereunder, and who knowing that disclosure of the specific material is prohibited, willfully discloses the material in any manner to any person or agency not entitled to receive it, shall be guilty of a misdemeanor and fined not more than \$5,000.

N. EARLY TERMINATION

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

The contract may be terminated as follows:

1. The State and the Contractor, by mutual written agreement, may terminate the contract at any time.
2. The State, at its sole discretion, may terminate the contract for any reason upon thirty (30) calendar day's written notice to the Contractor. Such termination shall not relieve the Contractor of warranty or other service obligations incurred under the terms of the contract. In the event of termination the Contractor shall be entitled to payment, determined on a pro rata basis, for products or services satisfactorily performed or provided.
3. The State may terminate the contract immediately for the following reasons:
 - a. if directed to do so by statute;
 - b. Contractor has made an assignment for the benefit of creditors, has admitted in writing its inability to pay debts as they mature, or has ceased operating in the normal course of business;
 - c. a trustee or receiver of the Contractor or of any substantial part of the Contractor's assets has been appointed by a court;
 - d. fraud, misappropriation, embezzlement, malfeasance, misfeasance, or illegal conduct pertaining to performance under the contract by its Contractor, its employees, officers, directors, or shareholders;
 - e. an involuntary proceeding has been commenced by any party against the Contractor under any one of the chapters of Title 11 of the United States Code and (i) the proceeding has been pending for at least sixty (60) calendar days; or (ii) the Contractor has consented, either expressly or by operation of law, to the entry of an order for relief; or (iii) the Contractor has been decreed or adjudged a debtor;
 - f. a voluntary petition has been filed by the Contractor under any of the chapters of Title 11 of the United States Code;
 - g. Contractor intentionally discloses confidential information;
 - h. Contractor has or announces it will discontinue support of the deliverable; and,
 - i. In the event funding is no longer available.

O. CONTRACT CLOSEOUT

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

Upon termination of the contract for any reason the Contractor shall within thirty (30) days, unless stated otherwise herein:

1. Transfer all completed or partially completed deliverables to the State;
2. Transfer ownership and title to all completed or partially completed deliverables to the State;
3. Return to the State all information and data, unless the Contractor is permitted to keep the information or data by contract or rule of law. Contractor may retain one copy of any information or data as required to comply with applicable work product documentation standards or as are automatically retained in the course of Contractor's routine back up procedures;
4. Cooperate with any successor contractor, person or entity in the assumption of any or all of the obligations of this contract;
5. Cooperate with any successor contractor, person or entity with the transfer of information or data related to this contract;
6. Return or vacate any state owned real or personal property;

Nothing in this Section should be construed to require the Contractor to surrender intellectual property, real or person property, or information or data owned by the Contractor for which the State has no legal claim.

III. CONTRACTOR DUTIES

A. INDEPENDENT CONTRACTOR / OBLIGATIONS

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

It is agreed that the Contractor is an independent contractor and that nothing contained herein is intended or should be construed as creating or establishing a relationship of employment, agency, or a partnership.

The Contractor is solely responsible for fulfilling the contract. The Contractor or the Contractor's representative shall be the sole point of contact regarding all contractual matters.

The Contractor shall secure, at its own expense, all personnel required to perform the services under the contract. The personnel the Contractor uses to fulfill the contract shall have no contractual or other legal relationship with the State; they shall not be considered employees of the State and shall not be entitled to any compensation, rights or benefits from the State, including but not limited to, tenure rights, medical and hospital care, sick and vacation leave, severance pay, or retirement benefits.

By-name personnel commitments made in the Contractor's bid shall not be changed without the prior written approval of the State. Replacement of these personnel, if approved by the State, shall be with personnel of equal or greater ability and qualifications.

The Contractor warrants that all persons assigned to the project shall be employees of the Contractor or a Subcontractor, and shall be fully qualified to perform the work required herein. Personnel employed by the Contractor or a subcontractor to fulfill the terms of the contract shall remain under the sole direction and control of the Contractor or the subcontractor respectively.

With respect to its employees, the Contractor agrees to be solely responsible for the following:

1. Any and all pay, benefits, and employment taxes and/or other payroll withholding;
2. Any and all vehicles used by the Contractor's employees, including all insurance required by state law;
3. Damages incurred by Contractor's employees within the scope of their duties under the contract;
4. Maintaining Workers' Compensation and health insurance that complies with state and federal law and submitting any reports on such insurance to the extent required by governing law;
5. Determining the hours to be worked and the duties to be performed by the Contractor's employees; and,
6. All claims on behalf of any person arising out of employment or alleged employment (including without limit claims of discrimination alleged against the Contractor, its officers, agents, or subcontractors or subcontractor's employees).

If the Contractor intends to utilize any subcontractor, the Subcontractor's level of effort, tasks, and time allocation must be clearly defined in the Contractor's bid. The Contractor shall agree that it will not utilize any Subcontractors not specifically included in its bid in the performance of the contract without the prior written authorization of the State.

The State reserves the right to require the Contractor to reassign or remove from the project any Contractor or Subcontractor employee.

Contractor shall insure that the terms and conditions contained in any contract with a sub-contractor does not conflict with the terms and conditions of this contract.

The Contractor shall include a similar provision, for the protection of the State, in the contract with any Subcontractor engaged to perform work on this contract.

B. EMPLOYEE WORK ELIGIBILITY STATUS

The Contractor is required and hereby agrees to use a federal immigration verification system to determine the work eligibility status of employees physically performing work within the State. A federal immigration verification system means the electronic verification of the work authorization program authorized by the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. 1324a, known as the E-Verify Program, or an equivalent federal

program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of an employee.

If the Contractor is an individual or sole proprietorship, the following applies:

1. The Contractor must complete the United States Citizenship Attestation Form, available on the DAS website at <http://das.nebraska.gov/materiel/purchasing.html>

The completed United States Attestation Form should be submitted with the ITB response.

2. If the Contractor indicates on such attestation form that he or she is a qualified alien, the Contractor agrees to provide the U.S. Citizenship and Immigration Services documentation required to verify the Contractor's lawful presence in the United States using the Systematic Alien Verification for Entitlements (SAVE) Program.
3. The Contractor understands and agrees that lawful presence in the United States is required and the Contractor may be disqualified or the contract terminated if such lawful presence cannot be verified as required by Neb. Rev. Stat. § 4-108.

C. COMPLIANCE WITH CIVIL RIGHTS LAWS AND EQUAL OPPORTUNITY EMPLOYMENT / NONDISCRIMINATION (Statutory)

The Contractor shall comply with all applicable local, state, and federal statutes and regulations regarding civil rights laws and equal opportunity employment. The Nebraska Fair Employment Practice Act prohibits Contractors of the State, and their Subcontractors, from discriminating against any employee or applicant for employment, with respect to hire, tenure, terms, conditions, compensation, or privileges of employment because of race, color, religion, sex, disability, marital status, or national origin (Neb. Rev. Stat. §48-1101 through 48-1125). The Contractor guarantees compliance with the Nebraska Fair Employment Practice Act, and breach of this provision shall be regarded as a material breach of contract. The Contractor shall insert a similar provision in all Subcontracts for goods or services to be covered by any contract resulting from this ITB.

D. COOPERATION WITH OTHER CONTRACTORS

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

Contractor may be required to work with or in close proximity to other contractors or individuals that may be working on the same or different projects. The Contractor shall agree to cooperate with such other contractors or individuals, and shall not commit or permit any act which may interfere with the performance of work by any other contractor or individual. Contractor is not required to compromise Contractor's intellectual property or proprietary information unless expressly required to do so by this contract.

E. PERMITS, REGULATIONS, LAWS

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

The contract price shall include the cost of all royalties, licenses, permits, and approvals, whether arising from patents, trademarks, copyrights or otherwise, that are in any way involved in the contract. The Contractor shall obtain and pay for all royalties, licenses, and permits, and approvals necessary for the performance of the contract. The Contractor must guarantee that it has the full legal right to the materials, supplies, equipment, software, and other items used to execute this contract.

F. INSURANCE REQUIREMENTS

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

The Contractor shall throughout the term of the contract maintain insurance as specified herein and provide the State a current Certificate of Insurance/Accord Form (COI) verifying the coverage. The Contractor shall not commence work on the contract until the insurance is in place. If Contractor subcontracts any portion of the Contract the Contractor must, throughout the term of the contract, either:

1. Provide equivalent insurance for each subcontractor and provide a COI verifying the coverage for the subcontractor;
2. Require each subcontractor to have equivalent insurance and provide written notice to the State that the Contractor has verified that each subcontractor has the required coverage; or,
3. Provide the State with copies of each subcontractor's Certificate of Insurance evidencing the required coverage.

The Contractor shall not allow any Subcontractor to commence work until the Subcontractor has equivalent insurance. The failure of the State to require a COI, or the failure of the Contractor to provide a COI or require subcontractor insurance shall not limit, relieve, or decrease the liability of the Contractor hereunder.

In the event that any policy written on a claims-made basis terminates or is canceled during the term of the contract or with in one (1) years of termination or expiration of the contract, the contractor shall obtain an extended discovery or reporting period, or a new insurance policy, providing coverage required by this contract for the term of the contract and one (1) years following termination or expiration of the contract.

If by the terms of any insurance a mandatory deductible is required, or if the Contractor elects to increase the mandatory deductible amount, the Contractor shall be responsible for payment of the amount of the deductible in the event of a paid claim.

Notwithstanding any other clause in this Contract, the State may recover up to the liability limits of the insurance policies required herein.

1. WORKERS' COMPENSATION INSURANCE

The Contractor shall take out and maintain during the life of this contract the statutory Workers' Compensation and Employer's Liability Insurance for all of the contractors' employees to be engaged in work on the project under this contract and, in case any such work is sublet, the Contractor shall require the Subcontractor similarly to provide Worker's Compensation and Employer's Liability Insurance for all of the Subcontractor's employees to be engaged in such work. This policy shall be written to meet the statutory requirements for the state in which the work is to be performed, including Occupational Disease. **The policy shall include a waiver of subrogation in favor of the State. The COI shall contain the mandatory COI subrogation waiver language found hereinafter.** The amounts of such insurance shall not be less than the limits stated hereinafter. For employees working in the State, the policy must be written by an entity authorized by the State of Nebraska Department of Insurance to write Workers' Compensation and Employer's Liability Insurance for Nebraska employees.

2. COMMERCIAL GENERAL LIABILITY INSURANCE AND COMMERCIAL AUTOMOBILE LIABILITY INSURANCE

The Contractor shall take out and maintain during the life of this contract such Commercial General Liability Insurance and Commercial Automobile Liability Insurance as shall protect Contractor and any Subcontractor performing work covered by this contract from claims for damages for bodily injury, including death, as well as from claims for property damage, which may arise from operations under this contract, whether such operation be by the Contractor or by any Subcontractor or by anyone directly or indirectly employed by either of them, and the amounts of such insurance shall not be less than limits stated hereinafter.

The Commercial General Liability Insurance shall be written on an **occurrence basis**, and provide Premises/Operations, Products/Completed Operations, Independent Contractors, Personal Injury, and Contractual Liability coverage. **The policy shall include the State, and others as required by the contract**

documents, Nebraska Department Of Transportation as Additional Insured(s). This policy shall be primary, and any insurance or self-insurance carried by the State shall be considered secondary and non-contributory. The COI shall contain the mandatory COI liability waiver language found hereinafter. The Commercial Automobile Liability Insurance shall be written to cover all Owned, Non-owned, and Hired vehicles.

REQUIRED INSURANCE COVERAGE	
BUILDERS RISK	
All Risk Insurance – Cost of the Job including Soft Costs	
COMMERCIAL GENERAL LIABILITY	
General Aggregate	\$2,000,000
Products/Completed Operations Aggregate	\$2,000,000
Personal/Advertising Injury	\$1,000,000 per occurrence
Bodily Injury/Property Damage	\$1,000,000 per occurrence
Fire Damage	\$50,000 any one fire
Medical Payments	\$10,000 any one person
Damage to Rented Premises	\$300,000 each occurrence
Contractual	Included
Independent Contractors	Included
If higher limits are required, the Umbrella/Excess Liability limits are allowed to satisfy the higher limit.	
WORKER'S COMPENSATION	
Employers Liability Limits	\$500K/\$500K/\$500K
Statutory Limits- All States	Statutory - State of Nebraska
Voluntary Compensation	Statutory
COMMERCIAL AUTOMOBILE LIABILITY	
Bodily Injury/Property Damage	\$1,000,000 combined single limit
Include All Owned, Hired & Non-Owned Automobile liability	Included
Motor Carrier Act Endorsement	Where Applicable
GARAGE LIABILITY	
\$1,000,000 Each Accident	
\$2,000,000 Aggregate	
GARAGE KEEPERS LEGAL LIABILITY	
Includes Comprehensive & Collision	Limits sufficient to cover all vehicles in the insured's care, custody or control.
UMBRELLA/EXCESS LIABILITY	
Over Primary Insurance	\$5,000,000 per occurrence
COMMERCIAL CRIME	
Crime/Employee Dishonesty Including 3rd Party Fidelity	\$1,000,000
CONTRACTOR'S POLLUTION LIABILITY	
Each Occurrence/Aggregate Limit	\$2,000,000
Includes Non-Owned Disposal Sites	
MANDATORY COI SUBROGATION WAIVER LANGUAGE	
"Workers' Compensation policy shall include a waiver of subrogation in favor of the State of Nebraska."	
MANDATORY COI LIABILITY WAIVER LANGUAGE	
"Commercial General Liability & Commercial Automobile Liability policies shall be primary and any insurance or self-insurance carried by the State shall be considered secondary and non-contributory. State of Nebraska shall be included as additionally insured."	

If the mandatory COI subrogation waiver language or mandatory COI liability waiver language on the COI states that the waiver is subject to, condition upon, or otherwise limit by the insurance policy a copy of the relevant sections of the policy must be submitted with the COI so the State can review the limitations imposed by the insurance policy.

3. EVIDENCE OF COVERAGE

The Contractor should furnish the State, prior to beginning work and upon, a certificate of insurance coverage complying with the above requirements to the attention of:

Fleet Management
 5001 S 14th St
 Lincoln, NE 68512

These certificates or the cover sheet shall reference the ITB number, and the certificates shall include the name of the company, policy numbers, effective dates, dates of expiration, and amounts and types of coverage afforded. If the State is damaged by the failure of the Contractor to maintain such insurance, then the Contractor shall be responsible for all reasonable costs properly attributable thereto.

Reasonable notice of cancellation of any required insurance policy must be submitted to Administrative Services State Purchasing Bureau when issued and a new coverage binder shall be submitted immediately to ensure no break in coverage.

4. DEVIATIONS

The insurance requirements are subject to limited negotiation. Negotiation typically includes, but is not necessarily limited to, the correct type of coverage, necessity for Workers' Compensation, and the type of automobile coverage carried by the Contractor.

G. NOTICE OF POTENTIAL CONTRACTOR BREACH

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

If Contractor breaches the contract or anticipates breaching the contract the Contractor shall immediately give written notice to the State. The notice shall explain the breach or potential breach, and may include a request for a waiver of the breach if so desired. The State may, at its discretion, temporarily or permanently waive the breach. By granting a temporary waiver, the State does not forfeit any rights or remedies to which the State is entitled by law or equity, or pursuant to the provisions of the contract. Failure to give immediate notice, however, may be grounds for denial of any request for a waiver of a breach.

H. ANTITRUST

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

The Contractor hereby assigns to the State any and all claims for overcharges as to goods and/or services provided in connection with this contract resulting from antitrust violations which arise under antitrust laws of the United States and the antitrust laws of the State.

I. CONFLICT OF INTEREST

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

By submitting a bid, Contractor certifies that there does not now exist a relationship between the Contractor and any person or entity which is or gives the appearance of a conflict of interest related to this ITB or project.

The Contractor certifies that it shall not take any action or acquire any interest, either directly or indirectly, which will conflict in any manner or degree with the delivery of its goods hereunder or which creates an actual or an appearance of conflict of interest.

The Contractor certifies that it will not employ any individual known by Contractor to have a conflict of interest.

The Parties shall not knowingly, for a period of two years after execution of the contract, recruit or employ any employee or agent of the other Party who has worked on the ITB or project, or who had any influence on decisions affecting the ITB or project.

J. STATE PROPERTY

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

The Contractor shall be responsible for the proper care and custody of any State-owned property which is furnished for the Contractor's use during the performance of the contract. The Contractor shall reimburse the State for any loss or damage of such property; normal wear and tear is expected.

K. SITE RULES AND REGULATIONS

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

The Contractor shall use its best efforts to ensure that its employees, agents, and Subcontractors comply with site rules and regulations while on State premises. If the Contractor must perform on-site work outside of the daily operational hours set forth by the State, it must make arrangements with the State to ensure access to the facility and the equipment has been arranged. No additional payment will be made by the State on the basis of lack of access, unless the State fails to provide access as agreed to in writing between the State and the Contractor.

L. ADVERTISING

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

The Contractor agrees not to refer to the contract award in advertising in such a manner as to state or imply that the company or its goods are endorsed or preferred by the State. Any publicity releases pertaining to the project shall not be issued without prior written approval from the State.

M. DRUG POLICY

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

Contractor certifies it maintains a drug free work place environment to ensure worker safety and workplace integrity.
Contractor agrees to provide a copy of its drug free workplace policy at any time upon request by the State.

IV. PAYMENT

A. TAXES

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

The State is not required to pay taxes and assumes no such liability as a result of this solicitation. The Contractor may request a copy of the Nebraska Department of Revenue, Nebraska Resale or Exempt Sale Certificate for Sales Tax Exemption, Form 13 for their records. Any property tax payable on the Contractor's equipment which may be installed in a state-owned facility is the responsibility of the Contractor.

B. INVOICES

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

Invoices for payments must be submitted by the Contractor to the agency requesting the services with sufficient detail to support payment. The terms and conditions included in the Contractor's invoice shall be deemed to be solely for the convenience of the parties. No terms or conditions of any such invoice shall be binding upon the State, and no action by the State, including without limitation the payment of any such invoice in whole or in part, shall be construed as binding or estopping the State with respect to any such term or condition, unless the invoice term or condition has been previously agreed to by the State as an amendment to the contract.

C. INSPECTION AND APPROVAL

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within ITB Response (Initial)	NOTES/COMMENTS:
RR			

Final inspection and approval of all work required under the contract shall be performed by the designated State officials.

The State and/or its authorized representatives shall have the right to enter any premises where the Contractor or Subcontractor duties under the contract are being performed, and to inspect, monitor or otherwise evaluate the work being performed. All inspections and evaluations shall be at reasonable times and in a manner that will not unreasonably delay work.

If a simple inspection of the goods would reveal nonconformity, notice of nonconformity should be provided to the vendor as soon as reasonably practical, but not to exceed thirty (30) days from receipt of goods. This includes visual inspection of product to ensure packaging is not damaged, dented or compromised.

D. PAYMENT (Statutory)

State will render payment to Contractor when the terms and conditions of the contract and specifications have been satisfactorily completed on the part of the Contractor as solely determined by the State. (Neb. Rev. Stat. Section 73-506(1)). The State may require the Contractor to accept payment by electronic means such as ACH deposit. In no event shall the State be responsible or liable to pay for any services provided by the Contractor prior to the Effective Date of the contract, and the Contractor hereby waives any claim or cause of action for any such services.

E. LATE PAYMENT (Statutory)

The Contractor may charge the responsible agency interest for late payment in compliance with the State of Nebraska Prompt Payment Act (See Neb. Rev. Stat. §§ 81-2401 through 81-2408).

F. SUBJECT TO FUNDING / FUNDING OUT CLAUSE FOR LOSS OF APPROPRIATIONS (Statutory)

The State's obligation to pay amounts due on the Contract for a fiscal years following the current fiscal year is contingent upon legislative appropriation of funds. Should said funds not be appropriated, the State may terminate the contract with respect to those payments for the fiscal year(s) for which such funds are not appropriated. The State will give the Contractor written notice thirty (30) calendar days prior to the effective date of termination. All obligations of the State to make payments after the termination date will cease. The Contractor shall be entitled to receive just and equitable compensation for any authorized work which has been satisfactorily completed as of the termination date. In no event shall the Contractor be paid for a loss of anticipated profit.

G. RIGHT TO AUDIT (Statutory)

The State shall have the right to audit the Contractor's performance of this contract upon a thirty (30) day written notice. Contractor shall utilize generally accepted accounting principles, and shall maintain the accounting records, and other records and information relevant to the contract (Information) to enable the State to audit the contract. (Neb. Rev. Stat. §84-304 et seq.) The State may audit and the Contractor shall maintain the information during the term of the contract and for a period of five (5) years after the completion of this contract or until all issues or litigation are resolved, whichever is later. The Contractor shall make the Information available to the State at Contractor's place of business or a location acceptable to both Parties during normal business hours. If this is not practical or the Contractor so elects, the Contractor may provide electronic or paper copies of the Information. The State reserves the right to examine, make copies of, and take notes on any Information relevant to this contract, regardless of the form or the Information, how it is stored, or who possesses the Information. In no circumstances will contractor be required to create or maintain documents not kept in the ordinary course of contractor's business operations, nor will contractor be required to disclose any information, including but not limited to product cost data, which is confidential or proprietary to contractor.

The Parties shall pay their own costs of the audit unless the audit finds a previously undisclosed overpayment by the State. If a previously undisclosed overpayment exceeds one-half of one percent (.5%) of the total contract billings, or if fraud, material misrepresentations, or non-performance is discovered on the part of the Contractor, the Contractor shall reimburse the State for the total costs of the audit. Overpayments and audit costs owed to the State shall be paid within ninety (90) days of written notice of the claim. The Contractor agrees to correct any material weaknesses or condition found as a result of the audit.

V. SCOPE OF WORK

The Bidder should provide the following information in response to this ITB.

A. SCOPE

It is the intent of this bid invitation to establish a contract to supply Tandem Axle Chassis MIN 60,000 GVWR W/RDS Body and TOWPLOW per the attached specifications from date of award for a period of one (1) year with the option to renew for an additional four (4) one-year renewal periods when mutually agreeable to the vendor and the State. The State reserves the right to extend the period of this contract beyond the end date when mutually agreeable to the vendor and the State.

Complete specifications, manufacturer's current descriptive literature and/or advertising data sheets with cuts or photographs must be included with the bid for the IDENTICAL items proposed. Any information necessary to show compliance with these specifications not given on the manufacturer's descriptive literature and/or advertising data sheets must be supplied in writing on or attached to the bid document. If manufacturer's information necessary to show compliance with these specifications is not attached to the bid document, the Bidder may be required to submit requested information within three (3) business days of a written request. Failure to submit requested descriptive literature or advertising data sheets may be grounds to reject the bid.

B. AMENDMENT

This Contract may be amended in writing, within scope, upon the agreement of both parties.

C. REVISIONS

In the event any product is discontinued or replaced upon mutual consent during the contract period, the State reserves the right to amend this contract to include the alternate product at the same price.

VI. CAB AND CHASSIS

A. BIDDER INSTRUCTIONS

Bidder must respond to each of the following statements in Sections VI through XVIII. Specifications listed are minimum conditions that must be met in order for a Bidder to qualify for the award.

"YES" response means the Bidder guarantees they can meet this condition.

"NO" response means the Bidder cannot meet this condition and will not be considered.

"NO & PROVIDE ALTERNATIVE" responses should be used only with a narrative response in the NOTES/COMMENTS section explaining in detail any deviation from the Bidder's ability to meet the condition, and an explanation of how this would be determined to be an acceptable alternative to meeting the condition. Alternatives must be detailed in such a way that allows such deviations to be fully evaluated. The State shall determine at its sole discretion whether or not the Bidder's alternative is an acceptable alternative.

B. NON-COMPLIANCE STATEMENT

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Read these specifications carefully. Any and all exceptions to these specifications must be written on or attached to quotation request. Any noncompliance may void your quotation. Non-compliance to any single specification can void your quotation.
✓			2. It is the responsibility of Bidders to obtain information and clarifications as provided below. The State is not responsible for any erroneous or incomplete understandings or wrongful interpretations of this ITB by any Bidder.
✓			3. No interpretation related to the meaning of bid specifications or other pre-bid documents will be made orally to any Bidder by the State. Any ITB interpretation must be put in writing and faxed by the Bidder to: the State Purchasing Bureau, Fax (402) 471-2089 or e-mailed to AS Materiel Purchasing as.materielpurchasing@nebraska.gov by the last day to submit written questions that is specified in the Schedule of Events. (Inquiries received after the last day to submit written questions may not be addressed).
NOTES/COMMENTS:			

C. BASIC SPECIFICATIONS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Shall be not less than 60,000 Gross Vehicle Weight Rating a. VIN door shall show full GVWR and not reflect calculated bridge capacity rating
✓			2. Wheel Base: a. Between 206 and 220 inches or as required by body installer to meet requirements to mount dump body, wings and other options b. Cab to trunnion shall be minimum 136 to 140 inches as required to meet RDS body specifications. This shall be clear; useable space above the rails with exception that vertical stack and heat shield may extend up to 6 inches into CT area as long as:



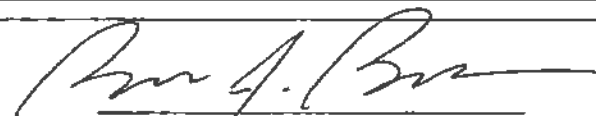
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2019 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION
AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: Navistar, Inc.
(U.S. Manufacturer or Importer)
Certificate Number: KNVXH07570SA-001

Effective Date:
10/09/2018

Expiration Date:
12/31/2019


Byron J. Bunker, Division Director
Compliance Division

Issue Date:
10/09/2018

Revision Date:
N/A

Model Year: 2019
Manufacturer Type: Original Engine Manufacturer
Engine Family: KNVXH07570SA
Intended Service Class: Heavy Heavy-Duty Diesel
Fuel Type: Diesel

Intended Engine Application: Tractor and Vocational
Primary Test Configuration Transient Duty Cycle:
CO2 FCL value (g/hp-hr): 513
CO2 FEL value (g/hp-hr): 528
N2O FEL value (g/hp-hr): 0.10
CH4 FEL value (g/hp-hr): 0.10
Primary Test Configuration Steady-State Duty Cycle:
CO2 FCL value (g/hp-hr): 455
CO2 FEL value (g/hp-hr): 469

Pursuant to Section 206 of the Clean Air Act (42 U.S.C. section 7525), 40 CFR Parts 86 and 1036, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which represent the engine family, and is subject to the terms and conditions prescribed in those provisions.

This certificate of conformity covers only those new motor vehicle engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Parts 86 and 1036 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Parts 86 and 1036.

This certificate of conformity is conditional upon compliance of said manufacturer with the averaging, banking and trading provisions of 40 CFR Parts 86 and 1036. Failure to comply with these provisions may render this certificate void *ab initio*.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR Parts 86 and 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Parts 86 and 1036. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Parts 86 and 1036.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction into commerce in the U.S. prior to the effective date of the certificate.

Pursuant to the authority vested in California Air Resources Board by Health and Safety Code Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: The engine and emission control systems produced by the manufacturer are certified as described below for use in on-road motor vehicles with a manufacturer's GVWR over 14,000 pounds. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	ENGINE SIZES (L)	FUEL TYPE ¹	STANDARDS & TEST PROCEDURE	INTENDED SERVICE CLASS ²	ECS & SPECIAL FEATURES ³	DIAGNOSTIC ⁵
			Diesel	Diesel	HHDD		
2019	KNVXH07570SA	12.4	Diesel	Diesel	HHDD	DDI, TC, CAC, ECM, EGR, OC, PTOX, SCR-U, AMOX	OBD (S)
PRIMARY ENGINE'S IDLE EMISSIONS CONTROL ⁶		ADDITIONAL IDLE EMISSIONS CONTROL ⁶					
30g		N/A					
ENGINE (L)		ENGINE MODELS / CODES (rated power, in hp)					
12.4		See attachment for engine models and ratings					

¹ and applicable. GVWR=gross vehicle weight rating; 13 CCR sxxv Title 13, California Code of Regulations, Section sxxv, 40 CFR 94.abc1 Title 40, Code of Federal Regulations, Section 94.abc. L=liter, hp=horsepower, kW=kilowatt, Btu=hour.
² CHG/LNG=compressed/liquefied natural gas; LPG=liquefied petroleum gas; E85=85% ethanol fuel; MF=multi fuel s.k.a. BF=bi fuel; DF=dual fuel; FF=flexible fuel.
³ L/MH HHDD=light/medium/heavy heavy-duty diesel; UH=urban bus; HDO=heavy duty Otto.
⁴ ECS=emission control system; TWC=three-way oxidizing catalyst; NAC=NOx adsorption catalyst; SCR-U / SCR=urea selective catalytic reduction - urea / - ammonia; WU (prefix) warm-up catalyst; DPF=diesel particulate filter; PTOX=periodic trap oxidizer; HO2S/O2S=heated oxygen sensor; HAPS/AFS=heated air-fuel ratio sensor (s.k.a., universal or linear oxygen sensor); TBI=throttle body fuel injection; SPMFI=sequential/port fuel injection; DGI=direct gasoline injection; GCARB=gaseous carburetor; DI/DDI=direct/indirect diesel injection; TC/SC=turbo super charger; CAC=charge air cooler; EGR / EGR-C=exhaust gas recirculation / cooled EGR; PAIR/AIR=purified/secondary air injection; SPL=smoke puff limiter; ECM/PCB=engine/powertrain control module; EBS=engine shutdown system (per 13 CCR 1956.8A)(6)(A)(1); 20g=20 g/hp-hr NOx (per 13 CCR 1956.8A)(6)(C); APS=internal combustion auxiliary power system; ALT=alternative method (per 13 CCR 1956.8A)(6)(D). Example(s) listed per 13 CCR 1956.8A)(6)(B) or for CHG/LNG fuel systems. Not all applicable (e.g., Otto engines and vehicles).
⁵ OBD=engine manufacturer diagnostic system : OBD(F) / (P) / (S)=full / partial / partial with fine / on-board diagnostic. (2013-08-20)

Following are: 1) the FTP exhaust emission standards, or family emission limit(s) as applicable, under 13 CCR 1956.8; 2) the SET and NTE limits under the applicable California exhaust emission standards and test procedures for heavy-duty diesel engines and vehicles (Test Procedures); and 3) the corresponding certification levels, for this engine family. "Diesel" CO, SET and NTE certification compliance may have been demonstrated by the manufacturer as provided under the applicable Test Procedures in lieu of testing. (For flexible- and dual-fueled engines, the CERT values in brackets [] are those when tested on conventional test fuel. For multi-fueled engines, the STD and CERT values for default operation permitted in 13 CCR 1956.8 are in parentheses.)⁴

In g/bhp-hr	NMHC		NOx		NMHC+NOx		CO		PM		HCHO	
	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET	FTP	SET
STD	0.14	0.14	0.20	0.20	*	*	15.5	15.5	0.01	0.01	*	*
CERT	0.01	0.005	0.11	0.11	*	*	0.05	0.01	0.001	0.000	*	*
NTE	0.21		0.30		*		19.4		0.02		*	

⁴ g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; SET=supplemental emissions testing; NTE=Not-to-Exceed emission limit; STD=standard of emission test cap; FEL=family emission limit; CERT=certification level; NMHC/NMHC=non-methane hydrocarbon; NOx=nitrogen oxides; CO=carbon monoxide; PM=particulate matter; HCHO=formaldehyde.

BE IT FURTHER RESOLVED: The manufacturer has demonstrated compliance with the Greenhouse Gas Emission Standards as specified in Title 13 CCR 1956.8 and the incorporated "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy Duty Diesel Engines and Vehicles" (HDDE Test Procedures) adopted Dec. 27, 2002, as last amended Oct. 21, 2014 using the 2014 model year National Heavy-Duty Engine and Vehicle Greenhouse Gas Program as specified in Section 1036.108 of the HDDE Test Procedures. The manufacturer has submitted the required information and therefore has met the criteria necessary to receive a California Executive Order based on the Environmental Protection Agency's Certificate of Conformity for the above listed engine family.

In g/bhp-hr	EPA CERTIFICATE OF CONFORMITY				PRIMARY INTENDED SERVICE CLASS	
	KNVXH07570SA-001				TRACTOR / VOCATIONAL	
	CO ₂				CH ₄	N ₂ O
	FTP	SET				
STD	555	460		0.10	0.10	
FCL	513	455				
PEL	528	469		0.10	0.10	
CERT	508	450		0.00	0.08	

⁴ g/bhp-hr=grams per brake horsepower-hour; FTP=Federal Test Procedure; SET=Supplemental emissions testing; STD=standard of emission test cap; FEL=family emission limit; FCL=family certification level; CERT=certification level; CO₂=carbon dioxide; CH₄=methane; N₂O=nitrous oxide; VOCATIONAL=vocational engine; TRACTOR=tractor engine.

✓			<ul style="list-style-type: none"> i. Stack with shield is near rear corner of cab. Right side preferred. ii. None of exhaust system in CT area crosses over chassis rail
✓			3. Frame resisting bending moment shall equal or exceed 2,500,000 inch pounds.
✓			4. Minimum 18-inch integral front frame extension on truck will be required, front only bumper and fenders to be furnished.
✓			5. Hood shall be tilt-forward hood fenders with: <ul style="list-style-type: none"> a. Service access panels required. b. Engine shall be equipped with any OEM available extension tube to allow engine oil and automatic transmission fluid to be conveniently checked and filled at service access panel. c. Butterfly type hood for convenient access to engine is acceptable if tilt-forward hood/fender with services access panel(s) are not available by manufacturer.
NOTES/COMMENTS:			

D. ENGINE

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Diesel, minimum 440 HP; 12 Liter, minimum 1,600 LB FOOT torque. Engine shall be certified to meet current EPA emissions standards for current model year at time of order <u>450 HP / 1,700 LB FOOT Torque</u> NO OTHER ENGINE WILL BE ACCEPTABLE without written approval by Department of Transportation Fleet Management prior to bid opening. Alternative engines may only be requested during the pre-bid conference and/or during the question and answer period. Please specify: <u>International A26</u> <ul style="list-style-type: none"> a. Vender shall provide a copy of the Certificate of Conformity letter sent to the Original Equipment Manufacturer from United States Environmental Protection Agency office of Transportation and air quality. Certificate of Conformity letter should be provided at time of bid opening. Failure to provide Certificate of Conformity letter shall be cause for bid rejection. b. The State of NE will not accept a chassis with any engine that is not compliant or OEM is pay non-compliance penalties to sell said engine/chassis within State of NE
✓			2. Muffler to be horizontal with vertical stack on right hand side with 90 degree elbowed exhaust outlet that is ABOVE top cab shields. Elbowed exhaust outlet must be equivalent material and finished as stack and may be dealer installed. Vertical system heat shield required, Horizontal exhaust is acceptable only if required with body and/or wing mounting. If

✓			horizontal is used it must have exhaust suppression to prevent damage to pavement during emission system regeneration.
✓			3. Temperature controlled fan.
✓			4. Engine to be equipped with 110 volt AC engine coolant heater; male receptacle with cover for electrical wire for engine heater is to be sturdily mounted.
✓			5. Cold starting aid-KBI Dieselmatic cartridge type or equivalent; cartridge to be furnished with warm engine cut off switch may be dealer installed unless equipped with glow plugs or pre-heater. OEM engine software system to aid cold engine start also acceptable. Please specify: <u>Grid Heater</u>
✓			6. Exterior and interior to engine compartment air inlet system for air cleaner. Air cleaner with dual elements if available. <u>Yes</u> Please specify <u>Donaldson</u>
✓			7. Front crankshaft provisions required for power take off.
✓			8. Stainless steel oil pan if available from manufacturer. Please specify: <u>As option for \$1,250</u>

NOTES/COMMENTS:

Stainless steel Oil Pan is available for an additional \$1,250 - Not Included in Base Price

E. FILTERS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Oil filter to be full flow, throw-away type.
✓			2. Dual element air cleaner if available by manufacturer, Donaldson or equivalent Please specify: <u>Donaldson</u>

NOTES/COMMENTS:

F. COOLING

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Manufacture's heaviest duty cooling capacity radiator to be compatible with front mounted PTO.
✓			2. Coolant filter if required by engine manufacturer.

✓			3. Truck shall have manufacturer's recommended long life antifreeze protection to no less than 34 degrees below zero Fahrenheit.
NOTES/COMMENTS:			

G. TRANSMISSION

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Allison HD4060 or 4560 automatic transmission with a hold feature in all gears with transmission oil temperature gauge or warning system on or near dash. Transmission to be most compatible with engine horsepower and torque. <ul style="list-style-type: none"> a. Transmission should have Allison Prognostic, load base shift scheduling and shift energy management features as available. b. Ground speed signal connecting point shall be provided by chassis OEM regardless of transmission installed. Connecting point to be easily accessible by body/hydraulic system installers. c. Transmission electronic control box to be mounted in cab if available from manufacturer.
✓			2. Synthetic oil to be OEM factory fill for transmission.
NOTES/COMMENTS:			

H. AXLE AND SPRINGS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Minimum 20,000 pounds rated capacity axle in front with corresponding multi-leaf springs. Front axle to be set forward design with front bumper to axle measurement of no more than 31 ½ inches. Shall be measured from front of hood or front hood line to center of axle. <ul style="list-style-type: none"> a. OIL FILLED, FRONT WHEEL HUBS WITH WINDOW REQUIRED.
✓			2. Rear suspension assembly shall be Hendrickson PRIMAAX heavy duty on/off road with minimum 46,000 pounds rated capacity. <ul style="list-style-type: none"> a. Tandem axle assembly shall be rated at minimum 40,000 pounds of 46,000 pounds capacity as per OEM requirements. b. Inter-wheel and inter-axle full locking differentials of manufacturer's recommended brand. Switches shall have indicator lights c. Adequate gear ratios must be available to sustain road speed of 75 MPH plus or minus 3 MPH at governed engine RPM.
✓			3. Front and rear springs to also meet manufacture's GVWR requirements.

✓			4. Manual dump valve for air suspension with indicator light.
✓			5. Rear axles to have synthetic oil installed.
NOTES/COMMENTS:			

I. STEERING

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Manufacturer's power steering required. a. Dual Power steering gearboxes required.
✓			2. Tilt steering wheel required.
NOTES/COMMENTS:			

J. BRAKES

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Services brakes shall be six wheel, full air, with automatic slack adjusters. a. Brakes shall be ABS design.
✓			2. Two shoes per wheel, double anchored when brakes are drum type.
✓			3. Services brakes may also be combination of rear drum brakes and front disc brakes. Please specify: <u>Drum</u>
✓			4. Dust shields are required on all axles.
✓			5. Anti-lock brakes system on all wheels required.
✓			6. A spring loaded parking brake system designed to automatically apply parking brakes to all four rear wheels when pressure in main air reservoir drops below safe pressure with warning signal is required. a. Forward facing brake chambers.
✓			7. The compressor shall be single or two stage water cooled type with minimum air flow of 18 CFM.
✓			8. Bendix AD-IP dryer or OEM equivalent required, which may be dealer installed if not available by manufacturer. Spin on filter required. OEM brand air dryer must be approved by NDOT prior to bid opening. Alternatives may only be requested during the pre-bid conference and/or during the question and answer period.
✓			9. Drain valve system for all air tanks must be conveniently operated from side of chassis; system may be dealer installed if not available by manufacturer.

✓			10. Trailer brakes – truck to be equipped with hand air control valve, break away valve and all necessary lines and connections mounted to rear of truck chassis required for coupling air brakes on trailer.
NOTES/COMMENTS:			

K. FUEL TANKS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Fuel tank to be left side mounted and 100 gallon capacity. State tank size being bid: <ul style="list-style-type: none"> a. Tank extending beyond rear line of cab shall not interfere with wing mount. b. Stainless steel tank if available from manufacturer. Please specify: <u>Aluminium</u> c. Stainless steel fuel tank straps if available from manufacturer. Please specify: <u>stainless steel</u>
✓			2. Fuel tank shall be regular accessory units AS SHOWN AND LISTED IN TRUCK MANUFACTURE'S DATA BOOKS. <ul style="list-style-type: none"> a. Suction line from tank to pump to be OEM plastic or stratoflex. Stratoflex is preferred. Please specify: <u>OEM Plastic</u>
✓			3. Fuel/water separator with heater required: Davco brand 384 preferred. Please specify: <u>Davco 382</u> <ul style="list-style-type: none"> a. Shall be compatible with Bio-diesel fuel.
✓			4. Minimum fourteen inches ground clearance required under fuel tank, DEF tank and supports.
✓			5. OEM DEF tank if applicable shall not interfere with mounting of wing frame, cab shield, etc.
NOTES/COMMENTS:			

L. WHEELS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Quantity eight (8)- 22.5 inch by minimum 8.25 inches, ventilated, 10 stud, hub-pilot, steel disc type with 11-1/4 inch diameter bolt circle; identical including color, interchangeable; rear wheels and tires must be spaced to permit use of tire chains.

✓			2. Quantity three (3) – 22.5 x 12.25 (front and spare) otherwise meeting specification.
NOTES/COMMENTS:			

M. TIRE SPECIFICATIONS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Steel belted radials of tubeless type. <ul style="list-style-type: none"> a. Quantity eight (8) – 11R22.5 "H" load range or equivalent metric size rear. <ul style="list-style-type: none"> i. Tread design to be Michelin XDN@ or equivalent on other brands. ii. Fronts and spare shall be 425/65R22.5J of Michelin XZY3 or equivalent tread.
✓			2. Tires must be Goodyear, Michelin, Bridgestone, Firestone Continental or General and shall carry said company name. Please specify: <u>Continental</u>
NOTES/COMMENTS:			

N. CAB SPECIFICATIONS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Air suspension cab with locks on doors
✓			2. National Brand Model 200 series or OEM equivalent high back seat with air lumbar support on both driver and passage sides, both with cloth covering and able to adjust forward and backwards on gliders. Please specify: <u>National</u> <ul style="list-style-type: none"> a. Seats must be able to provide 6.5 inches of travel. b. Seat mounted arm rest outboard to be furnished on both driver and passage seats. If outboard arm rest is available by molded arm rest on door of truck that is acceptable.
✓			3. Power electric windows on both side windows.
✓			4. Two (2) padded sun visors.
✓			5. Tinted safety glass in cab.
✓			6. Front windshield shall include heated defroster grids to aid melting of snow and/or ice buildup during winter operations.

		✓	7. Window in bottom, front part of right door if available from manufacturer. N/A
✓			8. Step or running board on each side of cab.
✓			9. Interior finished to exclude excessive noise and weather.
✓			10. Exterior and/or interior cab grab handles on both sides to facilitate entry into the truck shall be provided.
✓			11. Minimum 107 inches from grade to top of cab required.
✓			12. Cab to have minimum 72 inches of shoulder room per specification sheet.
✓			13. Cab to have minimum of 56 inches floor to headliner height.
✓			14. Air suspension cab required. If manufacture does not have air suspension cab available, then Cab mate by Link manufacturing Ltd. is acceptable which maybe dealer installed. Please specify: Factory Installed
NOTES/COMMENTS:			

O. COLOR

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Truck will be highway safety yellow, vendor to provide color chip for approval.
✓			2. Paint will be base coat/clear coat acrylic, activator-hardened acrylic or polyurethane type.
NOTES/COMMENTS:			

P. MIRRORS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Rear vision rectangular western type. a. Mirrors to be stainless steel or OEM bright finished equivalent heated type with tinted or non-glare glass. b. Mirrors shall be electorally adjustable from driver seat.
✓			2. Size 16 inch by 7 inch or approximately 110 square inches.
✓			3. Mounted on right and left doors of cab. Extendable to maximum legal width.
✓			4. 8 inch convex mirror or equivalent size to be mounted below the 16 inch by 7 inch mirror on each side. Convex mirror not to overlap main mirror. Convex mirror to be heated type.

NOTES/COMMENTS:

Q. LIGHTS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Halogen or LED high beam headlights with low beam, parking, dome, double tail and stop lights, front and rear directional turn signal lights. a. Turn signals shall be self-canceling if available from OEM.
✓			2. LED double tail and stop lights required for chassis orders. OEM chassis lights may be omitted for dump body orders as LED lights are required with dump body installation.
✓			3. Wiring harness with connector for auxiliary lighting is required if available from manufacturer. Switch circuit to be battery power if available. Auxiliary snow plow lighting is required with dump body installation.

NOTES/COMMENTS:

R. ELECTRICAL

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. System to 12 volts.
✓			2. Manufacture's recommended batteries for diesel engine bid: minimum of three (3) batteries with 2700 CCA.
✓			3. Alternator shall be a Delco 28Si or Bosch of minimum 160 amperes. Please specify: <u>Delco 28SI 200 AMP</u>
✓			4. Positive and negative jump start studs required. Must be easily accessible at side of chassis. Use of frame or frame hardware is not acceptable for negative stud. Jump stud, cable and mount shall be dealer installed if not available from factory.
✓			5. Chassis shall have easily accessible battery disconnect switch near the battery box or other OEM mounting location that is easily accessible for operators. Please specify location of switch: <u>In Cab</u>
✓			6. Trailer lighting harness and 7 pin ATA plug required at end of frame for trailer hookup.

NOTES/COMMENTS:

S. CONTROLS AND INSTRUMENTS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Key locking ignition switch; head, parking and dome light switch; traffic hazards switch; headlight beam control; electronic engine speed control for cruise and PTO/idle functions. Speedometer.
✓			2. Voltmeter; oil pressure gauge; fuel gauge; engine temperature gauge and air pressure gauge.
✓			3. High beam indicator light, flasher turn-indicator lights, turn signal switch located on steering Column.
✓			4. Engine hour meter, tachometer and vacuum restriction gauge for air cleaner are required, which shall be dash mounted. If manufacturer does not offer a vacuum restriction gauge on dash then a Filter Minder brand of gauge that is dash mounted is acceptable, which may be dealer installed.
✓			5. Control for inter-wheel inter-axle locking differentials shall have dash mounted indicator light.
✓			6. Rearview camera system is required and may be installed by dump body installer. Camera system shall include a minimum 5 inch color monitor and one camera mounted to provide clear view of area behind truck with dump body and spreader installed. Camera will activate when chassis transmission is place in reverse and NDOT would also prefer that operator could activate system for view at any time. Please specify: <u>ZONE DEFENSE</u>
✓			7. Camera System monitor shall have minimum of 3 camera input to allow additional cameras to be installed by NDOT at later date.
✓			8. Rear view camera should have: a. Minimum 170 degree field of view. b. Camera with heated lens. c. Camera to be mounted in the area above pintle plate that will provide view under tailgate spreader when installed.
<p>NOTES/COMMENTS: <u>Rear View Camera Supplied by Monroe Truck Equipment</u></p>			

T. WINDSHIELD WIPERS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Heaviest duty dual electrical wipers available with intermittent capability.
✓			2. Dual electric windshield washers. a. Washer nozzles to be integrated into wiper arms.

NOTES/COMMENTS:

U. GENERAL

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Dual electric horns: a. Manufacturer's standard air horn(s) shall be provided.
✓			2. Truck manufacturer's recommended outside air intake heater with defroster to entire windshield, power outlet on dash.
✓			3. Manufacturer's standard manually controlled air conditioning; seat belts for right and left seats with retractors, lap/shoulder type.
✓			4. Factory installed AM/FM radio, preferable with antenna mounted on cowlings instead of top of cab.
✓			5. Three sets of keys required per vehicle
NOTES/COMMENTS:			

V. RADIO FREQUENCY SHIELDING- Caution!!

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. The chassis and/ or installed components and equipment shall be compatible with use of NDOT mobile and/or two way communication devices. Main communication radio operates in low band range 47 MHz to 48 MHz, but all frequencies apply including low band, high band, UHF and VHF.
✓			2. The chassis and/or installed components and equipment shall be manufactured to meet all current SAE and/or ISO standards applicable and/ or relevant to Electromagnetic Compatibility.
✓			3. NDOT will conduct testing of radio/two-way when installed in chassis. NDOT will notify vendor if normal operational parameters are not met due to degradation of signal caused by electromagnetic emissions from chassis, or installed components and equipment. Vendor shall be required to work with NDOT personal to reduce interference level to a point acceptable to NDOT normal radio operating parameters. Vendor shall have 30 days to resolve RFI issue.
✓			4. Vendor and/or manufacturer will be responsible for any and all cost to replace and/or modify any parts found to cause radio frequency interference. If NDOT and vendor cannot resolve source of RFI the unit will be sent to independent accredited lab for testing to ensure SAE and/or ISO standards which were current at date of bid. Should the chassis and/or installed components and equipment fail testing at the accredited lab, the vendor shall be responsible for all cost incurred for testing.

✓			5. If after testing NDOT and/or accredited lab, the vendor is unable or unwilling to incur the cost and correct the RFI issue to the satisfaction of NDOT. ALL ORDERS AND CORRESPONDING CONTRACT WILL BE CANCELED.
NOTES/COMMENTS:			

W. FACTORY INSPECTION

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. The first truck chassis manufactured shall be made available for inspection by Department of Transportation Personal at factory.
✓			2. Vendor representative(s) shall accompany Department of Transportation personal during inspection. a. Vendor shall be responsible to have body and hitch representatives in attendance at inspection to resolve any possible problems
✓			3. Transportation, meals and lodging cost for Department of Transportation representatives to perform required inspection shall be the vendor's expense. Vendor/manufacturer must provide space inside building with truck to do inspection. With a minimum 2 hours.
NOTES/COMMENTS:			

X. WARRANTY

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. The manufacturer's regular warranty certificate will be required with each unit delivered and the warranty shall apply, in all cases with the following exceptions: a. Because of the installation or attachment of auxiliary or supplementary equipment by the Department of Transportation or subcontractor, the effective date of warranty will be after field assignment. As each unit is assigned for service the Department will maintain a record of serial number and assignment date. b. Manufacturer's written warranty includes engine, transmission and differential must accompany delivered units. c. Full manufacturer's warranty coverage will be required for the stated warranty period, beginning at assignment date, in addition to the time between delivery and field assignment. d. Prior to the awarding of, or entering into any agreement or contract, it shall be the responsibility of the manufacturer and/or the successful bidder to warrant to the State of Nebraska, in writing that it has factory authorized dealers in the State of Nebraska who will provide warranty/services and repair work without undue delay. e. Provide any information on towing available and what is covered.

NOTES/COMMENTS:

Y. SERVICE

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Manufacturer's standard warranty, completed pre-delivery inspection certificate, Manufacturer's Statement of Origin and line sheet will be required at time each unit is delivered.
✓			2. Service policy shall be honored by all of the manufacturer's authorized dealers in the State of Nebraska.
✓			3. Dealer's decals, stickers, or other signs shall not be put on units; manufacturer's nameplate, stampings and other similar signs are acceptable.
NOTES/COMMENTS:			

Z. MANUALS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Owners/operator's manual must accompany each unit delivered.
✓			2. All manuals must be furnished prior to payment and delivered to Fleet Management, Equipment Data Coordinator.
✓			3. Failure to deliver all manuals that are ordered may result in non-payment of ten percent of the purchase order total, until all manuals are delivered.
✓			4. NDOT shall be granted access to online engine, chassis, transmission services and parts manuals as available through OEM at no cost to NDOT. Vendor to provide NDOT personal training for online manuals. Vendor to enter VIN numbers into OEM data base: Please specify: <u>online / manuals</u>
NOTES/COMMENTS:			

AA. SPECIFICATION FORM

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Successful bidder must complete form for each unit delivered and must accompany each unit when delivered. Forms will be supplied by Department of Transportation to successful bidder after purchase order is awarded.

✓			2. If vendor does not properly complete form for each unit, a sum of \$250.00 per unit will be deducted from the purchase order amount.
NOTES/COMMENTS:			

BB. INSURANCE

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. The vendor will be required to fully insure all chassis, for all perils, until delivery to and accepted by the Department of Transportation, Fleet Management, 5001 South 14 th Street, Lincoln, Nebraska 68512.
✓			2. Proof of insurance must be furnished within five days after notification of award to State Purchasing Bureau at address on the invitation to bid.
✓			3. If delivery is earlier than indicated by bidder on invitation to bid, vendor must furnish insurance from actual delivery date to date specified on invitation to bid.
✓			4. The State of Nebraska assumes, ownership at time of actual delivery at 5001 South 14 th Street, Lincoln, Nebraska 68512 and acceptance of complete unit.
NOTES/COMMENTS:			

VII. BODY

A. BODIES

Monroe Specification sheets
Pages 37-76

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Body shall be Stainless steel Monroe RDS model and meet following specifications. a. Stainless steel construction will be 201 or 304
✓			2. Length of 14 feet required. requires a minimum CA of 133 inches.
✓			3. Top inside width shall be 87 inches with total outside width being 96 inches
✓			4. Side height of 50 inches minimum required. May be sloped front to rear to match tailgate height
✓			5. Tailgate height of 50 inches
✓			6. Capacity of 10 43 cubic yards
✓			7. The longills shall be fabricated from 1/4" stainless steel, 14" deep a. Sections of 4" x 5.4# channel are welded every two (2) feet, the length of the spreader at the base of the longills, where the longills are then boxed in with 1/4" stainless steel b. Then there shall be 3/16" x 3" x 3" structural angle welding every 12" the full length of the conveyor at the top of the longills.
✓			8. The unit shall have a 1/4" stainless steel replaceable floor with 3/16" removable chain guards.
✓			9. The sides must be of a radius design for strength and to allow free flow of granular material to the conveyor.
✓			10. The boxed top rail shall be a minimum of 3/16 inch formed channel.
✓			11. The front shall be sloped to accommodate a headlift cylinder with partial doghouse and conform with the radius of the body and shall be 100% welded on the inside and outside
✓			12. Side supports shall be added and shall have 3/16" x 4" 4" tube extending through long members with a 3/16" boxed section welded 100% from top rail of the body to cross tube, a. 3/16 inch stainless steel construction
✓			13. Top rail of RDS body shall be compatible for tarp installation. Top rail may be sloped front to back.
✓			14. Box shall have the Whelen heated taillight housing part number 11-487697-1ss or equivalent with approval from NDOT Fleet management before bid opening. Alternatives may only be requested during the pre-bid conference and/or during the questions and answers period. Please specify <u>Whelen</u>
NOTES/COMMENTS:			

B. ROLL TARP

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. The tarp system shall be a Shurco Super Duty Shur-Lok kit or equal, and consist of the following minimum: <ul style="list-style-type: none"> a. 22-ounce vinyl coated tarp with tailflap. b. Roll-away ridge pole. c. Stainless steel front endcap. d. Aluminum latch plate. e. One heavy duty rear tarp bow. f. Three easy off offset tarp stops. g. Four crank retainers h. long shur-flex crank arm i. Front end shur-return system.
/			2. Installation shall be such that the tarp can be secured for travel in either the open or covered mode.

C. TAILGATE

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Tailgate shall be compatible for use with roll tarp. <ul style="list-style-type: none"> A. Shall be manufactured from 3/16 inch stainless steel on the bottom and 1/4 inch formed channels on the sides.
/			2. Tailgate shall be double-acting with a squared perimeter, having two horizontal braces of 10 gauge material full width of the tailgate: <ul style="list-style-type: none"> a. Material door shall extend 16 inches into the interior of the body to prevent material from escaping through the partially opened door over the conveyor. b. Opening shall be 21 inches in width by 8-1/2 inches in height. c. Tailgate shall have 1 x 4 inch bar stock tailgate hardware with Harden pins d. Air tailgate latches shall be 1 inch flame cut, with each latch being adjustable with threaded clevis and keeper pins e. Latch shall be an over center type. f. Solid hook to hold tow plow hoses at lower passage side of tailgate
/			3. Tailgate to be air operated with in cab switch to control tailgate release.
NOTES/COMMENTS:			

D. CONVEYOR ASSEMBLY

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. The body conveyor shall be minimum 32 inches in width and shall have 28,000 pound tensile strength per strand pintle chain, with 1-1/2 inch x 1/2 inch bar flights on 4-1/2 inch centers. Pintle chain shall 30.50 center to center on <ul style="list-style-type: none"> a. Conveyor to be driven by two high torque/variable speed 6 1 spur gearboxes and two hydraulic motor with ground speed sensor capability. Preferably gearboxes are to be retained by a clevis type torque arm mount. b. There shall be 8 tooth sprockets keyed to the 2 inch drive and idler shafts.
/			2. Conveyor drive shaft shall be heavy duty, dust sealed self-aligning four bolt flange bearings.
/			3. There shall be a heavy duty idler assembly that will provide adjustment for proper conveyor chain tension by use of slide rail style adjusters.
NOTES/COMMENTS:			

E. FRONT CROSS CONVEYOR

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. The unit shall have a front cross conveyor with spinner.
/			2. The conveyor shall be minimum 19 inches wide and shall utilize a two-ply rubber belt <ul style="list-style-type: none"> a. The belt shall be heavy duty, with top cover measuring 3/16 inch and the bottom ply measuring 1/16 inch. Total thickness being 3/8 inch. b. The belt shall have a working tension of 150 pounds per inch of width.
/			3. The conveyor shall be direct driven by a 5 inch roller on one end of conveyor, the main idler roller shall also be a 5 inch diameter <ul style="list-style-type: none"> a. There shall also be two 3 inch idler rollers for belt return and four idler 2 bolt flange bearings.
/			4. The conveyor will have five 1-1/4 inch bearing with four bolt flanges and three 1-1/4 inch bearings with cast housings that are adjustable in a rail type frame.
NOTES/COMMENTS:			

F. SPINNER ASSEMBLY

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. The spinner assembly shall be manufactured from 3/16 inch stainless steel and shall have a material deflector shield integral to the body.

/			2. The spinner motor shall be high torque/low speed mounted directly to the spinner disc with a cast hub.
/			3. The spinner disc shall be 20 inch in diameter and manufactured of polyurethane with six molded-in fins.
NOTES/COMMENTS:			

G. STATIONARY CAB SHIELD

YES	NO	NO & PROVIDE ALTERNATIVE	
/			<p>1. Cab shield shall cover rear, one half of cab and be constructed of 201 stainless steel.</p> <ul style="list-style-type: none"> a. Be 6 to 12 inches to top of cab. b. Allow visibility from rear cab window. c. Shall be the same width as widest part of cab above doors d. Standard (12) inch channel will be used as uprights to top part of cab shield and top cross-member. Twelve (12) inch channel shall be minimum of 19.5 pound per foot. Formed channels may also be used providing they are as strong as or stronger than standard 12 inch channel. Formed channels to be approved by NDOT prior to use and installation. e. Each upright shall be bolted with minimum of five each of 5/8 inch grade 8 bolts to chassis rail. Welding and gusseting of right hand upright to wing sub-frame is acceptable. f. Upright flanges shall face away from center of chassis g. Uprights shall be further stiffened to rail with 8 inch length of 3/8 inch by 3 inch by 3 inch angle irons placed on top of rails and properly welded to uprights. This angle iron may also act as the bottom support for the hydraulic reservoir. This angle iron shall not be welded to frame rails but must rest squarely on chassis rail h. All seems to be continuous, skip weld will not be accepted.
/			2. Top cross member shall be adequately welded to uprights and gusseted with two 1/4 inch steel plates of 6 inch by 6 inch by about 8-1/2 inch dimensions at rear part of assembly
/			<p>3. Flame cut openings in cab shield shall allow vision thru rear window area</p> <ul style="list-style-type: none"> a. Shield shall be placed to allow ample visibility from rear window b. Outer skirts of cab shield shall extend a minimum of six (6) inches below rear cab window c. A two (2) inch angle iron will be welded to uprights near top of hydraulic reservoir d. An approximate three (3) inch opening from top of reservoir to angle iron is required to allow hand access
/			<p>4. Cab shield shall be welded to uprights and top cross member. Cab shield material shall be minimum 10 gauge thickness.</p> <ul style="list-style-type: none"> a. Reinforced and welded to cross member with two 3 inch by 1 3/8 (4. 1) channel irons, which extend the full length of cab shield and align with eight (8) inch channel uprights

/			<ul style="list-style-type: none"> b. Adequately gusseted from 3 inch x 4 1 channel iron to eight inch c. Channel iron. d. Welded to 4 1 channel iron with flanges downward e. Meet all OSHA standards. f. Have provisions that do not allow ponding of water. (No Drain Holes).
/			5. Adequately-sized openings with rounded corners will be necessary in eight (8) inch channel uprights for filler tube, temperature/sight gauge and other hydraulic components to be mounted on left side of truck. Openings will be done in a professional manner with straight sides with minimum one-half inch radius corners.
/			6. Welding to be continuous on both sides of gussets, channels and cross members.
/			<p>7. Three (3) strobe light mounting brackets are required to be installed on each unit. Bracket sample will be provided by NDOT to provide successful bidder with proper bolt pattern for NDOT lighting</p> <ul style="list-style-type: none"> a. Brackets to be welded to cab shield b. One (1) bracket shall be center mounted on top of cab shield. The other two (2) brackets shall be mounted on top of cab shield, one on each side. Placement of brackets shall be such that auxiliary plow lights will not impair visibility of strobe lights
NOTES/COMMENTS:			

H. MUDFLAPS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			<p>1. Mounted behind and in front of tandems as per Nebraska Statues</p> <ul style="list-style-type: none"> a. Front mud flap bracket can either be truck frame or body mounted. Must provide for anti-sail and not interfere with any of the truck components. b. Rear mud flaps shall be attached to a stationary mount not on body. If attach to body it will be by adequately-sized chain links.
/			2. Dealer nameplate(s) and or other dealer sign(s) on rear mud flaps shall not face to rear of truck.
/			3. Curved fenders for tandem axle chassis required.
NOTES/COMMENTS:			

I. HOISTS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Mailhot single, front-mounted, telescoping, inverted, trunnion mounted dual acting power up – power down.
/			2. Minimum national truck equipment Association class 80 rating.

/			3. Minimum dump angle approximately 45 degrees.
/			4. Hoist should not protrude above front side of box or front bow cap of tarp. a. To be roll tarp compatible
NOTES/COMMENTS:			

J. HYDRALIC SYSTEM

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. The truck hydraulic pump shall be directly driven via a Spicer Number 1350 driveshaft connected to an OEM supplied PTO drive flange mounted on the engine front crankshaft dampener.
/			2. Driveshaft shall pass under or through the engine radiator, under if possible.
/			3. Drive flange attachment bolts and the hydraulic pump shaft set screw shall be safety wired.
/			4. The driveline grease zerks shall be easily serviced.
/			5. A heavy duty PTO shield is required from pump to front of chassis which shall be attached to snow plow hitch or be a part thereof.
/			6. The truck hydraulic pump shall be a minimum 8.75 cubic inch (145cc) variable displacement load-sense designed for continuous operation, the pump shall be a Parker P2145 or equivalent. Please specify <u>Parker P2145</u> a. The hydraulic pump be capable of producing a normal 60 GPM flow at 1800 engine RPM with minimum 3000 PSI operation pressure.
/			7. Hydraulic system pressure will be set to operate a 2500 PSI a. Hydraulic system must be capable of operating chassis spreader and trailer spreader simultaneously.
/			8. Hydraulic pump outlet port shall have an electronically operated valve to be operated by low hydraulic oil sensor. Valve will close when hydraulic oil is low.
/			9. ½ inch hydraulic hoses from hydraulic stack valve to the front of the snow plow hitch for raise-lower and plow angle functions.
/			10. Hoses to be rigidly mounted with ISO 16028 flat face interchange couplings. Couplers (one male and one female) placed so as not to interfere with plow hitch or plow function.
/			11. Couplers or equivalent: <u>Faster FFH0812NPT/Faster FFH0812NPTM (FPO Premier) Parker FEM-501-BFP-ZP/Parker FEM-502-8FP-ZJ (XTR) Stucchi Part#231718B/2317189 (Z Plated)</u> . Couplers to meet ISO 9227 standards to a minimum of 400 hours salt spray test.
/			12. Hoses with one of the above listed couplers (one male and one female) shall be installed to Plow cylinder.

/			13. Plow up-down couplers to be mounted on plow hitch on passenger's side of truck. Plow angle couplers to be mounted on plow hitch on driver's side of truck.
/			14. Plow angle circuit will have pressure relief valve. To be mounted inside frame rail near hitch.
/			15. Only steel wire braided hoses are acceptable.
/			16. Hydraulic oil to be multi-purpose, all season type. Please specify: <u>ISO 32</u>
/			17. The hydraulic control valve(s) to be a stack valve type load independent proportional valve which is closed center, load sensing and pressure compensated to control three (3) functions simultaneously. A valve assembly utilizing a modular manifold with individual valve sections would also be acceptable. The control center console shall be floor mounted.
/			18. The valve is to be controlled by electrical proportional actuation
/			19. Each valve section shall be equipped with adjustable trim control, flow control, spool stroke limiters or other means to control oil flow for each function independently. a. Valve section spool to have maximum 20cc leakage rate.
/			20. Valve is to be arranged as follows: a. Closed center inlet with relief. b. Hoist= 4 way, 26 gpm, 500 psi down port relief c. Plow lift= 4 way, 10 gpm. d. Plow angle= 4 way, 10 gpm. e. Wing toe - 4 way, 10 gpm, 500 psi down port relief (if required). f. Wing heel= 4 way, 10 gpm, 500 psi down port relief, 2000 psi up g. Port relief (if required). h. Auger - 4 way, 17 gpm motor spool or cartridge valve i. Spinner= 3 way, 10 gpm motor spool or cartridge valve j. Prewet = 3 way, 6 gpm motor spool or cartridge valve. k. Anti-Ice= 3 way, 16 gpm motor spool or cartridge valve l. Endcover.
/			21. Hydraulic control valve to be mounted behind cab in a weatherproof enclosure with hydraulic oil tank. Location and hose routine to be reviewed during pilot inspection.
/			22. The Control center shall be floor mount type with integral arm rest for controlling all hydraulics functions, spreader control functions and auxiliary lighting and warning indicators.
/			23. A drawing of proposed design should be submitted with invitation to bid.
/			24. Control of hydraulic functions with single joystick is to be located in the armrest. The armrest must be adjustable.
/			25. Joystick operations described as follows. a. Shall operate proportionally and shall have the ability to run three functions simultaneously. b. Hoist function-with operator activated safety lock. c. Plow lift-forward/backward axis, d. Plow angle-left/right axis

/			<ul style="list-style-type: none"> e. Wing function- dual axis with operator activate safety lock. f. Wing lift=forward/backward axis. g. wing heel=left/right axis. h. Benching wing rear slide forward/backward axis
/			<p>26. Spreader control shall be a Certified Power brand, Freedom XDS, Force America brand, SSC-6100 or Cirrus brand, SpreadSmart RX Touch. All spreader controls must meet all other specifications</p> <p>Indicate spreader control <u>SSC-6100</u></p>
/			<p>27. It shall be capable of controlling the application rates of granular, with pre-wetting agents, and/or anti-icing agents simultaneously or independently, regardless of vehicle speed.</p>
/			<p>28. Hydraulic system must be capable of operating chassis spreader and trailer spreader simultaneously with working either truck blade raise or tow plow blade raise</p>
/			<p>29. Control must be GPS compatible. The spreader controller shall provide a standard output of real-time streaming data including but not limited to Ground speed, surface and air temperature, material selected, material application rate, lane(s) material being applied to and pre-wet rate</p> <ul style="list-style-type: none"> a. The output shall be in standard format such as ASCII through a standard 9 pin, USB or other connector that meet NDOT approval. b. The data shall be formatted so that 3rd party devices can read informational data in real time. All hardware, software and information necessary for 3rd party device to read the data output shall be provided on all units at no additional charge to NDOT.
/			<p>30. It must be possible to reprogram the controller by upgrading the software.</p>
/			<p>31. The control shall be installed onto the control console Mounted onto the dash or other pre-approved area. Installation shall position the control so it is easy for the operator to see and reach</p>
/			<p>32. Anti-ice feature shall include a 3-lane selective lane switch box mounted in, under or near the console or through the soft keys of controller. Box shall have four (4) switches, the first to allow selection of either anti-ice or granular system, the remaining three (3) shall be lane selections switches Left, center and right.</p> <ul style="list-style-type: none"> a. Anti-ice system shall adjust pump output to maintain selected rate as lanes are activated or deactivated. b. Anti-ice system to close valves to prevent gravitational flow of liquid when truck is stopped or 'pass' button is pushed c. Anti-ice system to provide an audio alarm for insufficient application of liquid. Display shall show actual rate being applied. d. An electronic display capable of being reset to indicate gallons remaining in tank or gallons used since rest. Gallon usage reading should be stand-alone function but may also be attained from resettable daily storm total.
/			<p>33. Control shall allow up to a minimum of ten different preprogrammed application rates plus a manual override feature, it shall be capable of four granular products and tow liquid products. A blast feature shall be incorporated.</p>

/			Controller blast button shall immediately cause full hydraulic flow to the auger section, causing maximum spreader material output. The blast system shall be equipped with a timer. Blast feature shall also work with Anti-Ice function.
/			34. Controller shall default to 'pass or stand by' upon startup of truck even if console master switch is 'on'. This will eliminate material being spread when truck starts to move in yard or is started in shop bay.
/			35. A data lock key shall be part of the controller to prevent data or programs from being changed or deleted without key access. Password program also acceptable.
/			36. A key shall be provided for each controller.
/			37. Granular rates may be selectively displayed in pounds-per-lane mile or kilograms-per-kilometer. Liquid pre-wet rates may be selectively displayed in gallons-per-ton or liters-per-metric ton.
/			38. Controller shall have a non-volatile memory to store all program and data when it is disconnected from a power source.
/			39. A LCD color display, minimum of five (5) inches diagonal shall provide the operator with instant access to. <ul style="list-style-type: none"> a. Total distance. b. Total granular applied. c. Total liquid applied d. Vehicle speed. e. Distance traveled. f. Low oil indicator. g. Body up indicator
/			40. All spreader control harnessing shall meet ISO IP68 and NEMA 6 standards. The connectors should be die cast E-coated, and be designed to have NO corrosion after 500 hours in a 35C salt spray. Each should have three sealing points (1) the lock ring itself, (2) a raised portion of the molded plastic around each pin, and (3) a Viton O-ring that seals the whole connector. Wiring to be equivalent to Daniel Woodhead, Brad Harrison electrical connector and wiring.
/			41. Switch panel to be Wired-Rite System Inc., Touchguard or Force America brands. Switches will have built-in bus bar connecting, silk screen backlit function indicators and magnetic automatic reset internal circuit breakers. Wiring shall include adequate slack to allow entire panel to be easily removed for service or replacement. Please specify <u>FORCE AMERICA</u>
/			42. Main 12 volt battery feed into truck cab control box shall be protected by a 60 amp manual resetting waterproof circuit breaker (Wired Rite DB-SOR or equivalent) installed on the truck cab fire wall or within battery cover enclosure.
/			43. The power feed line to the 80 amp breaker shall be a minimum of 4-gauge fine strand copper.
/			44. The positive/negative wires into the cab from the breaker and truck frame ground shall be 4-gauge.
/			45. Switch circuits will be either a battery or ignition type. Battery circuits shall be always hot. Ignition circuits will receive power through a Bosch model 0332002150 75 amp relay when the ignition switch is in both the accessory or run positions.

/			<p>46. The switches and lames shall be labeled and function as follows</p> <ul style="list-style-type: none"> a. Plow/Truck Lights, (if OEM chassis supplied this is to be changed to an auxiliary switch SPST off/on) Battery DPDT. 2 position. ON/ON. b. Cab/Hood Plow Lights Battery DPDT, 2 position ON/ON. c. Auxiliary Switch ignition SPST. ON/OFF. d. Amber Strobe Light Battery SPST, ON/OFF. e. Blue Strobe Light Battery SPST, ON/OFF. f. White Strobe Light Battery SPST, ON/OFF. g. Spreader Light ignition SPST ON/OFF. h. Auxiliary Switch ignition SPSTON/OFF. i. Winter/Summer DPDT. 2 position, ON/ON.
/			<p>47. The Winter/Summer switch shall control power to the dump body height warning circuit. In the winter mode it will power the height warning feature of the dump body up lamp circuit causing it to function as designed. In the summer mode, it will not allow power to the dump height warning circuit</p> <ul style="list-style-type: none"> a. Switch panel to be located on the armrest portion of the control console and not interfere with the operation of the joystick.
/			<p>48. A guarded/protected switch is also required to allow temporary override of low hydraulic oil shut down solenoid. This will allow operator to possibly operate any function to allow unit to be moved off roadway.</p>
/			<p>49. The body up indicator lamp shall function as a dump body height warning system. In both the winter and summer mode, it shall illuminate whenever the body is raised.</p> <ul style="list-style-type: none"> a. In addition, in the winter mode, working through an adjustable angle mercury switch, this system shall also include a flasher and audible alarm that will engage adjustment of the mercury switch. b. Alarm must be loud enough to be heard over any truck noise.
/			<p>50. The Winter/Summer switch shall control power to the dump body height warning circuit. In the winter mode it will power the height warning feature of the dump body up lamp circuit causing it to function as designed. In the summer mode, it will not allow power to the dump height warning circuit.</p>
/			<p>51. Switch panel to be located on the armrest portion of the control console and not interfere with the operation of the joystick.</p>
/			<p>52. 13 Hydraulic reservoir to be minimum fifty (50) gallon oil capacity with five (5) gallon expansion space for total 55 gallon.</p>
/			<p>53. Reservoir to be sturdily mounted, and complete with suction strainer return filter and adequate shut-off valves for servicing.</p>
/			<p>54. Return filter shall have a 10 micron rating. Filter shall be interchangeable with such filters as Donaldson P55D388, Wix 1759 or Baldwin TB287-10.</p> <p>Please specify: <u>ZINGA SE-10</u></p>
/			<p>55. Suction strainer shall be 100 mesh with 5 PSI relief valve</p>
/			<p>56. A gate-type or ball valve shut-off valve, of at least the size of the suction line, is required between the reservoir and the suction line itself.</p>

/			57. 14 Reservoir tank shall be mounted between the cab and the body within the confines of twelve (12) inch channel upright for cab shield.
/			58. The 7 gauge steel reservoir will be twelve inches wide
/			59. The approximate height will be 32 inches and approximate width of 33.5 inches. a. The reservoir must be of such height to allow visibility through rear cab window and to accommodate other chassis/body requirements
/			60. Reservoir will have a 45 to 70 degree filler pipe Filler pipe will extend a minimum of three (13) inches through upright a. Filler neck shall be removable from top of tank
/			61. A sight gauge with Fahrenheit temperature scale for checking proper oil level shall be furnished. a. Sight gauge location shall be on same side of reservoir as filler tube.
/			62. A hydraulic oil low level alarm or indicator light is required a. Alarm or light to be mounted in the cab
/			63. Bottom rear of tank on each side will have flat steel plates welded to back of tank with holes for bolting to upright flange. a. Upper part of tank will have ¼ -inch x 6-inch flat plate welded to center of tank with holes for bolting to angle iron cross member between uprights Bolts to be Grade 8. b. Tank shall be mounted so as to have adequate clearance from chassis components and so that it can be conveniently removed without moving the twelve inch uprights that secure the tank.
/			64. The filter will be mounted on the same side of tank as filler tube a. Reservoir will have a 1-inch magnetic drain plug and baffle(s) as needed. b. All components of hydraulic system shall be of size that will not restrict flow and withstand a minimum working pressure of 2,500 PSI.
/			65. Vendor will minimize the number of critical rub points for hydraulic hoses, where critical rub points exist; they shall be wrapped with spiral metal or adequate rubber wrap.
/			66. System shall permit the dump body to be raised or lowered while vehicle is traveling at highway speeds up to 35 MPH as well as when vehicle is not moving. a. Partially or fully raised box shall not creep up or down when vehicle is not moving or when hydraulic valve has been returned to neutral position and vehicle is traveling at 35 MPH or less.
/			67. Hydraulic hookup for TowPlow. a. Coupler stack to be located rear passage side of RDS body. i. Couplers to be ISO interchange ii. Faster 3P508G-4-12G-MC/Faster 2P508G-4-12G-FC b. Hydraulic circuit for steering and moldboard lift shall have pressure relief valve also mounted at rear passage side of RDS body

/			<p>68. Detailed literature and manufacturer's specification and data sheets on PTO, Joystick Control, Spreader control crankshaft drive, hydraulic pump, valves, filters and flexible cable control system will be provided with bid. BIDS MAY NOT BE CONSIDERED WITHOUT THE INCLUSION OF THIS INFORMATION NECESSARY TO EVALUATE THE BID</p>
/			<p>69. Hydraulic/spreader system training and support shall be provided by company representative.</p> <ul style="list-style-type: none"> a. Training for operators and mechanics shall be provided by spreader control/hydraulic system representative <ul style="list-style-type: none"> i. Training shall be done at any of the units, assigned locations and/or district within the State of Nebraska. ii. Training session shall be a minimum of four (4) hours for operators. An additional four (4) hours of training shall be provided to mechanics for diagnostic procedures and repair of controller system. iii. Training shall include basic operation, calibration procedures, and basic trouble shooting. Training to be required and provided annually for each NOOT District. b. Technical support shall be provided for systems <ul style="list-style-type: none"> i. Vendor shall make a representative available to travel within the State of Nebraska and assist mechanic with system failures. ii. Vendor representative shall travel to any of the unit's assigned location to make repairs during warranty.
/			<p>70. The Hydraulic/Spreader control system shall be free of RFI Emissions</p>
/			<p>71. The hydraulic/spreader control system and/or installed components and equipment shall be compatible with use of NOOT mobile and/or two-way communication devices. Main communication radio operates in low band range of 47 MHz to 48 MHz, but all frequencies apply including low band, high band, UHF and VHF.</p>
/			<p>72. The hydraulic/spreader control system and/or installed components and equipment shall be manufactured to meet all current SAE and/or ISO Standard applicable and/or relevant to Electromagnetic Compatibility</p>
/			<p>73. NDOT will conduct testing of radio/two-way when installed in chassis. NDOT will notify vendor if normal operational parameters are not met due to degradation of signals caused by electromagnetic emissions from control system and/or installed components and equipment. Vendor shall be required to work with NDOT personnel to reduce interference level to a point acceptable to NDOT normal radio operation parameters. Vendor shall have 30 days to resolve RFI issue</p>
/			<p>74. Vendor and/or manufacturer will be responsible for any and all cost to replace and/or modify any parts found to cause radio frequency interference. If NOOT and vendor cannot resolve source of RFI, the unit will sent to an independent accredited lab for testing to ensure SAE and/or ISO Standards compliance. Testing shall be done to SAE and/or ISO Standard which were current at time of bid. Should the unit fail testing at the accredited lab, the vendor shall be responsible for all cost incurred for testing</p>
/			<p>75. If after testing by NDOT and/or accredited lab, the vendor is unable or unwilling to incur cost and correct the RFI issue to the satisfaction</p>

/			of NDOT, ALL ORDERS AND CORRESPONDING CONTRACT WILL BE CANCELED
NOTES/COMMENTS:			

K. SNOW PLOW HITCH

YES	NO	NO & PROVIDE ALTERNATIVE	
/			<p>1. Shall be heavy duty, universal quick hitch Monroe, Viking, Henke Henderson or other equivalent approved in writing by Fleet Management prior to bid opening. Alternatives may only be requested during the pre-bid conference and/or the question and answer period. A minimum of four inch double acting hydraulic cylinder. Hitch may be powder coat finish or primer and paint finish. Paint will be base coat/clear coat acrylic, activator-hardened acrylic or polyurethane type.</p> <ul style="list-style-type: none"> a. Center line hitch mounting is to be 30.5" b. Lower plow mount pin approximately 14 inches from grade c. Height of hitch mast shall be 40-44 inches from plow attachment pin to pivot of lift arm. d. Plow lift shall be adjustable to length. e. Hitch shall be tilt design, Manual or hydraulic.
/			2. Hitch will include attaching pins and A-frame lift arm with lifting lug or clevis.
/			3. All thrust loads must be transferred to chassis frame and not to chassis axle or spring assemblies.
/			4. The crankshaft drive- pump must be supported and protected by this hitch assembly
/			5. Hitch to be made so that filling hood/fenders will tilt fully forward with mast in tilted position. Mast shall be tilting design by either manual or hydraulic function.
/			6. Hitch will be installed with Grade 8 bolts to chassis and as per hitch manufacturer's recommendations.
/			<p>7. A drawing of hitch to include material specifications of materials used shall be provided prior to bid award.</p> <ul style="list-style-type: none"> a. Pump shall be located as reasonably close as possible to chassis components after bumper removal b. Bumper to be put in dump body when delivered. All mounting brackets and hardware shall be left intact with bumper and shall be delivered with the same truck as which was removed from.
NOTES/COMMENTS:			

L. INSTALLATION

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. All installations shall be made so that no body member will touch or interfere with proper alignment of the body hinge assembly, truck suspension or other components.
/			2. The longitudinal truck frame members are to be cut off and properly ground at the rear of the truck chassis.
/			3. A minimum 3/4-inch steel pintle plate shall be continuously welded across the width of the body's rear hinge and to the truck's frame. Minimum 3/8, inch steel plate gussets shall be continuously welded to the hitch plate at an angle toward the bottom of the hitch and to the truck's frame forwardly as far as practical or a minimum of 12 inches.
/			4. The pintle plate shall be recessed approximately 3/8 inch into frame rails to allow double welding of entire plate on both sides. The pintle plate shall be frame width at pintle eye height.
/			5. Double welds shall be thick, heavy duty type or additional welds will be required.
/			6. Pintle plate shall not extend lower than 3 inches below lower mounting bolt of pintle hook.
/			7. A pintle hitch, Holland PH-310 rated at 50 tons, shall be centrally attached with Grade 8 bolts to the pintle plate. Proper adjustment of the hitch's air cushion plunger shall be done using Holland's adjustment gauge (part number T0-03147). All installation and adjustments shall follow manufacturer's guidelines where otherwise not noted. Eye height to be approximately 28 inches from grade with air suspension at operating height.
/			8. Two safety chain brackets with load capacity of 30,000 pounds each, Premier Number 9 or equivalent of use as attachment of trailer safety. <ul style="list-style-type: none"> a. These are to be closely attached to frame rails welded to the right and left of pintle hitch. b. Reference drawing and/or pictures will be provided to vendor after award to show NDOT preferred placement of chain hook, trailer airline/gladhands and trailer electrical plug.
/			9. The frame cut-off must also be made so as to position the face of the channel cross member or angle iron 9 inches, plus or minus 1/2 inch forward of the reared e of the dump box floor.
/			10. Dump box, electric adjustable, lift limit, weatherproof valve control must be provided. To stop oil flow to dump box cylinder. <ul style="list-style-type: none"> a. It shall be capable of limiting overall box height from 12 feet above ground level up to maximum possible dump angle.
/			11. All bare wire to bare wire electrical connections shall be properly soldered and weather sealed with heat shrink tubing. <ul style="list-style-type: none"> a. Wires from chassis to body lights shall be in flexible conduit or loom.
/			12. Professional techniques and workmanship are required. <ul style="list-style-type: none"> a. No welding or cutting of chassis rails except as stated elsewhere in the specifications. b. Welds must be chipped free of slag and thoroughly protected with yellow or black enamel as appropriate. c. Improper mounting, poor welding practices, the presence of slag, hydraulic oil leaks or inadequate paint coverage will be cause for rejection of any unit. In which

/			case, the vendor will be notified to call for the vehicle and remove it from State property for remedy of defects
NOTES/COMMENTS:			

M. FOLDING LADDER

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Shall be fabricated of standard, one inch square, tubular stainless steel stock.
/			2. Rungs of stainless steel with 1-1/16 inch width and be put on right front side of body ahead of front tandem tire.
/			3. Shall be made so access is from about two feet from grade with approximately four rungs.
/			4. Space must be provided behind all rungs to allow for adequate toe room.
/			5. When ladder is folded in upright position, it shall not extend out beyond edge of main body.
/			6. Adequate latch to keep foldable portion of ladder in upright position when traveling is required.
NOTES/COMMENTS:			

N. AUXILIARY HEADLAMP/TURN SIGNALS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Two sets are required.
/			2. One set shall be mounted on cab shield near front corners of cab with a heavy bracket positioning the light so that the top of light will be about same height as top of cab shield. Plow light mounting not to interfere with strobe light mounting position.
/			3. One set referred to as hood lights, will be attached with a sturdy bracket preferably using existing chassis bolts to alleviate fiberglass cracking.
/			4. Height of centerline of hood lights will be slightly above the top of hood.
/			5. Light sets shall consist of ABL LED Snow Plow Light with heated lens. ABL number is #3800 or approved equivalent. Lights other than those above must be approved by NDOT Fleet Management prior to bid opening. Alternatives may only be requested during the pre-bid conference and/or during the question and answer period.
/			6. Two toggle switches are required to switch between chassis headlights, Cab lights or hood lights.
/			7. Use of dimmer switch in all modes required.

/			8. A permanent-type decal or sign shall be installed by switches indicating "chassis headlights" or "hood lights"
/			9. Wires from lights to entrance of cab shall be in flexible conduit or loom, adequately attached and with the proper grommets.
/			10. Additional holes are not permitted in cab for light wire entrance, unless existing manufacturer's holes in firewall or elsewhere do not allow wire entrance. FLEET MANAGEMENT must then be contacted for acceptable access.
/			11. Wire entrance must be properly grommet or otherwise silicone sealed so as not to permit moisture entrance
/			12. Turn lights will be wired so they function when factory installed turn signals.
/			13. Heavy duty flasher is required, unless original chassis flasher is recommended for the additional lights. a. Is original chassis flasher recommended for additional lights? <u>yes</u>
/			14. A halogen spotlight or LED is acceptable that is fixed for wing operation is required. Unit will be a six inch diameter, round or rectangular shaped light mounted on cab shield, Mounting of light will allow light beam to be direct to heel of wing moldboard in operating position.
NOTES/COMMENTS:			

O. CLEARANCE REFLECTORS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. All reflectors used in lieu of lights shall be placed front, sides and rear as required by State and Federal laws.
NOTES/COMMENTS:			

P. CONVEX MIRRORS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Required for each front fender of Phillip Fender Guides or Veivac 8 inch round convex mirrors. An equivalent could be acceptable but must be approved in writing by Fleet Management prior to bid opening. Alternatives may only be requested during the pre-bid conference and/or during the question and answer period Please specify <u>chassis supplied</u>
✓			2. Mirrors proposed must be recommended by mirror manufacturer for install on front fenders of dump truck.
✓			3. Mirrors shall be mounted so they do not interfere with auxiliary headlamps

✓			4. Mirrors to be heated type if available. Please specify <u>Heated</u>
NOTES/COMMENTS:			

Q. TOOL BOX

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. An approximate 24 inch long by 12 inch by 14 inch waterproof unit of Knaack Weatherguard brand Model WG 525-5-01, Knapheide TBU2414A or Omaha Brand 824-B is required. Please specify <u>Weatherguard</u>
/			2. Box must be sturdily mounted on chassis frame
/			3. Bidder shall note that air dryer, air tank or battery box may need to be relocated to accommodate the box.
NOTES/COMMENTS:			

R. SAFETY EQUIPMENT

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Electronic type back-up alarm that meets OSHA standards.
/			2. Rear view camera system required as per Section Chassis S-6
NOTES/COMMENTS:			

S. ROADWATCH SENSOR

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Roadwatch Sensor Head and Roadwatch display or its equivalent from Force America or Certified Controls will be furnished and mounted on truck. a. Hard wired no wireless
/			2. Unit is to be wired into control panel
NOTES/COMMENTS:			

T. WARRANTY

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. One year on parts and labor beginning after field assignment a. As each unit is assigned for service the Department of Transportation will maintain a record of assignment date
/			2. Prior to awarding of, or entering into any agreement or contract, it shall be the responsibility of the Manufacturer and or the successful bidder to warrant to the State of Nebraska, in writing that it has factory authorized dealers in the State of Nebraska who will provide warranty/service and repair work without undue delay.
NOTES/COMMENTS:			

U. GENERAL

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Rolled edges or protective curved strips shall be attached to brackets and mountings of installed switches and similar devices in cab that have exposed sharp edges.
/			2. Stickers, decals and similar signs shall not be affixed in cab where sun reflects from them in driver's or passenger's eyes
/			3. Dealer's decals, stickers, or other signs shall not be put on units. manufacturer's nameplates, stampings and other similar signs are acceptable
/			4. The first truck and body installation ready for delivery for each year of orders must be made available for inspection by Nebraska Department of Transportation (NDOT) personal.
/			5. Vendor representative shall accompany Nebraska Department of Transportation (NDOT) personnel during inspection
/			6. Components and parts that require vendor cutting, welding, grinding and similar operations shall not be painted prior to inspection. A light coating of primer is acceptable
/			7. Approval of the body, ladder, toolbox, lights, snow plow hitch and hydraulic mount must be obtained before additional units are assembled.
/			8. The chassis, body, snow plow hitch, sander and hydraulics shall be delivered as a complete unit and ready for satisfactory operation
/			9. After the pilot inspection no changes to the chassis, dump body, body mountings, hydraulic system or any other components shall be made without documented permission from NOOT fleet management
/			10. Transportation, meals, and lodging cost for Nebraska Department of Transportation (NOOT) representatives to perform required inspection(s) shall be at the vendor's expense. Vendor/manufacturer must provide space in building to do inspection

NOTES/COMMENTS:

V. MANUALS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Following will be furnished with each unit delivered
/			2. One dump body manual and parts listing a. One hydraulic system manual including information on schematic of system tank, pump, valves, driveline, cables, levers and other relevant items to include operation calibration and trouble shooting.
/			3. May be a print format, CD-ROM, flash drive or online.
/			4. All manuals must be furnished prior to payment and delivered to Fleet Management personal.
/			5. Failure to deliver all manuals that are ordered may result in non-payment of ten percent (10%) of purchase order total until all manuals are delivered.
NOTES/COMMENTS:			

W. SPECIFICATION FORM

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Successful bidder must complete form to the fullest extent possible for each unit delivered and must accompany each unit when delivered. Forms will be supplied by Nebraska Department of Transportation (NDOT) to successful bidder after purchase order is awarded.
✓			2. If vendor does not properly complete form for each unit. A sum of \$250.00 per unit will be deducted from purchase order amount.
NOTES/COMMENTS:			

X. DELIVERY

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. After vendor completes pre-delivery service, vendor shall deliver the unit to NDOT, 5001 South 14th St Lincoln NE 68512, between 9:00am and 3:00pm, except on Saturdays, Sundays and State Holidays.
✓			2. Each unit shall be delivered with a minimum of 20 gallons of fuel in tank.

✓			3. Vendor must notify NDOT Fleet Management a minimum of 24 hours prior to delivery of units. Contact number for NDOT Fleet Management are 402-479-4319 or 402-479-4323.
✓			4. Manufacturer's Statement of Origin and other pertinent purchasing documents must accompany invoice at time of delivery
✓			5. All deliveries and pricing are to be F.O.B. 5001 S 14th Street Lincoln, Nebraska 68512.
✓			6. Delivery of completed chassis with dump body is desired within 200 days of receipt of order by vendor. Delivery time beyond 200 days may result in bid not being considered. Indicate delivery days ARO: <u>270 DAYS ARO</u>

NOTES/COMMENTS:

#6 - CHASSIS WILL NEED TO BE ON GROUND IN MONROE WI., NO LATER THAN 180 DAYS ARO

Y. WARRANTY

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Contractor must warrant the average life expectancy supplies hereunder to be not less than that stated in the manufacturer's price list and agree to replace, without cost, all supplies falling to meet this requirement, except where the reduced life is due to conditions beyond the control of the Contractor. Defective parts or those damaged in shipment must be replaced by the Contractor at no charge to the State of Nebraska. The manufacturer's standard warranty shall apply and be in effect for at least one year from the date the equipment was placed in service.

NOTES/COMMENTS:

VIII. Attachment-RDS Pre wet System-240 gallon Dual 120 gallon tanks

A. GENERAL

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Pre-wetter will be used to apply liquid ice control material onto granular material at the spreader spinner.
/			2. Pump system shall have a design rating of 4 GPM @ 70 PSI with input of 3 GPM hydraulic flow.
/			3. Tanks shall have 120 US gallons capacity (Dual)
/			4. System must be fully tested and calibrated to 10 gallons per ton rate upon delivery to the Department of Transportation. System shall be flushed and winterized with suitable antifreeze solution to prevent damage.
/			5. All components, parts, pieces fasteners, etc shall be manufactured for nonferrous/non-rusting materials.
/			6. Liquid ice control material hoses be ½ polyester braid reinforced clear PVC or hose pressure and chemical rated for deicing liquid and suitable for cold weather use.
/			7. All hoses shall be long enough to allow the dump body tailgate to open for dumping over the spreader.
/			8. Tanks must mount on top of the fenders and fit in the area along the sides of the body
/			9. Cables to be ISO IP68 NEMA 6 rating
NOTES/COMMENTS:			

B. TANKS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Tanks shall be specifically designed to fit Department of Transportation's snow removal truck RDS body. When installed they shall not extend beyond the side of the fender.
/			2. Wedge style tanks shall be approximately 5.5 inches wide at the top and 19.5 inches at the bottom. Height shall be 22 inches. overall length shall be 100 inches.
/			3. Tank shall be constructed from rotationally molded UV stabilized polyethylene. Design liquid rating shall be a minimum of 14.5 lbs per gallon.
/			4. There shall be three molded-in stiffeners, each approximately 4 inches wide, evenly spaced in the tank length.
/			5. Tanks shall include a 1 inch baffle vent installed at the top
		/	6. Tanks shall have a two top mounted 3 inch NPT fill lids. Lids shall be tethered
/			7. Tanks to include two 1-1/4 inch NPT molded in ports on each end. Ports to be located as close to the bottom of the tank as possible (spin weld and/or bulkhead fittings are not acceptable at this location).

/			8.	A 1-1/4 inch ID cross over hose with fittings is required
NOTES/COMMENTS: #6 = 2" NPT				

C. FITTINGS

YES	NO	NO & PROVIDE ALTERNATIVE		
/			1.	All anti-icing liquid fittings are to be made of glass reinforced polypropylene for strength.
/			2.	A 3/4 -inch Y-type strainer with a stainless 20 mesh screen must be installed between the tanks and pump.
/			3.	A 1-1/2 inch male cam lock connector shall be installed to allow bulk filling. A matching cam lock cover cap shall be provided. Bulk fill fitting must be accessible from the ground.
/			4.	The right rear facing port shall have a 1-114 NPT plug screwed into it.
/			5.	A 3/4 inch 3-way valve shall be installed into the suction plumbing. When this valve is closed, normal flow of the anti-ice material shall occur. When the 3- way valve is turned to the closed position and this valve opened, flush material shall be sucked into the plumbing and pumping system, thoroughly displacing all corrosive materials. An approximate 12-inch hose piece shall be attached to this fitting to allow easy flush material introduction via a plastic jug.
NOTES/COMMENTS:				

D. PUMP SYSTEM AND FLOW METER

YES	NO	NO & PROVIDE ALTERNATIVE		
/			1.	Matenal pump shall be a solid brass gear type, direct coupled to the hydraulic motor that will power the pre-wetter.
/			2.	Pre-wetter hydraulic system shall obtain its flow directly from the valve motor manifold circuit identified for this purpose
/			3.	Flow control shall be electrically controlled by the spreader control in the truck cab, allowing precise metering of the oil flow
/			4.	Pump system shall incorporate a calibrated turbine style flow meter. Flow meter signal shall be sent to the spreader control, allowing a precise ground oriented liquid application rate. Rate shall be adjustable up to the limits of the pump design output.
/			5.	A float switch placed in the bottom of the tank to indicate low level or empty tank. Float switch shall be compatible and connected to spreader control system.
/			6.	Pump and associated plumbing to be enclosed in a fiberglass weather resistant enclosure.
/			7.	Enclosure to be mounted alongside of body.

NOTES/COMMENTS:

E. MOUNTING SYSTEM

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Pre-wet system shall attach to the dump body fenders via a full stainless steel framework. Frame shall fully support the tank.
/			2. Polyethylene tank shall be retained in the stainless steel mounting cradle with three 3 inch wide UV stabilized nylon tie down straps Straps shall have a heavy duty threaded I-bolt mount on each end Bolts shall pass through the mounting framework and be tension adjustable with stainless nuts.
NOTES/COMMENTS:			

F. NOZZLE DELIVERY SYSTEM

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Pre-wet liquid shall travel from the pump out to be applied on the spreader spinner.
/			2. Two brass nozzles, each rated 1.0 GPM flow shall be furnished and mounted on to a bracket attached to the spreader spinner with stainless bolt Nozzles shall be directed to spray on the centerline of the spinner.
/			3. A suitable cam lock type quick connector shall be installed in the delivery line running to the nozzles. It shall be positioned in the line to approximately correspond to where the hydraulic quick connectors for the spinner assembly are, allowing the entire spinner assembly to be easily removed with the nozzle bracket assembly attached.
/			4. A one-way check valve system must be installed in the delivery line directly before or at the nozzles to prevent line drain down when the system is shut-off
NOTES/COMMENTS:			

IX. Attachment-Front Mount Patrol Wing

A. WINGS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Wing to have a minimum 11-foot long moldboard.
/			2. Height of Moldboard shall be minimum 29 inches.
/			3. Moldboard thickness to be minimum 3/16 inch. Moldboard steel shall meet ASTM A36 specification.
/			4. Cutting edge of 5/8 inch by 8 inches. AASHTO punched.
/			5. Moldboard bottom angle or base angle shall be a minimum 4 inch x 4 inch by 3/4 inch structural angle.
/			6. Minimum seven moldboard flame cut ribs. Ribs must be 1/2-inch thick minimum. Ribs to be one-piece. Spliced ribs are unacceptable.
/			7. A halogen spotlight that is fixed for wing operation is required. Unit will be a six inch diameter, round or rectangular shaped light mounted on cab shield. Mounting of light will allow light beam to be directed to heel of wing moldboard in operating position.
NOTES/COMMENTS:			

B. MOUNTING REQUIREMENTS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Wing must be able to be mounted to work in conjunction with a State provided reversible plow or a one way plow.
/			2. Rear push arm frame assembly shall be designed for mounting on a chassis so that it is not necessary to require additional cab to body spacing.
/			3. Two adjustable length push arm assemblies shall be required.
/			4. Upper push arm shall have an extension spring and slide assembly to allow moldboard to trip.
/			5. The wing shall be able to be mounted so that it will fold closely to the truck and shall be provided with a safety chain on the heel to secure the wing in a folded position for travel.
/			6. When the wing is in the lowered plowing position, the wing shall provide sufficient tire clearance for turning left and right.
/			7. All necessary parts, brackets, hardware, fittings etc. for complete and satisfactory installation of wing shall be furnished.
/			8. The upper push arm shall have a built-in slide assembly for the rear cylinder pickup and attachments for rear spring assembly.
/			9. The wing heel lift cylinder shall be 3 inch x 15-inch minimum. <ul style="list-style-type: none"> a. The rod diameter shall be a minimum of 2 inch and be double acting.

NOTES/COMMENTS:

C. WING POST

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. The front post shall be fabricated from a 3/8 inch thick T1 steel and must be made of two interlaced side flanges and a center web plate for additional strength.
/			2. It shall be fabricated and reinforced in such a manner to allow the full travel of the front slide plate from the top to the bottom.
/			3. The front slide plate must be a minimum of 1/2" thick steel and incorporate a minimum of 5 inches mechanical float.
/			4. The slide plate must be welded in permanently. (Plate)
		/	5. The wing post cross tube is to be a minimum of 5 inch x 7 inch x 3/8 inch thick wall tubing.
-			6. The front wing post shall be attached to the frame of the truck with 1/2-inch side plates bolted to the front frame extension of the truck

NOTES/COMMENTS:
#5 = 4" x 6" x 1/2" wall

D. HYDRUALICS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. To be compatible with the truck hydraulics. Two stack valve sections are required for satisfactory operation of the win.
/			2. Needs to be compatible with joystick controls as specified by the body.
/			3. Toe cylinder hydraulic hoses shall be furnished with couplers as specified in the main body. Quick coupler connect shall be made via bulkhead fittings mounted through a 1/4 inch thick plate welded to the stationary portion of the snow plow push frame. Quick couplers shall not be installed directly to cylinder.
/			4. All the appropriate hydraulic cylinders, fittings, hardware, and other parts necessary for mounting shall be furnished

NOTES/COMMENTS:

E. WEIGHT OF ATTACHMENT

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Maximum advertised weight of complete wing assembly (front wing post, moldboard and push tubes 2,800 pounds

/			2. Components listing with all weights for complete assembly including frames to be provided prior to bid award.
NOTES/COMMENTS:			

F. SUSPENSION

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Vendor needs to add aftermarket air bag on right side to compensate for extra right side weight of wing.
/			2. Size to be installed so when air bag inflated, unit sets level when wing is raised in folded back position
NOTES/COMMENTS:			

G. MANUALS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. One operators manual must be furnished at time of delivery with each unit
/			2. All manual(s) must be furnished prior to payment and delivered to Fleet Management, Equipment Data Coordinator. Failure to deliver all manuals that are ordered may result in non-payment of ten percent of purchase order total until all manuals are delivered
NOTES/COMMENTS:			

H. COLOR

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Wing moldboard is to be painted black. Powder coating is preferred.
/			2. Moldboard plowing surface to be aluminum paint
/			3. All attaching components of the wing are to be painted black Powder coating is preferred.
NOTES/COMMENTS:			

I. WARRANTY

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Manufacturer's standard warranty shall apply and be for at least one year.
/			2. Dealer's decals, stickers or other signs shall not be on unit(s), manufacturer's nameplates, stampings and other similar signs are acceptable
NOTES/COMMENTS:			

X. Attachment-Right Hand Mid-Mount Patrol Wing

A. WINGS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Wing to have a minimum 8 foot long moldboard.
/			2. Height of Moldboard inboard shall be minimum 24 inches and outboard height shall be a minimum 28 inches. Measurements include the eight inch cutting edge installed.
/			3. Moldboard thickness to be minimum 3/16 inch. a. Moldboard to be made of commercial grade A36 steel or equivalent. Please specify: _____
/			4. Cutting edge of 5/8 Inch by 8 inches. AASHTO punched.
/			5. Moldboard bottom angle or base angle shall be a minimum 4" x 4" x 3/4" structural angle with a triangle shaped 3" x 3" x 1/2" plate gusset between each bolt hole.
/			6. Minimum seven moldboard flame cut ribs. a. Ribs must be 3/8-inch thick minimum. b. Ribs to be one-piece. Spliced ribs are unacceptable c. Ribs are to be continuously welded.
/			7. Moldboard too formed channel shall be a minimum 2 1/2" x 1"
/			8. Wing light position to light moldboard mount as not to reflect off exhaust.
NOTES/COMMENTS:			

B. PUSH ARM

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. The outer tube of the push arm is to be a minimum 3 1/2" O D schedule 80 pipe.
/			2. The inner shaft shall be a solid 2 7/8" O.D. -1045 steel shaft
/			3. The wing shall have a single spring cushioned push arm.
/			4. The push arm shall be adjustable and have a safety shear pin
/			5. Both ends of the arm will have fabricated pivot blocks.
NOTES/COMMENTS:			

C. WING POST

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. The front wing cross tube shall be fabricated from 4" x 6" x 1/2" wall structural tube which spans both frame rails of the truck.
/			2. The outboard end of the cross tube shall be constructed from 7" structural I-beam with a minimum 3 5/8" flange vertically attached so as to be the foundation of a front wing post assembly.
/			3. The I-beam shall be reinforced with two fully welded diagonal pieces of 3" x 3/8" steel bar from the cross tube to the I-beam. These shall be further reinforced with a 1" x 1/2" piece of steel bar welded to the face.
/			4. The front mast slide to be 3/4" plate steel and is a minimum of 5 7/8" wide.
/			5. The front of the moldboard shall be mounted to the front slide plate with a single 1-1/2" diameter grade #5 bolt with a top lock nut the slide plate to allow for 5 inch float.
/			6. The front cross tube shall be mounted under the truck frame and supported by two steel elates a minimum of 1/2" x 12" x 24"
/			7. The front of the wing is raised by a single 4"ID x 12" double acting lift cylinder.
/			8. The cylinder attaches to the backside of the front mast at the top with an 1 1/4" grade #5 bolt and at the bottom with a minimum 1" diameter pin. It is mounted through two gussels welded to both the I-beam and cross tube for structural rigidity.
/			9. The slide assembly will allow mounting of the moldboard by means of a 3/4" reinforced steel plate approximately 10" x 18" which is mounted to the slide assembly with a single heat treated steel pin approximately 1-1/2" x 12".
/			10. The rear wing cross tube assembly shall be fabricated from 6" x 4" x 1/2," mild steel tubing.
/			11. The cross tube shall be mounted underneath truck by two steel mounting plates approximately 12" x 28" x 1/2," with flame cut holes for the cross tube to pass through.
/			12. The rear lift wing cylinder shall be a single 4" ID x 10" double acting hydraulic cylinder attached to the moldboard's mechanical float linkage. <ul style="list-style-type: none"> a. No cable or chains acceptable hydraulically operated only b. The moldboard/wing heel lift cylinder shall have a lock valve to prevent wing from falling in event of failed hoses
NOTES/COMMENTS:			

D. HYRAULICS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. To be compatible with the truck hydraulics. Two stack valve sections are required for satisfactory operation of the wing.
/			2. Needs to be compatible with joystick controls as specified in main body.
/			3. Toe cylinder hydraulic hoses shall be furnished with one of the listed flat face quick couplers (33.F.1.a.). Quick coupler connect shall be made via bulkhead fittings mounted through a 1/4-inch thick plate welded to the stationary portion of the snow plow push frame. Quick couplers shall not be installed directly to cylinder.
/			4. All the appropriate hydraulic cylinders, fittings, hardware and other parts necessary for mounting shall be furnished.
NOTES/COMMENTS:			

E. MANUALS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. One operator manual must be furnished at time of delivery with each unit.
/			2. All manual(s) must be furnished prior to payment and delivered to Fleet Management, Equipment Data Coordinator. Failure to deliver all manuals that are ordered may result in non-payment of ten percent of purchase order total until all manuals are delivered.
NOTES/COMMENTS:			

F. COLOR

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Wing moldboard is to be painted black except plowing surfaces to be painted aluminum Powder coating is referred.
/			2. All attaching components of the wing are to be painted black. Powder coating is referred
NOTES/COMMENTS:			

G. WARRANTY

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Manufacture's standard warranty shall apply and be at least one year
/			2. Dealers decals, stickers or other signs shall not be on unit(s). manufacturer's nameplates, stampings and other similar signs are acceptable.
NOTES/COMMENTS:			

XI. Attachment-Left hand mid-mount patrol wing

A. MOUNTING

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Wing shall be mounted behind cab and forward of tandem axle on driver's side of chassis. Wing mounting will not interfere with entry into cab.
/			2. Chassis vendor and body vendor will be responsible for repositioning components such as fuel tank, battery box, air tanks, etc. to allow for ample free area for proper mounting of wing frame to left hand side of chassis
NOTES/COMMENTS:			

B. WINGS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. The outer tube of the push arm is to be a minimum 3 1/2" O.D. schedule 80 pipe.
/			2. The inner shaft shall be a solid 2 7/8" O.D. - 1045 steel shaft.
/			3. The wing shall have a single spring cushioned push arm.
/			4. The push arm shall be adjustable and have a safety shear pin
/			5. Both ends of the arm will have fabricated pivot blocks
NOTES/COMMENTS:			

C. WING POST

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. The front wing cross tube shall be fabricated from 4" x 6" x 1/2" wall structural tube which spans both frame rails of the truck.
/			2. The outboard end of the cross tube shall be constructed from 7" structural I-beam with a minimum 3 5/8" flange vertically attached so as to be the foundation of a front wing post assembly
/			3. The I-beam shall be reinforced with two fully welded diagonal pieces of 3" x 3/8" steel bar from the cross tube to the I-beam. These shall be further reinforced with a 1" x 1/2" piece of steel bar welded to the face.
/			4. The front mast slide to be 3/4" plate steel and is a minimum of 5 7/8" wide.
/			5. The front of the moldboard shall be mounted to the front slide plate with a single 1-1/2" diameter grade #5 bolt with a top lock nut. The slide plate to allow for 5 inch float.

/			6. The front cross tube shall be mounted under the truck frame and supported by two steel plates a minimum of 1/2" x 12" x 24"
/			7. The front of the wing is raised by a single 4" I.D x 12" double acting lift cylinder
/			8. The cylinder attaches to the backside of the front mast at the top with a 1-1/4" grade #5 bolt and at the bottom with a minimum 1" diameter pin. It is mounted through two gussets welded to both the I-beam and cross tube for structural rigidity
/			9. The slide assembly will allow mounting of the moldboard by means of a 3/4" reinforced steel plate approximately 10" x 18" which is mounted to the slide assembly with a single heat treated steel pin approximately 1-1/2" x 12".
/			10. The rear wing cross tube assembly shall be fabricated from 6" x 4" x 1/2" mild steel tubing.
/			11. The cross tube shall be mounted underneath truck by two steel mounting plates approximately 12" x 28" x 1/2" with flame cut holes for the cross tube to pass through.
/			12. The rear lift wing cylinder shall be a single 4" ID x 10" double acting hydraulic cylinder attached to the moldboard's mechanical float linkage <ul style="list-style-type: none"> a. No cable or chains acceptable, hydraulically operated only. b. The moldboard/wing heel lift cylinder shall have a lock valve to prevent wing from falling in event of failed hoses
NOTES/COMMENTS:			

D. HYRAULICS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. To be compatible with the truck hydraulics Two stack valve sections are required for satisfactory operation of the wing.
/			2. Needs to be compatible with joystick controls as specified in main body.
/			3. Toe cylinder hydraulic hoses shall be furnished with one of the listed flat face quick couplers (33.F.1.a). Quick coupler connect shall be made via bulkhead fittings mounted through a 1/4-inch thick plate welded to the stationary portion of the snow plow push frame. Quick couplers shall not be installed directly to cylinder.
/			4. All the appropriate hydraulic cylinders, fittings, hardware and other parts necessary for mounting shall be furnished
NOTES/COMMENTS:			

E. MANUALS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. One operator manual must be furnished at time of delivery with each unit.
/			2. All manual(s) must be furnished prior to payment and delivered to Fleet Management, Equipment Data Coordinator. Failure to deliver all manuals that are ordered may result in non-payment of ten percent of purchase order total until all manuals are delivered.
NOTES/COMMENTS:			

F. COLOR

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Wing moldboard is to be painted black except plowing surfaces to be painted aluminum. Powder coating is referred.
/			2. All attaching components of the wing are to be painted black. Powder coating is referred.
NOTES/COMMENTS:			

G. WARRANTY

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Manufacture's standard warranty shall apply and be at least one year.
/			2. Dealer's decals, stickers or other signs shall not be on unit(s); manufacturer's nameplates, stampings and other similar signs are acceptable.
NOTES/COMMENTS:			

XII. Attachment- Benching Wing

A. WINGS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Right hand wing full hydraulic with overall length of about 11 feet
/			2. Wing will have overall length of about 11 feet <ul style="list-style-type: none"> a. Cutting edge of ½ inch by an inches and reversible. b. Moldboard thickness minimum 8 gauge c. Front frame mounted. d. AASHTO punched. e. Hydraulically operated including rear slide Front and rear of wing shall be of power-down type <ul style="list-style-type: none"> i. Hydraulic stack valve assembly shall have a four way section added for operation of rear slide. Provision shall be made in Joystick for control of this function. ii. The moldboard/wing heel lift cylinder shall have a safety lock valve to prevent wing from falling in event if failed hoses f. Full trip moldboard type g. Skid plate of bottom of front wing post with sloped front and back is required. h. Skids to be minimum ½ inch thick and have a total width of at least four inches i. Minimum benching height shall not be less than 36 inches
/			3. Color of wing to be painted flat black except plowing surfaces to be aluminum
/			4. Cab shield may be attached to wing mast frame and sturdily reinforced, Assembly shall be constructed and bolted to frame rails with appropriate size and number of Grade B bolts in which case the assembly shall be sturdily braced.
NOTES/COMMENTS:			

XIII. Attachment-High Benching Wing

A. WINGS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Right hand wing full hydraulic with overall length of about 11 feet
✓			2. Wing will have overall length of about 11 feet <ul style="list-style-type: none"> a. Cutting edge of ½ inch by an inches and reversible b. Moldboard thickness minimum 8 gauge. c. Front frame mounted. d. AASHTO punched. e. Hydraulically operated including rear slide. Front and rear of wing shall be of power-down type <ul style="list-style-type: none"> i. Hydraulic stack valve assembly shall have a four way section added for operation of rear slide. Provision shall be made in Joystick for control of this function. ii. The moldboard/wing heel lift cylinder shall have a safety lock valve to prevent wing from falling in event if failed hoses. f. Full trip moldboard type g. Skid plate of bottom of front wing post with sloped front and back is required. h. Skids to be minimum ½ inch thick and have a total width of at least four inches. i. Minimum benching height shall not be less than 54 inches.
/			3. Color of wing to be painted flat black except plowing surfaces to be aluminum.
✓			4. Cab shield may be attached to wing mast frame and sturdily reinforced, Assembly shall be constructed and bolted to frame rails with appropriate size and number of Grade B bolts in which case the assembly shall be sturdily braced.
NOTES/COMMENTS:			

XIV. Attachment- Sever High Benching Wing

A. WINGS

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Right hand wing full hydraulic with overall length of about 11 feet
/			2. Wing will have overall length of about 11 feet <ul style="list-style-type: none"> a. Cutting edge of ½ inch by an inches and reversible b. Moldboard thickness minimum 8 gauge. c. Front frame mounted. d. AASHTO punched. e. Hydraulically operated including rear slide Front and rear of wing shall be of power-down type <ul style="list-style-type: none"> i. Hydraulic stack valve assembly shall have a four way section added for operation of rear slide Provision shall be made in Joystick for control of this function ii. The moldboard/wing heel lift cylinder shall have a safety lock valve to prevent wing from falling in event if failed hoses iii. Rear slide will 3 stage hydraulic cylinder f. Full trip moldboard type g. Skid plate of bottom of front wing post with sloped front and back is required. h. Skids to be minimum ½ inch thick and have a total width of at least four inches i. Minimum benching height shall not be less than 80 inches
/			3. Color of wing to be painted flat black except plowing surfaces to be aluminum.
/			4. Cab shield may be attached to wing mast frame and sturdily reinforced. Assembly shall be constructed and bolted to frame rails with appropriate size and number of Grade B bolts in which case the assembly shall be sturdily braced.
NOTES/COMMENTS:			

XV. Attachment-V-Plow with V-Plow hitch

A. V-PLOW

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Will be a Monroe, Viking, Henke, Henderson, Falls or equivalent quick hitch with 14 inch pin height, approved in writing by Fleet Management prior to bid opening. Alternatives may only be requested during the pre-bid conference and/or during the question and answer period. Please specify: <u>HENKE V10</u>
/			2. Unit will have a 9 foot cutting width.
/			3. Appropriate moldboard spread for rest of plow Please specify: <u>150"</u>
/			4. Approximate 4 foot nose height
/			5. Approximate 6 foot 9 inch high at rear of moldboard
/			6. Minimum 8 gauge moldboard thickness and approximate weight of 2,500 pounds
/			7. Skid shoes will have maximum, feasible number of tungsten carbide inserts of minimum 3/16 inch thickness on bottom surface
/			8. V-plow will have minimum 10 inch ground clearance in raised position
/			9. V-Plow will be painted flat black except plowing surface of aluminum color.
/			10. V-Plow shall be fully mounted at the body builder, tested for proper fit and operation prior to shipment to NDOT.
NOTES/COMMENTS:			

B. PLOW MOUNTING

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Hitch will be mounted for both wing and plow(s) using Grade 8 bolts
/			2. Will include ½ inch thick steel, bolted-on, hydraulic pump guard at front part of hitch.
/			3. V-Plow and wing shall be mounted on unit if required

/			4. Front part of wing shall be capable of full vertical travel range without interference from V-plow or fender, when the V-plow is in either raised or lowered position.
NOTES/COMMENTS:			

C. HEAVY DUTY SNOW PLOW HITCH (in lieu of hitch from main specification)

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Shall be heavy duty, power tilt design with quick hitch type with minimum four (4) inch hydraulic cylinder and 14 inch pin height a. Pivot pin of lift arm to be 48-54 inches above quick connect pin. b. Compatible with V-Plow being supplied and for use with one-way snow plow.
/			2. Hitch will include attaching pins and A-frame lift arm with lifting lug or clevis
/			3. All thrust loads must be transferred to chassis frame and not to chassis axle or spring assemblies.
/			4. The crankshaft driven pump must be supported and protected by this hitch assembly.
/			5. Hitch to be made so that tilting hood/fenders will tilt fully forward with mast in tilted position.
/			6. Hitch will be installed with Grade 8 bolts to chassis and as per hitch manufacturer's recommendations.
/			7. A drawing of hitch to include material specifications of materials used shall be provided prior to bid award. a. Pump shall be located as reasonably close as possible to chassis components after bumper removal. b. Bumper to be put in dump body when delivered. All mounting brackets and hardware shall be left intact with bumper and shall be delivered with the same truck as which it was removed from.
NOTES/COMMENTS:			

XVI. Attachment-V-Plow with V-plow Hitch without V-plow

A SNOW PLOW HITCH (in lieu of hitch from main specification)

YES	NO	NO & PROVIDE ALTERNATIVE	
/			1. Shall be heavy duty, power tilt design with quick hitch type with minimum four (4) inch hydraulic cylinder and 14 inch pin height a. Pivot pin of lift arm to be 48-54 inches above quick connect pin. b. Recommended by V-Plow and one-way snow plow manufacturer for use on proposed chassis
/			2. Hitch will include attaching pins and A-frame lift arm with lifting lug or clevis.
/			3. All thrust loads must be transferred to chassis frame and not to chassis axle or spring assemblies.
/			4. The crankshaft driven pump must be supported and protected by this hitch Assembly.
/			5. Hitch to be made so that tilting hood/fenders will tilt fully forward with mast in tilted position
/			6. Hitch will be installed with Grade 8 bolts to chassis and as per hitch manufacturer's recommendations.
/			7. Drawing of hitch to include material specifications of materials used shall be provided prior to bid award. a. Pump shall be located as reasonably close as possible to chassis components after bumper removal. b. Bumper to be put in dump body when delivered. All mounting brackets and hardware shall be left intact with bumper and shall be delivered with the same truck as which it was removed from.
NOTES/COMMENTS:			

XVII. Specification for the Viking Cives Tow Plow

Scope the Viking Cives 26' tow plow trailer with material spreader shall be the latest current model of proven performance and under standard production by manufacturer and is to be of standard design, complete as regularly advertised and marketed including all specified accessories, tools and special features. All necessary parts for satisfactory operation of the equipment whether or not they may be specifically mentioned below. Complete detailed specification and advertised data sheets with cuts or photographs should be attached to the invitation to bid on the identical equipment proposed. Any information necessary to show compliance with these specifications. In addition to information given on advertising data sheets, should be supplied in writing and attached to the Invitation To Bid. The Viking Cives 26' tow plow trailer with material spreader must meet or exceed the following requirements.

A. FRAME AND MOLDBOARDS

*Viking Cives specifications
Pages 77-82*

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Swivel tongue to control offset.
✓			2. One (1) 12 foot moldboard.
✓			3. One (1) 14 foot moldboard
	✓	1/4" overlay	4. Moldboards to be 10 gauge steel with 3/8" poly overlay.
✓			5. Moldboard to be approximately 30" high.
✓			6. Moldboards to be raised and lowered by hydraulic cylinders.
✓			7. Moldboard base angle to be AASHTO punched to accept all standard cutting edges.
NOTES/COMMENTS:			

B. WEIGHT

YES	NO	NO & PROVIDE ALTERNATIVE	
	✓	36,000 lbs.	1. Gross allowable trailer weight of 32,000 pounds
NOTES/COMMENTS:			

C. AXLES

YES	NO	NO & PROVIDE ALTERNATIVE	
	✓	Arvin Meritor 18,000	1. Dual Arvin Meritor 16,000 Pound steering axle's w/connecting linkage.
✓			2. ABS air brake system.
✓			3. Solid suspension.
✓			4. Fenders over tires.

✓			<p>5. Four (4) TIRES TO BE 385/r22.5.</p> <p>a. Tires must be Goodyear, Michelin, Bridgestone, Firestone, Continental or General and shall carry said company name.</p> <p>Please specify. <u>Goodyear</u></p>
✓			<p>6. Hydraulic steering of axles to deploy Tow Plow to approximately 30 degrees.</p>
NOTES/COMMENTS:			

D. HYDRAULICS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			<p>1. Vendor will minimize the number of critical rub points for hydraulic hoses. Where critical rub points exist, they shall be wrapped with spiral metal or adequate rubber wrap.</p>
✓			<p>2. Only steel wire braided hoses are acceptable.</p>
✓			<p>3. Hoses to be ISO 16028 flat face interchange couplings. Example of couplers: Faster 3P508G-4-12G-MC/2P508G-4-12G-FC Couplers to meet ISO 9227 standards to minimum of 400 hours salt spray test.</p>
✓			<p>4. Hoses with one of the above listed couplers (one male and one female) shall be installed on each of the following.</p> <p>a. Steering cylinder.</p> <p>b. Raise/lower cylinder.</p> <p>c. Spreader spinner.</p> <p>d. Pre-Wet.</p>
NOTES/COMMENTS:			

E. LIGHTS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			<p>1. Federal safety lights and reflectors required.</p>
✓			<p>2. Rear stop/turn/tail and marker lights in swivel mast, which remains perpendicular to the travel lane.</p>
✓			<p>3. Two pedestal with warning light/beacons installed per NDOT specification on color and strobe</p>
✓			<p>4. Light mounted on top middle of tow plow moldboard shining towards heel of plow. Light to be shielded from snow and ice.</p>
NOTES/COMMENTS:			

F. MATERIAL SPREADER

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Constructed from ¼ Stainless steel.
✓			2. Approximately 7.8 cubic yards.
✓			3. 24 inch wide conveyor.
✓			4. Front discharge spinner assembly.
✓			5. Gear box to be 50:1.
✓			6. Body top screens.
✓			7. Conveyor motor sensor with 180 max pulse count.
✓			8. All spreader control harnessing shall meet ISO IP68 and NEMA6 standards. The connectors should be die cast E-coated and be designed to have NO corrosion after 500 hours in 35C salt spray.
✓			9. Sealed harness with a length capable of reaching rear of truck to include M-12 plug.
NOTES/COMMENTS:			

G. ROLL TARP

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. The tarp system shall be a Shurco Super Duty Shur-Lok kit or equivalent and consist of the following minimums: a. 22-ounce vinyl coated tarp with tailflap. b. Roll-away ridge pole. c. Stainless steel front endcap. d. Aluminum latch plate. e. One heavy duty rear tarp bow. f. Three easy-off offset tarp stops. g. Four crank retainers. h. Long Surfex crank arm. i. Front end shur-return system.
✓			2. Installation shall be such that the tarp can be secured for travel in either the open or covered mode.
NOTES/COMMENTS:			

H. PRE WET SYSTEM

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. 325 gallon poly tank mounted to the tow plow.

✓			2. Tank to have low level float switch to signal spreader control when empty.
✓			3. Pre-wetter will be used to apply liquid ice control material onto granular material at the spinner spreader.
✓			4. All components, parts pieces fasteners etc shall be manufactured with nonferrous/non-rusting materials.
✓			5. Liquid ice control material hoses shall be ½ polyester braided reinforced clear PVC. Suitable for cold weather use.
✓			6. Liquid rate control to be separate from truck pre wet.
✓			7. Two brass nozzles each rated 2.0GPM flow shall be mounted onto bracket attached to the spreader spinner with stainless bolts. Nozzles shall be directed to spray on the centerline of the spinner.
✓			8. System must be fully tested and calibrated to a 10 gallon per ton rate upon delivery to the department. System shall be flushed and winterized with suitable antifreeze solution to prevent damage.
NOTES/COMMENTS:			

I. PRE WET PUMP SYSTEM WITH FLOW METER

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Material mump shall be a solid brass gear type, direct coupled to the hydraulic motor that will power the pre-wetter.
✓			2. Pump system shall incorporate a calibration turbine style flow meter precise ground oriented liquid application rate Rate shall be adjustable to the limits of the pump design output.
✓			3. Pump, flow meter and associated plumbing to be enclosed in a fiberglass weather resistant enclosure.
NOTES/COMMENTS:			

J. MANUALS

YES	NO	NO & PROVIDE ALTERNATIVE	
			1. One operator manual must be furnished at time of delivery with each unit.
			2. All manual(s) must be furnished prior to payment and delivered to Fleet Management, Equipment Data Coordinator. Failure to deliver all manuals that are ordered may result in non-payment of ten percent of purchase order total until all manuals are delivered
NOTES/COMMENTS:			

K. MISCELLANEOUS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓		None required	1. The bidder should submit with their bid a list of special tools they will furnish with each machine.
✓			2. Dealer's decals, stickers or other signs shall not be affixed to units; manufacture's nameplate, stamping and other similar, signs acceptable.
✓			3. Dealer pre-delivery services required.
✓			4. Color-Plow shall be painted to match OEM chassis, Chassis vendor to provide OEM paint code to Viking-Cives.
✓			5. Professional techniques and workmanship are required. a. No welding or cutting of chassis rails expect as stated elsewhere in specifications. b. Welds must be chipped free of slag and thoroughly protected with yellow or black enamel as appropriate. c. Improper mounting, poor welding practices, the presence of slag, hydraulic oil leaks or inadequate paint coverage will be cause for rejection of any unit. In which case, the vendor will be notified to call for the vehicle and remove it from State property for remedy of defects.
NOTES/COMMENTS:			

L. WARRANTY

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Manufacturer's usual warranty shall apply, and shall be in effect of a minimum of one year from the date the equipment was placed in services.
✓			2. Vendor shall be responsible for all repairs to include parts, and labor during the 12 month usual warranty period.
✓			3. All transportation costs to and from the nearest authorized repair facility will be the responsibility of Nebraska Department of Transportation.
✓			4. Prior to the awarding of, or entering into any agreement or contract it shall be the responsibility of manufacturer and/or the successful bidder to warrant to the State of Nebraska, in writing, that it has factory authorized dealers in the State of Nebraska who will provide warranty/services and repair work without undue delay.
NOTES/COMMENTS: Factory Field Service available			

M. SPECIFICATION FORM

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Successful bidder will be required to complete a form to the fullest extent possible for each unit and must accompany each unit when delivered.
✓			2. Forms will be supplied by Department of Transportation to successful bidder after purchase orders is awarded.
NOTES/COMMENTS:			

XVIII. MISCELLANEOUS

A. MOTOR VEHICLE INDUSTRIES REGULATION ACT

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. All Bidders must comply with the licensing requirements for motor vehicle dealers established under the Motor Vehicle Industries Regulation Act, Nebraska Revised Statutes, § Chapter 60, Article 14 at time of bid. Bids will only be accepted from Bidders who are fully compliant with the Motor Vehicle Industries Regulation Act, Chapter 60, and Article 14.
NOTES/COMMENTS:			

B. ANNUAL USAGE, ESTIMATED

YES	NO	NO & PROVIDE ALTERNATIVE	
	✓		1. Annual usage figures provided are estimates and are not to be construed as either a minimum or maximum purchase quantity. The orders shall be for the actual quantities of each item ordered by or for any agency during the life of the contract. Vendor shall not impose minimum order requirements.
NOTES/COMMENTS:			

C. USAGE REPORT

YES	NO	NO & PROVIDE ALTERNATIVE	
	✓		1. The vendor shall, provide a quarterly usage report of this contract by state agencies and political subdivisions. Information will include agency name, item, and dollar amount. Information may be requested at any time by the SPB, as determined by the State.
NOTES/COMMENTS:			

D. DELIVERY ARO

YES	NO	NO & PROVIDE ALTERNATIVE	
		✓	1. Delivery desired within 180 days after receipt of order(s).
NOTES/COMMENTS:			
TOTAL			
Chassis 120-150 Days + Monroe 270 Days to complete			

E. DELIVER LOCATIONS/INSTRUCTIONS (BIDDER IS CERTIFYING THAT THEY CAN MEET THE DELIVER LOCATIONS/INSTRUCTIONS)

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Delivery to: Nebraska Department of Transportation 5001 South 14th St Lincoln, NE 68512
✓			2. Delivery times Monday-Friday 8:00am-3:30pm Not including Holidays
✓			3. Must inform Keith Jordan 24 hours before delivery via phone 402-479-4323
NOTES/COMMENTS:			

F. ORDERS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Orders will be placed either by, phone, fax, e-mail or Internet (if available and not to the exclusion of the other methods). All orders must reference a purchase order number and the purchase order number must be referenced on the packing slip, and invoice. Invoices are to be sent to the "Invoice to" address on the purchase order.
NOTES/COMMENTS:			

G. QUALITY

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			1. Product quality must meet specifications and be consistent for the term of the contract. A guarantee of satisfactory performance by the supplier and meeting delivery dates are considered to be an integral part of the purchase contract resulting from this bid invitation. All materials must be of first quality, under standard production by the manufacturer and be of standard design, complete as regularly advertised and marketed and be of proven performance. Products are to be fully guaranteed and may be returned for full credit or replacement (at the State's option) for any reason shipping during the initial warranty period with no additional charges for shipping or restocking.
NOTES/COMMENTS:			

H. PRICES

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			<p>1. Price quoted shall be unit price and shall be firm for 180 from date of an award and are to be net; including transportation and delivery charges fully prepaid by the Bidder F.O.B. Destination as specified. No additional charges will be allowed for packing, handling, fuel surcharge, or partial delivery costs. Any request for an increase must be submitted in writing to the SPB a minimum of thirty (30) days prior to proposed effective date of increase, and must show cause and be accompanied by supporting documentation (such as notification letter from manufacturer). Further documentation may be required by the State, to authenticate the increase (such as manufacturer invoices). Failure to supply any requested supporting documentation may be grounds to cancel the contract. In no instance may a price increases be billed to the State until the contract is amended. The State further reserves the right to reject any proposed price increase(s), cancel the contract and re-bid if determined to be in the best interest of the State. The State will be given full proportionate benefit of any decrease for the term of the contract. Contract supplier or suppliers may honor pricing and extend the contract to political sub-divisions, cities, and counties. Terms and conditions of the contract must be met by political sub-divisions, cities, and counties.</p>
<p>NOTES/COMMENTS:</p>			

I. AUTHORIZED DEALER & WARRANTY

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			<p>1. To the extent required by the manufacturer, the Bidder shall be an authorized dealer. Bidder may be required to substantiate that he/she is an authorized dealer. Proof, if required, must be submitted to the SPB within three (3) days of the request and prior to the award of any contract. The terms of the original manufacturer's standard warranty shall apply to all equipment acquired from this solicitation for the entire warranty period.</p>
<p>NOTES/COMMENTS:</p>			

J. SUBSTITUTIONS

YES	NO	NO & PROVIDE ALTERNATIVE	
✓			<p>1. Vendor will not substitute any item that has been awarded without prior written approval of SPB.</p>
<p>NOTES/COMMENTS:</p>			

K. SECRETARY OF STATE REGISTRATION REQUIREMENTS

CHOOSE "YES" TO BEST ANSWER ONLY, CHOOSE "NO" FOR REMAINING LINES

YES	NO	*Prior to contract award and/or upon request of SPB, potential award recipient(s) will be asked to certify compliance with Nebraska Secretary of State Registration by providing a true and exact copy of current (dated within 90 days) valid Certificate of Good Standing or Letter of Good Standing.
✓		<p>1. Bidder is a SOLE PROPRIETORSHIP (in which case, no Letter of Good Standing/Certificate of Good Standing is required)</p> <p>If the Bidder is an Individual or Sole Proprietorship, the following applies:</p> <p>a. The Bidder must complete the United States Citizenship Attestation Form, available on the Department of Administrative Services website at http://das.nebraska.gov/materiel/purchasing.html</p> <p>The completed United States Attestation Form should be submitted with the Invitation to Bid response.</p> <p>b. If the Bidder indicates on such attestation form that he or she is a qualified alien, the Contractor agrees to provide the U.S. Citizenship and Immigration Services documentation required to verify the Contractor's lawful presence in the United States using the Systematic Alien Verification for Entitlements (SAVE) Program.</p> <p>c. The Bidder understands and agrees that lawful presence in the United States is required and the Contractor may be disqualified or the contract terminated if such lawful presence cannot be verified as required by Neb. Rev. Stat. § 4-108.</p>
	✓	2. Bidder is a GENERAL PARTNERSHIP (in which case, no Letter of Good Standing/Certificate of Good Standing is required).
	✓	3. Bidder is a FOREIGN or DOMESTIC CORPORATION or BUSINESS and a copy of current Letter of Good Standing/Certificate of Good Standing from the Nebraska Secretary of State is provided within bid submission documents.
	✓	4. Bidder is a FOREIGN or DOMESTIC CORPORATION or BUSINESS and a copy of current Letter of Good Standing/Certificate of Good Standing from the Nebraska Secretary of State will be provided in a timely manner upon request prior to award.

Form A
Bidder Contact Sheet
Invitation To Bid Number 5992 OF

Form A should be completed and submitted with each response to this ITB. This is intended to provide the State with information on the Bidder's name and address, and the specific person(s) who are responsible for preparation of the Bidder's response.

Preparation of ITB Contact Information	
Bidder Name:	Cornhusker International Trucks, Inc.
Bidder Address:	4502 South 110 th St. Omaha NE 68137
Contact Person & Title:	Robert Roane Sales Representative
E-mail Address:	rob.roane@cornhuskerinternational.com
Telephone Number (Office):	402-331-8801
Telephone Number (Cellular):	402-290-6365
Fax Number:	402-331-8802

Each Bidder shall also designate a specific contact person who will be responsible for responding to the State if any clarifications of the Bidder's response should become necessary.

Communication with the State Contact Information	
Bidder Name:	
Bidder Address:	
Contact Person & Title:	
E-mail Address:	
Telephone Number (Office):	
Telephone Number (Cellular):	
Fax Number:	

Form B
Notification of Intent to Attend Pre-Bid Conference
Invitation To Bid Number 5992 OF

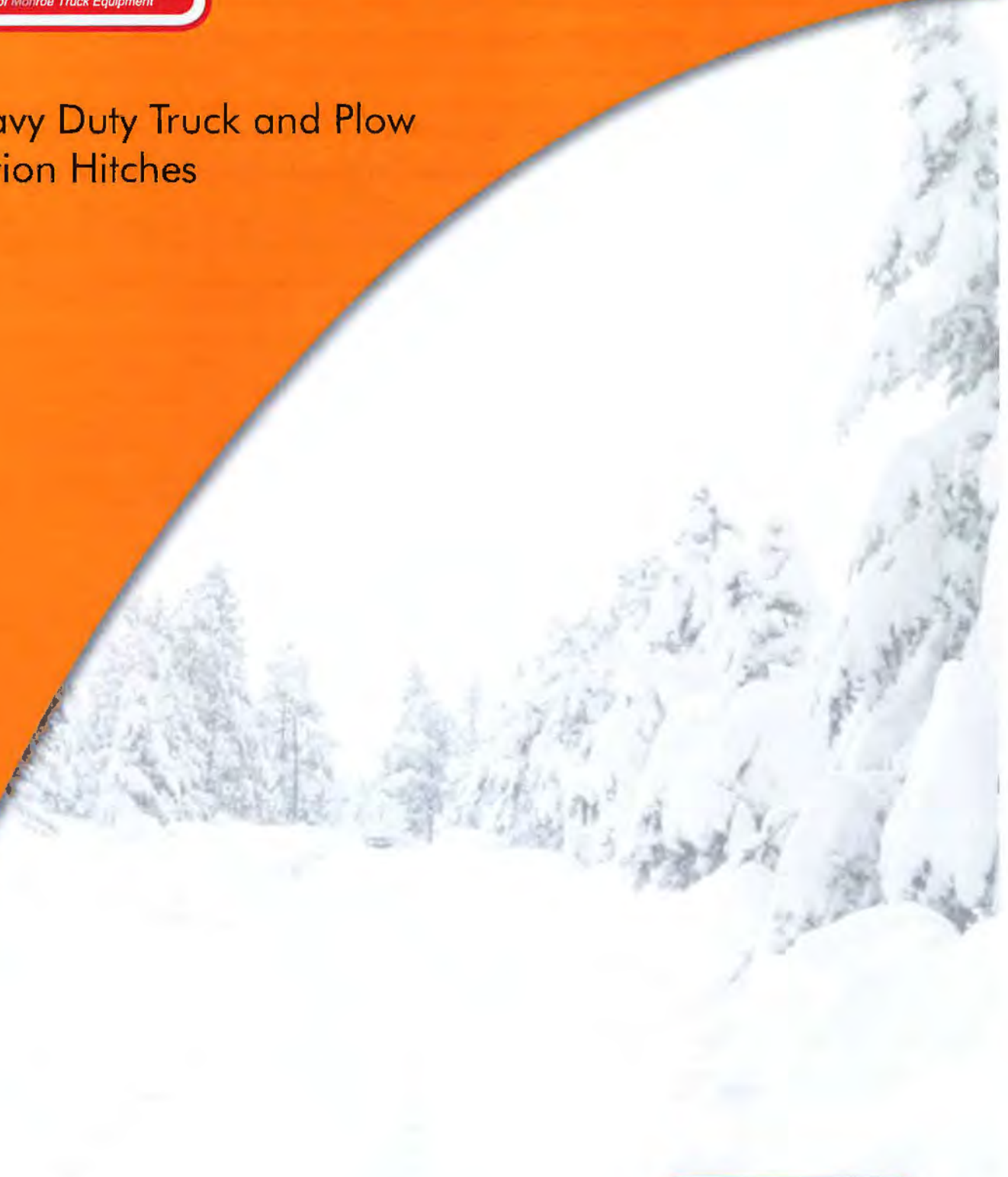
Bidder Name:	
Bidder Address:	
Contact Person:	Already Sent In &
E-mail Address:	
Telephone Number:	
Fax Number:	
Number of Attendees:	Attended

The "Notification of Intent to Attend Pre-Bid Conference" form should be submitted to the SPB via e-mail (as.materielpurchasing@nebraska.gov), facsimile (402-471-2089), hand delivered or U.S. Mail by the date shown in the Schedule of Events.



PLOW HITCHES

Heavy Duty Truck and Plow
Portion Hitches



www.monroetruck.com

Other Product Offerings:
Wings • Plows
Tailgate Spreaders
Liquid Systems • Scrapers
V-Box Spreaders

Pin Type Hitch



MC5000

- Low Profile Design
- Available in 21", 30.5" & 33.5" Centers
- Non-Tilt
- Telescopic Lift Arm



MC201

- High Profile Design
- Available in 30.5" & 33.5" Centers
- Tilting with Lever Release for Locking
- Telescopic Lift Arm



MC8002

- High Profile Design
- Available in 21", 30.5" & 33.5" Centers
- Tilting
- Telescopic Lift Arm



00011210 MC5000-FFLA

- Low Profile Design
- Available in 30.5" Centers
- Non-Tilt
- Telescopic w/Fold Flat Lift Arm



00031835 26B

Plow Portion Hitches



Pin Style Swivel Hitch Also Available in 21", 30.5" and 33.5" Center



MC801 Field Conversion Kit to Convert Pin Style to Loop Style Hitch



Pin Hitch for 26B Style Hitch



MC7082

- High Profile
- Positive 2 point Latch System
- 30.5" Centers
- Manual Tilt
- Telescopic Lift Arm



MC7083

- High Profile
- Positive 2 point Latch System
- 30.5" Centers
- Non Tilt
- Telescopic Lift Arm



00015137 MC7000

- Low Profile
- Positive 2 point Latch System
- 30.5" Centers
- Non Tilt
- Telescopic Lift Arm



00054392 MC7090

- Low Profile
- Positive 2 point Latch System
- 30.5" Centers
- Non Tilt
- Telescopic w/Fold Flat Lift Arm



00102712 MC7092

- Low Profile
- Positive 2 point Latch System
- 30.5" Centers
- Manual Tilt
- Telescopic Lift Arm



Plow Portion Hitches



MC6000 Quick Hitch Swivel Plate

Loop Style Hitches



MC2080 Pin Loop
- Low Profile
- Non Tilt
- Telescopic w/Fold Flat Lift Arm



QCP/FFLA
- Low Profile
- Non Tilt
- Telescopic w/Fold Flat Lift Arm



MC2075
- Low Profile
- Non Tilt
- Telescopic Lift Arm

Plow Portion Hitches



QCP Loop Weld On Style



QCP Loop Weld On Style Swivel Plate

Husting Hitches



Husting Hitch
- Available in 29" & 34" Wide

Plow Portion Hitches



Husting Hitch Plow Portion

00043300 Roller Kit

Quick Link Hitches

Plow Portion Hitches



- PF91-QL1/FFLA/Tilt
- Low Profile
 - Tilt
 - Telescopic w/Fold Flat Lift Arm



Quick Link Swivel Plate Hitch



- PF91-QL1/FFLA 00052633
- Low Profile
 - Non-Tilt
 - Telescopic w/Fold Flat Lift Arm



00059247 Field Conversion Kit

Tor-Lock/Arrowhead Hitches

Plow Portion Hitches



- Tor-Lock or Arrowhead
- Low Profile
 - Non-Tilt
 - Telescopic w/Fold Flat Lift Arm
 - Integral Arrowhead Receiver



NOTE: Available in Weld On Plow Portion without Swivel Plate

Oscillating Plow Portion Tor-Lock/Arrowhead Hitch



MC9001 Field Conversion Kit



Custom Hitches



00016541 Power Tilt



00029185 Power Tilt Quick Hitch with Wing Cross Tubes



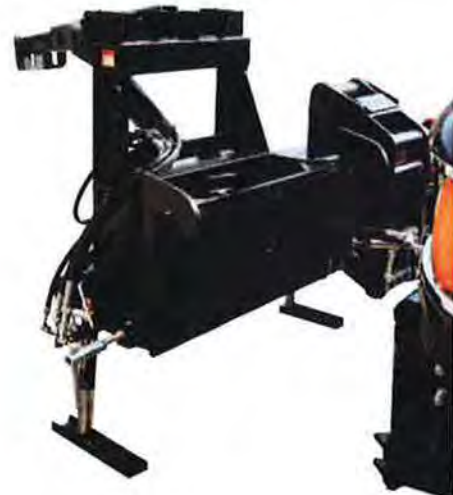
Flat Plate Hitch



00039044 MTA8000-Q



00091753 UBA Quick Hitch



Side Plates

SPU
½" Universal
Side Plates



Hitch is not included with
the side plates.



SPU-E
½" Universal
Side Plates for
Chassis with Frame
Extensions

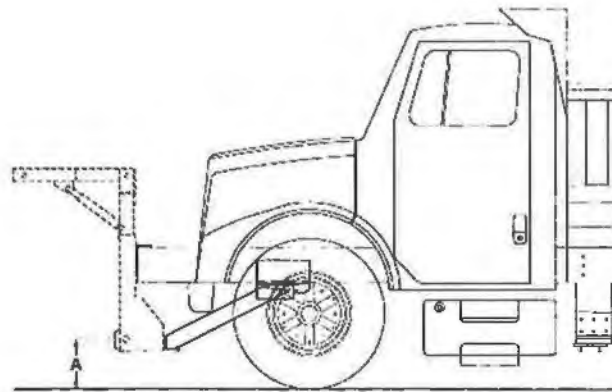
Note: Some modifications may be required for hitch installation.

Product updates and specifications are subject to change without notice.

Thrust Arm Kits



MC50
Thrust Arm
Mounting Kit



A=Push height of plow



Henke Manufacturing Corporation

Made in the USA
For Over 80 Years



V9.5 Model



V10 Model

Henke V 9.5 - V 10 Fixed Position Vee Plows

Product Features:

- Available in 2 Models V 9.5 or V 10
- V 9.5 Dimensions: Nose Height 40" - Rear Height 68" - 2200 lbs
- V 10 Dimensions: Nose Height 52" - Rear Height 86" - 3500 lbs
- Moldboard Components Manufactured from 3/16" High-Tensile Steel



- Heavy Duty Screw Adjustable Running Gear Assemblies
- Motor Grader, Wheel Loader, or Truck Applications
- Designed to Accept a Variety of Couplers and Pin Hitches



Built Tough – Built to Last!

Powder Coat Finish



- The ability to withstand high levels of corrosion protection to salt, chemicals, humidity, scratching and impact, far surpassing conventional paint top coats
- Resists fading from U.V. rays
- Environmentally green process
- Excellent adhesion
- High degree of scuff, chip or scratch resistance

"We use our trucks and equipment in a high chemical and high abrasive environment. Powder coating is the best route for several reasons. The main reason for us is the appearance because we like to have the image of always having superior and functional equipment. For this reason a powder coat finish is the best option for us on our salt spreaders. We also have had great results from the powder coat finish on our Snow Bully Snow Pushers. We own over 20 of them and we have never had to repaint a single one. Some of the v-boxes we have are 10 years old and have had heavy usage. They also have never been repainted. Only minor touch ups due to either driver or loader error. We will never use any type of equipment that does not have a powder coat finish. That is one of the reasons we use Monroe Snow & Ice Control Products exclusively!"

- Trevor Biebrach, Director of Operations, Snow Systems Incorporated



- Environmentally SAFE Process
- Emits NO VOC's
- Contains NO Heavy Metals
- NO Solvents Disposal



**MTE Achieving
Exceptional Quality Finishes,
Our Customers Demand**



MTE's Engineering Research & Development Team

- 6 Design Engineers and 4 Designer Draftsmen
- Design Software: AutoCad, Inventory, Design Space
Finite Element Analysis Software for Stress Analysis
- Dedicated R&D Area and Technicians

Distributed By:

Manufactured By:

Monroe Snow & Ice Control

A Division of Monroe Truck Equipment

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TRUCK EQUIPMENT



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BY
FORCE
ANALOG



I-Grip 6100

The Complete In-Cab Integration System

The Monroe I-Grip control powered by the Force SSC6100 CAN Bus Spreader Control System provides the latest in integrated Hydraulic function controls along with Spreader and Liquid Controls.

I-Grip Control

The Complete In-Cab Integration System

The I-Grip™ incorporates today's technology into a proportional single Joystick which provides an industry-leading approach to hydraulic function control.

The one point-of-contact and one point-of-control design provides the highest degree of operator comfort and system flexibility.

- ▶ **Function Controls with LED Backlit Face**
 - 3-Axis Hydraulic Proportional Control Functions
 - Toggle Operating Modes
 - Select Liquid Lanes

- ▶ **Spreader Controls**
 - Standby
 - Rate Increase/Decrease

- ▶ **Spreader Controls**
 - Spinner Increase/Decrease
 - Blast On/Off

- ▶ **Mode Select Zones**
 - Hydraulic Function Activation
 - Electric Interlock

- ▶ **Full Proportional Control**
- ▶ **Contactless Mode Selection**
- ▶ **Hi-Flex Cabling for Long-Life, Seat-Mounted Operation**



POWERED
BY
FORCE

SSC6100

CAN Bus Spreader Control System

- ▶ Remotely Mounted in Clear View for Operator
- ▶ 7" Diagonal Color TFT Wide-Screen Display
- ▶ Simultaneous Display of Key Activities:

- Granular Rate Set-Point vs. Actual
- Pre-Wet Liquid Set-Point vs. Actual
- Liquid Anti-Icing Set-Point vs. Actual

- ▶ Selectable On-Screen Data Gauges:

- Road/Air Temperature
- Current Material Name
- Vehicle Speed
- Spread Width
- Gate Setting



**Superior
Operator
Interface!**

- ▶ Spreader Control

- Two Continuous Rotation Encoders for Granular & Spinner
- Two Integrated Push-Buttons for Blast & Standby
- Multifunction Menu Navigation Control
- Adjustable LED Backlighting
- Color-Coded Knobs & Soft Keys Simplify Operation
Accelerates Training for New Drivers
- Industry-Leading Safety... Pushing ESTOP Button Immediately
Removes Power from Actuators to Halt Hydraulic Function Movement



**ESTOP
Safety Button**

- ▶ CAN Bus Central Processing Module

- Connects the Operator Interface, LCD Color Display & Valve Control Module Into One Multi-Tasking, Information & Control System
- On-Board Diagnostics Provide Real-Time Status of Sensors, Outputs and System Communications
- USB Port for High-Speed CAL File Transfer and Firmware Upgrades -- No PC Required

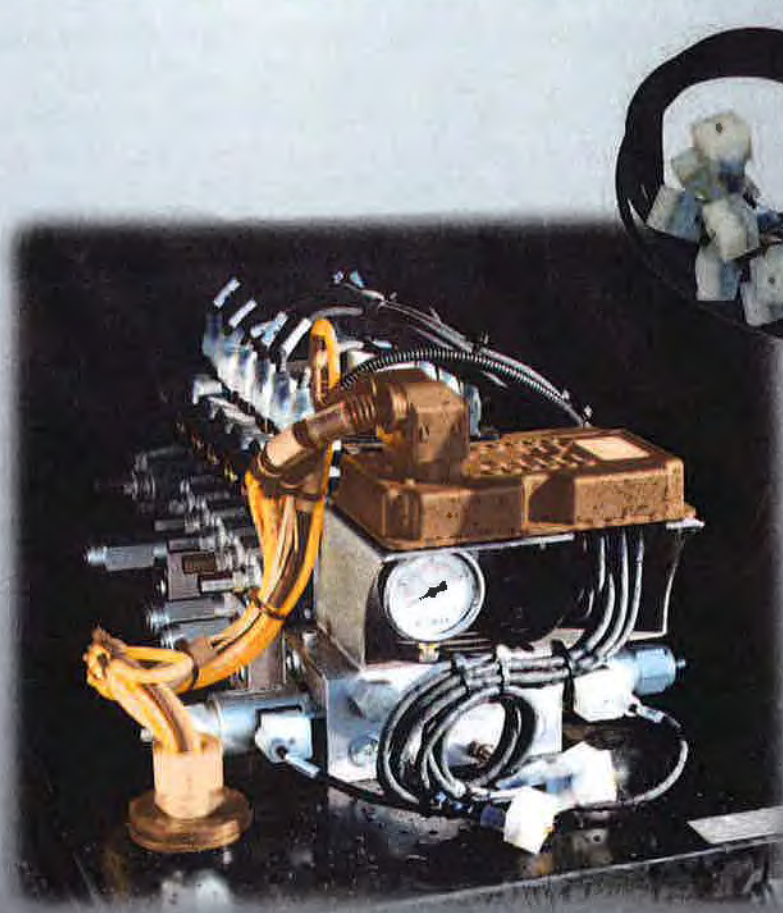


MONROE
TRUCK EQUIPMENT



**POWERED
BY
FORCE**

Valve Control Module



The Valve Control Module was developed on the robust CAN Bus communication protocol to eliminate bulky wire harnesses.

Constructed to meet harsh environmental standards and pre-installed on the valve assembly; making it the perfect companion for the Force America family of valves.

- ▶ Potted Module & Connectors Seal Out Water & Protect Against Vibration
- ▶ CAN Bus Interface to Controller Reduces Wiring Through Cab Floor
- ▶ Feedback Inputs for Sensors
- ▶ Warning Sensor Inputs
- ▶ Proportional/Non-Proportional Operation
- ▶ CAN Bus Output Connector to Additional Modules
- ▶ On-Board Diagnostics which Provide Real-Time Status of Sensors, Outputs & System Communications



POWERED
BY
FORCE



800.356.8134



www.monroetruck.com

Monroe Truck Equipment
1051 W. 7th Street
Monroe, WI 53566



Monroe Junior Wing

VISIT US ONLINE AT
www.monroetruck.com



Standard Specifications

- 27" Intake Height and 28" Discharge Height on Moldboard
- Two Double-Acting Cylinders for Direct Lift of Toe and Heel
- Direct-Lift Front Wing Post
- Wing Requires Two 4-Way Valves with 2100 PSI Relief for Heel Raise to Operate (Not included)
- Wing Provided with Under Frame Cross Tube Mounting and Hardware
- Moldboard is Shotblasted and Powder Coat Painted Orange
- Mounting Hardware Powder Coat Painted Black
- 10 Gauge Moldboard
- 3/8" One Piece, Tapered, Flame Cut Ribs

Options

- Right, Left or Dual Mount
- Front, Mid or Rear Mount
- Cast Iron Moldboard Shoe
- Wrap Around Curb Guard
- Carbide Cutting Edge
- Two Piece Torsion Spring Trip Cutting Edge
- Full Moldboard Trip
- Decell Heel Cylinder
- Available with Heavy Duty Patrol Wing Moldboard

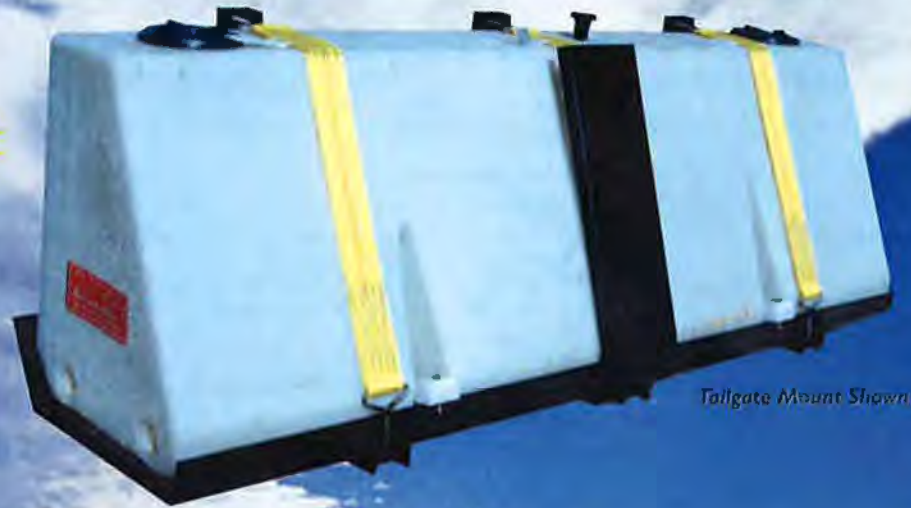


Shown with Full Trip Option



LDS-455 Hydraulic Liquid Dispensing System

VISIT US ONLINE AT
www.monroetruck.com



Tailgate Mount Shown

Standard System Includes:

- NEMA Weather-tite Fiberglass Pump Enclosure with Hydraulic, 7GPM pump assembly (Optional 4GPM)
- Glass Filled Polypropylene Plumbing Components
- Black EPDM Hose, 150PSI
- 5PSI In-Line Check Valve for Nozzles
- 2 Nozzle w/ Brass Tips and Caps
- In Cab Controller with Backlit On/Off System Switch
- Low Pressure Switch with Indicator Light
- Weather Pack Connections on Harnessing
- Tank Mounting Kits for V-box, Tailgate or Chassis Applications (Fits up to 9" radius dump bodies)
- Powder Coated Mild Steel Mounting Bracketry (Optional Stainless Steel)



- 15-200 Gallon, .350" wall, baffled tanks with breather.
- (2) large 1/4" NPT outlet ports at each end. (Molded in threads)
- (2) 5" fill wells with lids on 75, 100 & 200 gallon tanks
- Gallon Indicators on each end of 75, 100 & 200 gallon tanks.



Tethered 5" lid and slosh guard, standard on 75 & 100 gallon tanks.



Manufactured by:

Monroe Snow & Ice Control

A Division of Monroe Truck Equipment

1051 W. 7th Street, Monroe, Wisconsin 53566

800-880-0109 • Fax 608-328-8390 • Website: www.monroetruck.com

Distributed by:



Para-Glide WING POST

by Monroe Snow & Ice Control

The Monroe Para-Glide Double Function Patrol Wing is a multi-function wing that is capable of patrolling snow to widen shoulders or perform limited benching. The Para-Glide Double Function Wing is operated by hydraulic cylinders for positive activation of the wing. The operator has the ability to independently control the toe or heel of the wing. Another feature is the built in mechanical float to allow the wing to follow the contour of the plowing surface. The mounting of this wing usually requires no modification to the exhaust system, no additional cab to body spacing, no drivetrain interference and a rear mount that is located above the frame for an unobstructed ground to frame clearance. A Monroe Para-Glide Wing will increase your plow clearing capacity, increase operator efficiency, and reduce equipment road mile usage.

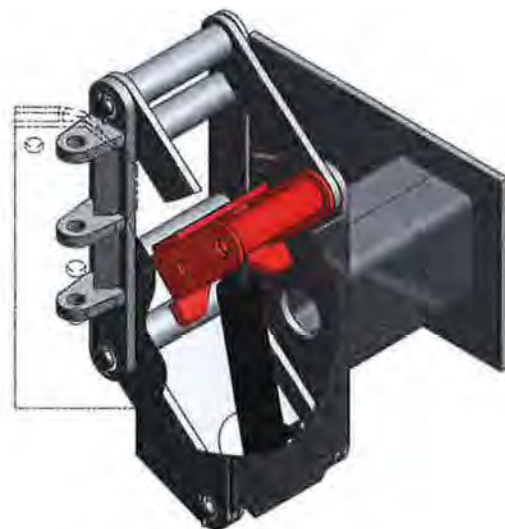
Two 4-way (double acting) valves are required • All moldboards are shotblasted and powder coated Urethane Orange

Features

- NEW and Improved Free Flotation Reduces Road Shock and Vibration to the Vehicle
- Longer Service Life and Fewer Repairs with Increased Safety.
- Faster Cycle Times
- Trailing Link Design
- 14" Full Float with 18" of Lift
- All Hydraulically Operated- No Cables
- Heavy Duty Construction with High Tensile Steels being Used to Reduce Weight of Assembly and Increase Durability
- 100% Welded Moldboard
- One Piece 1/2" Moldboard Reinforcement Ribs
- Rear Push Frame Mounted Above Frame for Increased Ground to Frame Clearance
- Single Adjustable Spring Cushioned Push Arm with Safety Shear Pin on 8' and 9' Wings. Double Push Arms on 10', 11' and 12' Wings
- No Additional Cab to Body Spacing Required for Rear Push Arm Frame



Para-Glide Wing Post in Resting Position.



Para-Glide Wing Post in Full Float Position.

Specifications

Specifications subject to change without notice.

	DFPW-8	DFPW-9	DFPW-10	DFPW-11	DFPW-12
Overall Moldboard Length	104"	116"	128"	140"	152"
Cutting Edge Length	8'	9'	10'	11'	12'
Height of Moldboard at Nose	29"	29"	29"	29"	29"
Height of Moldboard at Heel	39"	39"	39"	39"	39"
Moldboard Thickness	3/16"	3/16"	3/16"	3/16"	3/16"
Single Pusharm - Adjustable 4 Positions	OPT	OPT	OPT	OPT	OPT
Double Pusharms	OPT	OPT	OPT	OPT	OPT
Slide Cylinder	3x10	3x10	3x10	3x10	3x10
Lift Cylinder	4"ID x 21.75"	4"ID x 21.75"	3"ID x 15"	3"ID x 15"	3"ID x 15"
Weight of Complete Wing Assembly	1620	1690	1870	1985	2050
Weight of Moldboard	700	770	840	720	785
Clearing Width With 90° Push Arm Angle	58"	65"	72"	79"	87"



Shown with optional square pusharm.



Options

Two Piece Torsion Trip Edge
 Carbide Cutting Edge
 Curb Guard
 Full Trip Moldboard
 Dual Pusharms
 Moldboard Wear Shoe(s)

Decell Cylinder
 Left Side or Dual Mount
 Special Paint
 Power Slide Push Arm
 Mid or Rear Mount

Manufactured by:
Monroe Snow & Ice Control
 1051 W. 7th Street • Monroe, WI 53566
 800-880-0109 • 608-329-8105
 608-328-8390 Fax
 Web: www.monroetruck.com
 E-mail: snowandicecontrol@monroetruck.com

Distributed by:

Double Function Wing



The Monroe Double Function Patrol Wing is a multi-function wing that is capable of patrolling snow to widen shoulders or perform limited benching capabilities. The Double Function Wing is operated by hydraulic cylinders for positive activation of the wing. The operator has the ability to independently control the toe or heel of the wing. Another feature is the built in mechanical float to allow the wing to follow the contour of the plowing surface. The mounting of this wing usually requires no modification to the exhaust system, no additional cab to body spacing, no drivetrain interference and a rear mount that is located above the frame for an unobstructed ground to frame clearance. A Monroe Wing will increase your plow clearing capacity, increase operator efficiency, and reduce equipment road mile usage.

Two 4-way (double acting) valves are required to operate this unit • All moldboards are shotblasted and powder coated Urethane Orange

- All Hydraulically Operated- No Cables
- Single Adjustable Spring Cushioned Push Arm with Safety Shear Pin on 8' and 9' Wings. Double Push Arms on 10', 11' and 12' Wings
- Rugged Moldboard Construction
- 100% Welded Moldboard
- One Piece 1/2" Moldboard Reinforcement Ribs
- Rear Push Frame Mounted Above Frame for Increased Ground to Frame Clearance
- No Additional Cab to Body Spacing Required for Rear Push Arm Frame
- Free Float to Follow Contour of Road or Shoulder

Specifications

Specifications subject to change without notice.

	DFPW-8	DFPW-9	DFPW-10	DFPW-11	DFPW-12
Overall Moldboard Length	104"	116"	128"	140"	152"
Cutting Edge Length	8'	9'	10'	11'	12'
Height of Moldboard at Nose	29"	29"	29"	29"	29"
Height of Moldboard at Heel	39"	39"	39"	39"	39"
Moldboard Thickness	3/16"	3/16"	3/16"	3/16"	3/16"
Single Pusharm - Adjustable 4 Positions	STD	STD			
Double Pusharms	OPT	OPT	OPT	OPT	OPT
Inboard Slide Cylinder	3"ID x 24"	3"ID x 24"	3"ID x 24"	3"ID x 24"	3"ID x 24"
Outboard Lift Cylinder	4"ID x 21.75"	4"ID x 21.75"	3"ID x 15"	3"ID x 15"	3"ID x 15"
Weight of Complete Wing Assembly	1620	1690	1870	1985	2050
Weight of Moldboard	700	770	840	720	785
Clearing Width With 90° Push Arm Angle	58"	65"	72"	79"	87"

Available Options

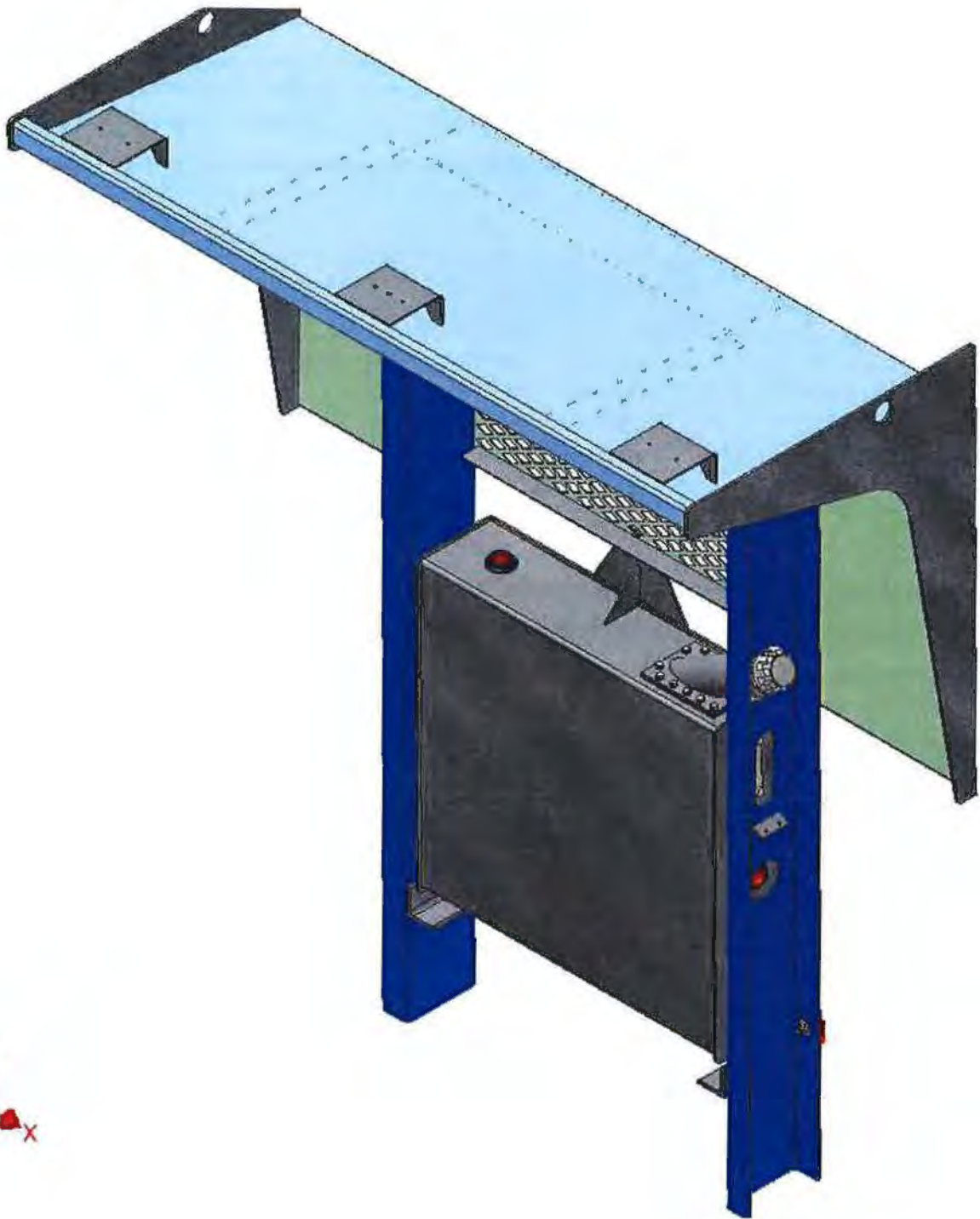
Two Piece Torsion Trip Edge
Carbide Cutting Edge
Curb Guard
Power or Manual Slide Front Post
Full Trip Moldboard

Power Heel Slide
Power and Manual Tilt Front Hitches
Dual Pusharms
Moldboard Wear Shoe
Decell Cylinder

Custom Cheekplate Hitches
Left Side or Dual Mount
Special Paint
Power Slide Push Arm

Manufactured by:
Monroe Snow & Ice Control
1051 W. 7th Street • Monroe, WI 53566
800-880-0109 • 608-329-8105
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E-mail: snowandicecontrol@monroetruck.com

Distributed by:





1051 W. 7th Street
Monroe, WI 53566
608-328-8127 • 800-356-8134

Truck Equipment Installation & Modifications Limited Warranty

Monroe Truck Equipment Limited Warranty

All components and products manufactured and installed by Monroe Truck Equipment (MTE) are warranted to be free from defects in material and workmanship for either (1) year from the date of purchase or (1) year from the date that the vehicle was put in service by its original operator, or 12,000 miles whichever occurs first.

All MTE workmanship, whether installation of MTE products or purchased components, fabrication, or repair, is covered for the same 12 month/12,000 mile warranty.

This limited warranty is the sole and exclusive remedy for defective product manufactured and/or installed by MTE.

This limited warranty covers only components manufactured by MTE. Except for installation workmanship, this limited warranty does not pertain to components manufactured by non-MTE suppliers and purchased by MTE, regardless of whether these components were selected or recommended by MTE.

Purchased Materials and Components Warranty

MTE sells and installs many components manufactured by and purchased from other suppliers. These components are covered by the warranty policies of the individual suppliers. MTE will, as a service to the buyer, pass on any warranties received from the manufacturer of these components and will process warranty claims related to supplier products. Unless the end user chooses to work directly with a non-MTE component supplier, MTE shall act as intermediate between the end user and the component supplier.

Non-MTE supplier policies typically differ from the MTE limited warranty. MTE has no control over the warranty policies of other suppliers and shall not deviate from a supplier's warranty without express written permission from that supplier.

Any and all claims concerning non-MTE components must be forwarded to MTE within 10 days of the discovered defect. All documentation of said claims must be accompanied with the identification number of the vehicle and/or a copy of the invoice. MTE has, at their option, a choice of whether to repair or replace the defective part at a MTE repair center or a location approved by MTE unless otherwise specified by the manufacturer.

Peripheral, Incidental, and Consequential Damages and Claims

The MTE limited warranty does not apply to damage and failure resulting from misuse, abuse, neglect, accident, improper customer/distributor installation, lack of maintenance, or acts of God. Any modifications by the buyer or any third party, without the prior written consent of MTE, may void this warranty. Operating conditions, or applications not made known to or contemplated by MTE at the time of delivery to the buyer may also void this warranty. Damages resulting from any other abnormal operation will not be covered by this warranty.

Normal maintenance, wear, and consumable items such as oils, coolants, fluids, tires, belts, hoses, filters, air cleaners, and light bulbs supplied in connection with goods or services provided by MTE are not covered under this warranty.

MTE will not reimburse for lost time, business, or business opportunity, or for any loss of use related to warranty claims. MTE will not provide or pay for the use of a rental vehicle, equipment, or tools while warranty work is performed. MTE will not reimburse for equipment or tools that are damaged, lost, or missing in conjunction with a warranty claim.

Warranty Repairs Performed by MTE or Authorized Agents

Whenever possible and feasible, warranty repairs shall be performed at an MTE facility or at an authorized distributor or dealer. In some instances, an MTE Field Service representative may repair the vehicle at the owner's selected location.

MTE may, at its discretion, pick up and return the vehicle to the owner's location or may request that the owner deliver the vehicle to the repair site. MTE is not responsible for and will not reimburse for mileage, fuel, and wear incurred in the process of driving the vehicle to a repair site, road testing, or delivery to the end user location, nor for lost time incurred by an owner delivering and picking up a vehicle.

Warranty Repairs Performed by Non-MTE Entities

In certain circumstances, MTE may authorize the vehicle owner, a dealer, a distributor, or another third party to perform warranty repairs. MTE will then reimburse the entity performing the work for components used and for labor to perform the repairs. Any such decision will be based on type of repair, distance to the nearest approved MTE repair site, and urgency of the repair.

Except for emergencies, MTE must grant authorization and permission before a non-MTE entity begins repair or replacement of components. Warranty claims for unauthorized and unsubstantiated work may be denied.

If MTE authorizes the buyer or a third party to repair or replace the defective parts instead of MTE doing such work itself, the buyer shall be invoiced for the replacement parts. Credit will be given pending the return of the defective parts and warranty issued by manufacturer. Authorized warranty work not performed by MTE will be at the rate of \$43.50/hr, and invoices for authorized work will be paid net 30. In the event that MTE and the second party cannot come to an agreement, a binding third party arbitrator will be chosen with the mutual consent of both parties.

Electrical and hydraulic components are not to be disassembled without the express written consent of MTE. All defective parts returned must be accompanied by the manufacturers' model, serial number, and date of installation. Any parts returned for warranty must be returned with freight prepaid.



1051 W. 7th Street
Monroe, WI 53566
608-328-8127 • 800-356-8134

How to Obtain Warranty Service from Monroe Truck Equipment

Making an Appointment for Warranty Service at an MTE Facility or Authorized Repair Site

1. Obtain the following information:
 - Vehicle Identification Number (VIN)
 - Type, model, and serial number of component or product requiring service
 - Number of original MTE Sales Order if available
 - Name of dealer that vehicle was purchased from if known
 - Date of purchase/in-service date if known
 - Detailed description of the problem
2. Call the MTE location where your truck was built. The build location will be marked on the yellow certification label in or near the driver's door jamb.
 - Monroe, Wisconsin: 1-608-329-8437 (Warranty Dept.) or 1-800-356-8134 (ask for Warranty Dept.)
 - Flint, Michigan: 1-877-233-2030 (ask for Warranty Dept.)
 - De Pere, Wisconsin: 1-800-848-5400 (ask for Service Dept.)
 - Marshfield, Wisconsin: 1-800-882-1900 (ask for Service Dept.)
 - Joliet, Illinois: 1-800-892-7052 (ask for Service Dept.)
 - Gallon, Ohio: 1-419-777-7120 (ask for Service Dept.)
 - Louisville, Kentucky: 1-502-426-0990 (ask for Service Dept.)
3. Discuss the problem with the Warranty representative to determine resolution and repair schedule.

Please let the Warranty representative know if your vehicle was sold with an extended or other non-standard warranty policy!

Requesting Authorization to Perform Warranty Work or Payment for Work Performed

1. Obtain the following information:
 - All of the information requested in item #1 above, plus:
 - Documented photographs for any physical damage. (paint, dents, etc.)
 - Inspection notes by MTE personnel or a third party representing MTE if necessary.
2. Call the MTE location where your truck was built. The build location will be marked on the yellow certification label in or near the driver's door jamb. See the location list in item #2 above.
3. Discuss the problem with the Warranty representative to determine coverage and repair method.
4. The representative will grant permission to perform repairs if approved.
5. The representative will issue a Returned Goods Authorization (RGA) number.
6. Defective parts must be returned freight prepaid to MTE within ten days.
7. If the affected component was purchased from a non-MTE supplier, please allow extra time for MTE to contact and work with the supplier.

Monroe Truck Equipment reserves the right to deny any warranty if the procedures detailed above are not followed. Proper documentation, including photos, must be provided in order for MTE to validate and approve any claim submitted after repairs are done.



MTE Powder Coat Paint Warranty

Monroe Truck Equipment (MTE) Limited Warranty Coverage

- Powder-coat paint finish on Snow & Ice products, MTE production parts, and customer parts is warranted against **adhesion failure**, cracking, checking, peeling, delamination, and more than 10% loss of gloss or color for 1 year.
- Powder-coat paint finish on selected MTE Manufactured bodies is warranted against **adhesion failure**, cracking, checking, peeling, and delamination for 3 years or 36,000 miles. No more than 10% loss of gloss or color for 1 year. See warranty document for specific products.

Eligibility for Warranty Coverage

- Warranty period commences from the in-service date for Snow & Ice products, MTE Manufactured bodies, and MTE production parts.
- Warranty period commences from the invoice date for customer parts.
- Original owners of S & I products and Manufactured bodies must complete and submit the Warranty Registration Card within thirty (30) days of purchase.
- The product must be used for its intended purpose.
- The product must be maintained and serviced according to the guidelines in any supplied owner's manual.

Exclusions

- This warranty applies only to powder coat paint applied by MTE at Monroe, Wisconsin.
- This warranty does not apply to powder coat paint applied to customer parts unless MTE has approved the material(s) of construction and has performed all required surface preparation steps.
- Warranty does not apply to any product that has been altered, abused, or misused.
- Warranty does not apply to products and bodies sold and used outside the United States and Canada.
- Painted surfaces must not be subjected to highly corrosive chemicals.
- Rust and perforation resulting from damage related to collisions, accidents, scratches, impacts, or normal and intended use of the product are not covered.
- Restoration of lettering, signs, and custom paint applications is not covered at any time if paint repairs are required.
- This warranty is not transferable.

Warranty Repairs

During warranty repairs to powder-coat paint, MTE will strive to restore the original paint coating. **Where paint has suffered complete adhesion failure, a part or body may be processed to remove all existing powder coat and new powder coat applied. Where deemed most practical, a small part may be replaced with a new powder-coated part.**

Repairs involving reapplication of powder coat paint shall be performed only at the MTE facility in Monroe, Wisconsin.

Where the original powder coat can not be effectively removed for repair or a defect is **cosmetic only**, and the **surface adhesion of the existing powder coat is good**, MTE retains the right to repair a powder-coat painted surface using a wet-coat paint process. **The underlying powder-coat paint will remain as a base for the wet coat.** Wet-coat repairs to powder coat paint may be performed at any MTE facility or at an approved automotive body repair shop.

Peripheral, Incidental, and Consequential Damages and Claims

The MTE limited warranty does not apply to damage and failure resulting from misuse, abuse, neglect, accident, improper customer/distributor installation, lack of maintenance, or acts of God. Any modifications by the buyer or any third party, without the prior written consent of MTE, may void this warranty. Operating conditions or applications not made known to or contemplated by MTE at the time of delivery to the buyer may also void this warranty. Damages resulting from any other abnormal operation will not be covered by this warranty.

Normal wear, reaction to corrosive operating environment, and premature failure due to poor maintenance are not covered under this warranty.

MTE will not reimburse for lost time, business, or business opportunity, or for any loss of use related to warranty claims. MTE will not provide or pay for the use of a rental vehicle, equipment, or tools while warranty work is performed. MTE will not reimburse for equipment or tools that are damaged, lost, or missing in conjunction with a warranty claim. MTE is not responsible for and will not reimburse for mileage, fuel, and wear incurred in the process of driving the vehicle to a repair site or delivery to the end user location, nor for lost time incurred by an owner delivering and picking up a vehicle.

This limited warranty is the sole and exclusive remedy for defective products manufactured and/or installed by MTE.

Policy revision/effective date: 05/07/08

For which is metallic, what options do I have for powder coating?
Used as a base primer. The body could be completely recoated with a liquid
benefits of using any powder.

Compared to wet spray?

In coating, powder coat will be two to three times stronger. If a very high quality
performance is about the same.

What if powder coated body is damaged and needs to be repainted?

Need for panel/spot repair using the same process and methods as a liquid painted
repaired and spot blended with any high quality liquid paint.

Customer Testimonials

in a corrosive environment. Powder coating is the best
option because we like to have the image of always
having a new coat finish is the best option for us on our salt
trucks on our Snow Bully Snow Pushers. We own
many of the v-boxes we have are 10 years old
and only minor touch ups due to either driver or
wear and tear have a powder coat finish. That is one of the

testimonials, Snow Systems Incorporated



**MTE Achieving
Exceptional Quality Finishes,
Our Customers Demand**



POWDER



- Environmental
- Economical
- Durable

The applied powder is then heated (cured) in an oven to it's melting point, after which it flows to form a smooth film, that dries to a firm, durable finish of superior consistency and uniformity. The finish free of chips, runs or bubbles, is extremely resistant to scratches, cracking, peeling, UV rays and rust.

ion due to salt,
far surpassing

ful VOC air pollution

ance

res several steps:

isting or a chemical cleaning process to insure the substrate is

hemical or conversion coating, usually phosphate or zinc based,

for powder adherence.

ompletely.

hosen for your

ostatic gun in a powder

ntal Benefits

ntally SAFE Process

VOC's (volatile organic

s)

IO Heavy Metals

t Disposal

can be Reclaimed

stance.

id in same environment*

*Based on Tests performed by Monroe Truck Equipment.



Power Coated Products

- Truck Frames
- Tractor Frames
- Motor Cycle Frames
- V Frames
- Oil Tanks
- Roll Bars
- Trucks
- Trailers
- Tractor Racks



Wash System - 5 Stage Washer with RO Water



BLAST



WASH



PAINT



CURE

Max Temperature: up to 430°

Wash System - 5 Stage Washer with RO Water

WA



CUR

Available Powder Coat Color Spectrum

- MTE has a wide variety of stock colors on hand.
- MTE can have a custom matched color in 7-10 days.
- MTE works with the industry's top manufacturers to develop powder paints that rival liquid paint appearance, and provide better corrosion and U.V. resistance.





Ladder Kit



Front Cross Conveyor Belt or Dual 6" Augers



Prewet System



Rear Cross Conveyor Self Leveling



Tip-Up Spinner w/ Berm Chute



Top Grates

- Chain Oilers • Floor Covers
- Manual or Air Trip Tailgate Latch

Powder Coat Finish Available

Distributed by:



Standard Specifications:

- 3/8" Mild Steel Body
- 3/8" Formed Dirt Shedding Top Rail
- 3/8" Removable Chain Shields (For Ease of Maintenance)
- 1/4" Long sills 14" in Height with Formed Cross sills
- 1/4" Replaceable Floor, Supported on 12" centers
- Dual 6:1 Gear Box Drives
- 2" Drive and Idler Shafts with 2" Heavy Duty Bearings
- 1 1/4" Heavy Duty Chain Adjusters
- Case Hardened Sprockets to 40-48 Rockwell
- 34" Wide Conveyor with 1/2" x 1 1/2" Bar Flights on 4 1/2" Centers
- Heavy Duty Pintle Chain with a 26,000 Minimum Tensile Strength Rating
- Telescopic Double Acting Nitrided Hoist Cylinder
- Full Opening Double Acting Tailgate
- Receiver Tube Mounted Rear Spinner Assembly

**The Ultimate All S
Live Floor! Design
Ease
Durability**





steel body,
body mounted



Left and right spinner assemblies
Spinner assemblies designed to work with underbody scrapers

Folding Berm Chute (shown on the left)
Dual auger also available



Selectable



City of Rockford, Illinois



The RDS body can be used as a traditional dump body, allowing material to discharge through the tailgate, when lifted by the front telescopic hoist.

The RDS body may be used in combination



F E A T U R E S

The Add-A-Fold® valve is a multifunctional valve originally designed to control cylinders and motors on truck applications. The enclosure is a cost effective solution to protect the valve from typical corrosion problems of "exposed" valves. A simple rubber latched cover employs a gasketless weather resistant seal design that stops harmful salt spray.

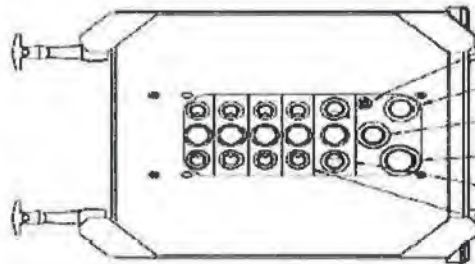
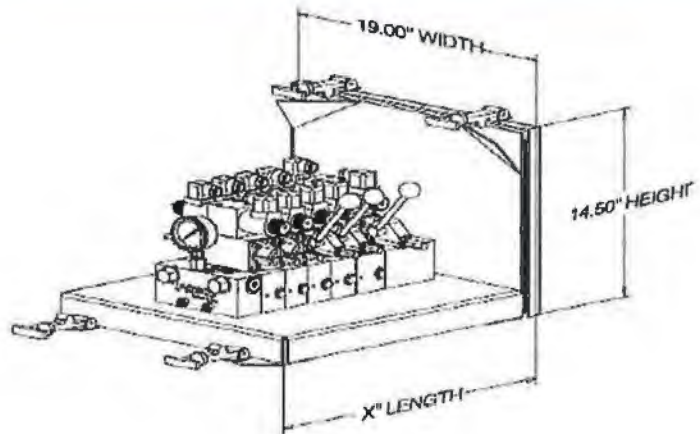
- **Manifold mounted valve sections**
 - Unsurpassed serviceability with bolt-on style valve sections
- **Modular Sub-base design**
 - Provides unlimited configurations of valve sizes, including optional pressure compensation and work port reliefs
- **Rack and pinion manual handle overrides**
 - Assists in troubleshooting and repair, with the added security of a robust manual control
- **Unique self-piloted electric actuators**
 - Pilot coils use full internal system pressure, no pilot lines, filters, or reducing valves required
- **Gear pump or load-sensing versions available**
- **Optional manifolds**
 - Dual 2-way and zero leak three and four way elements provide enhanced performance
- **Pre-wired valve harnesses**
- **Level ports all exit on the bottom side**



Installation Information

Dim.	Valve Sections					
	2-3	4-5	6-7	8-9	10-11	12-13
X	16.50	20.60	24.00	27.75	31.50	36.00

All dimensions are approximate.



- Load Sense (SAE 4)
- Optional Power Beyond (SAE 16)
- Inlet (SAE 16)
- Outlet (SAE 20)
- High Flow Functions (SAE 12)
- Low Flow Functions (SAE 10)

Specifications

Valve Specifications

- Nominal Inlet flow rating.....50 gpm*
- Operating Pressure (maximum)
 - Model 30.....3000 psi
 - Model 45.....4500 psi
- Temperature Range.....-40°F to +180°F
- Fluid requirement.....petroleum based 35-1750 ssu
- Filtration Requirements.....ISO 4406 18/14
- Seals.....BUNA-N
- Mounting sensitivity.....none

Electrical Specifications

- Rated Voltage.....12 VDC
- Coil resistance (at 68°).....6.5 ohms
- Current.....2 amps
- Power.....24 watts
- Duty cycle.....100%
- Frequency.....50 Hz pwm
- Electrical connector.....Din 43650A

Add-A-Fold[®] valves are also available in the VT-35 Valve/tank assembly



The VT-35 valve tank assembly combines the valve enclosure and tank into one easy to install assembly. All components; tank, valve, filter, filler/breather, sensors, cables, valve fittings and hose ends are under one rubber latched cover



501 East Cliff Road
Burnsville, Minnesota 55337
1-888-99FORCE
www.forceamerica.com
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Part Number FA1000

Service Centers and Sales

Bismarck, ND	800-624-7568	Fort Dodge, IA	800-362-2994
Charlotte, NC	800-788-8598	Kansas City, MO	800-383-4724
Chicago, IL	800-433-5765	Milwaukee, WI	800-722-5844
Columbus, OH	888-449-0356	Minneapolis, MN	800-328-2732
Dallas, TX	800-893-7225	Philadelphia, PA	800-492-6621
Denver, CO	888-833-7711	Salt Lake City, UT	877-230-0505

F E A T U R E S

The Patrol Commander™ Ultra Series Controller for medium and heavy duty plow trucks is a fully proportional control with integrated spreader control. Ergonomic design allows one-handed, finger-tip control of all spreader functions and up to nine hydraulic functions. Rigid construction ensures product quality for the life of the vehicle.

- **Fully proportional controls**
 - Infinite speed control of up to nine operations simultaneously
- **Swing-up arm**
- **Available in one, two and three joystick configurations**
 - Flexibility to meet specific system needs
- **Multiple joystick types available**
- **Backlit nomenclature**
- **Four programmable single-acting or dual-acting floats**
 - Float available on any joystick axis with optional three second delay
- **Integrated dash-key disconnect**
 - Completely disconnect system from battery when key switch is off
- **Joystick power-on detections**
 - Helps prevent unintended system operation
- **On-board visual diagnostics**
 - Intuitive feedback for troubleshooting



Product Specifications



Selectable valve drive frequency – Full pulse width modulation (PWM) control, selectable valve drive frequency for optimal valve performance.

Mechanical hoist interlock – Avoid inadvertent hoist operation for operator safety. Meets OSHA hoist control regulations.

Solid-state protection - Self-diagnostic valve output drivers protected against over-current and over temperature conditions.

Input voltage monitoring – Prevent unsafe operation during low voltage conditions.

Conveniently located sander standby, sander blast and body vibrator controls – Integrated push button controls for driver ease of operation.

Available in 1100-5100 series spreader controls – Manual, open and closed loop controls available for granular, pre-wet, anti-icing and dust control.

Integrated spreader control – Saves cab space and allows single-handed control of spreader.

Remote spreader display – Driver safety and convenience.

Integrated spinner/blast dials – A FORCE America innovation that provides simultaneous spinner adjustment while blast is activated.

Selectable valve drive frequency – Full pulse width modulation (PWM) control with selectable drive frequency for optimum valve performance.

Electrical Specifications

Operating temperature range	-40° to 185°F
Operating voltage	10.0 – 16.0 VDC
Operating current	800mA max standby 50A max with all outputs active
Maximum output current	2.0A
Protection	Over-voltage, under-voltage, Over current, reverse polarity
Valve output type	PWM
Valve drive frequency	50 or 125Hz
Proportional valve drive outputs	18
Float outputs	4

Maximum float output	5.0A@ 12.0VDC
Maximum vibrator output	2.0A@ 12.0VDC
Maximum hoist warning output	2.0A@ 12.0VDC
Blast and standby current	20mA max
Blast and standby output type	Open collector
Blast, standby and vibrator inputs	5.0 VDC
Dashkey input	12.0 VDC
Float enable input	12.0 VDC
Hoist enable input	5.0 VDC
Joystick inputs	RS485 standard



501 East Cliff Road
Burnsville, Minnesota 55337

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Part Number: FA507

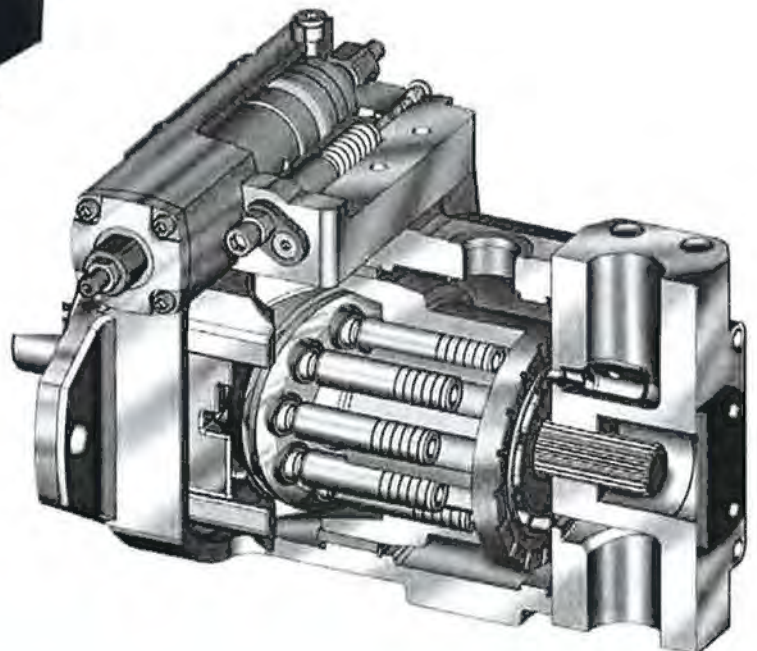
Service Centers and Sales

Bismarck, ND	800-624-7568	Fort Dodge, IA	800-362-2994
Charlotte, NC	800-788-8598	Kansas City, MO	800-383-4724
Chicago, IL	800-433-5765	Milwaukee, WI	800-722-5844
Columbus, OH	888-449-0356	Minneapolis, MN	800-328-2732
Dallas, TX	800-893-7225	Philadelphia, PA	800-492-6621
Denver, CO	888-833-7711	Salt Lake City, UT	877-230-0505

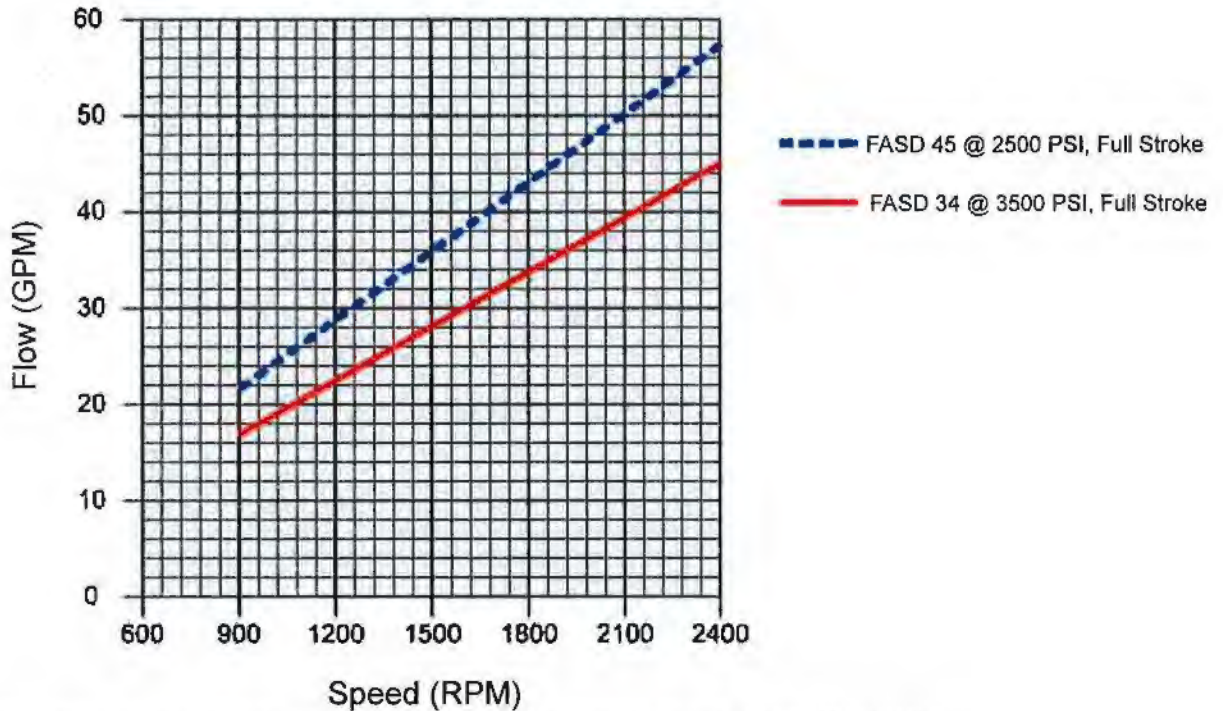
F E A T U R E S

FORCE America model FASD variable volume load sense piston pumps are specifically designed for severe duty mobile truck applications.

- High flow rates: 34-45 GPM (at 1800 RPM) 2400 RPM maximum speed
- High Pressure: intermittent pressure to 4000 PSI on FASD34, 3000 PSI on FASD45
- Severe duty high pressure (2000 PSI) outboard Teflon Shaft seal protects pump shaft bearing and seal from external contamination and salt spray
- Special hardening process on all wear surfaces
- Steel piston shoes for proven rotating group design
- O-ring housing seals, no gaskets!



Speed Versus Flow



The single pump flow curves are based on an oil temperature of 125°F(160SSU)

Available Models

FASD34-R	4.67 cu/in, right hand rotation, 1-1/4" round keyed shaft, SAE C 2-bolt mount
FASD34R-KIT	This kit includes pump, fittings, and adapters needed
FASD34-L	4.67 cu/in, left hand rotation, 1-1/4" round keyed shaft, SAE C 2-bolt mount
FASD34L-KIT	This kit includes pump, fittings, and adapters needed
FASD45-R	6.00 cu/in, right hand rotation, 1-1/4" round keyed shaft, SAE C 2-bolt mount
FASD45R-KIT	This kit includes pump, fittings, and adapters needed
FASD45-L	6.00 cu/in, left hand rotation, 1-1/4" round keyed shaft, SAE C 2-bolt mount
FASD45L-KIT	This kit includes pump, fittings, and adapters needed



501 East Cliff Road
Burnsville, MN 55337
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www.forceamerica.com

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Part Number: FA901

Service Centers and Sales

Bismarck, ND	800-624-7568	Fort Dodge, IA	800-362-2994
Charlotte, NC	800-788-8598	Kansas City, MO	800-383-4724
Chicago, IL	800-433-5765	Milwaukee, WI	800-722-5844
Columbus, OH	888-449-0356	Minneapolis, MN	800-328-2732
Dallas, TX	800-893-7225	Philadelphia, PA	800-492-6621
Denver, CO	888-833-7711	Salt Lake City, UT	877-230-0505



Monroe Heavy Duty Benching Wing



Shown in benching position with optional rubber snow deflector and a Monroe Reversible Snowplow.

Standard Specifications

- 3/16" formed moldboards, available in 9' to 12' lengths.
- 4" x 4" x 3/4" moldboard bottom angle.
- 1/2" moldboard ribs.
- Cutting edge--5/8" x 8" CI080 top punched with AASHO bolt hole pattern.
- Structural I-beam, direct-lift front post with 3 1/2" x 62" lift cylinder.
- Fabricated rear wing post with 3 1/2" x 48" and 3 1/2" x 34" cylinders.
- Single telescoping, three-position adjustable, spring-cushioned pusharms with shear pins.
- Requires one single-acting and two double-acting control valves.
- Moldboard painted powder coat orange.
- Mounting hardware painted powder coat black.



Wing shown in plowing position



Wing shown in the upper benching position



Rear wing post with
3-position adjustable pusharms



Options

- Rubber snow deflector
- Custom side plates
- Cast iron moldboard shoe
- Wrap-around curb guard
- Cable lift front post
- Carbide cutting edges
- Rear valve cabinet & 40 gallon reservoir
- Left side mount in lieu of right side mount
- Full trip moldboard
- Torsion trip edge moldboard
- Straight moldboard

Product updates and specifications are subject to change without notice.

Manufactured by:
 Monroe Snow & Ice Control
 1051 W. 7th Street • Monroe, WI 53566
 800-880-0109 • 608-329-8105
 608-328-8390 Fax
 Web: www.monroetruck.com
 E-mail: snowandicecontrol@monroetruck.com

Distributed by:



HV™ SERIES



**THE NEW
INTERNATIONAL® HV SERIES.**



A SMARTER APPROACH TO SERIOUS WORK.

INTRODUCING THE NEW INTERNATIONAL® HV™ SERIES.

There's a new breed of vocational truck that redefines the standard for uptime and productivity. Introducing the new International HV Series. Redesigned from the inside out, the interior was crafted with driver and body company feedback to ensure the most comfortable and productive environment possible, while the exterior continues the powerful styling of the WorkStar. The HV Series also features the intelligence of the industry-leading Diamond Logic® electrical system for the automation of tasks and interlocks to help protect both equipment and crew. Power options include the International® A26™, an engine designed with uptime in its DNA.

The HV Series is the go-to truck for those who know that it's not just about getting the job done, it's about getting the job done right.



UPTIME



DRIVERFIRST™



INTEGRATION







**EVERY MODEL YOU NEED.
IN THE CONFIGURATION
YOU WANT.**





Productivity often comes down to versatility. And there's no more versatile foundation than the HV™ Series. With configurations ranging from 4x2 to 8x6, BBCs of either 107" or 113" and set-forward or set-back front axles, plus a clean Cab-to-Axle (CA) configuration—the HV Series has what you want for virtually every possible need.





ENGINEERED FOR UPTIME. BATTLE-TESTED TOO.

FOR THOSE VOCATIONS WHERE UPTIME IS OF UTMOST IMPORTANCE, THE INTERNATIONAL® HV™ SERIES IS THE GO-TO SOLUTION. FROM THE WORKSITE TO THE BATTLEFIELD, THE HV SERIES WAS BUILT WITH RELIABILITY, PRODUCTIVITY, EFFICIENCY AND PERFORMANCE AS ITS PRIMARY MISSION.

HV SERIES FEATURES:

- ▶ Double-sided galvanized steel cab with superior fit and finish and corrosion resistance
- ▶ Huck® Bolt chassis fasteners provide superior clamping force and will not come loose even in extreme environments
- ▶ Single 1/2" frame rail has the strength of a double rail but lighter in weight and without the chance of inter-rail corrosion
- ▶ Standard breakaway mirrors minimize cab and door damage
- ▶ Integral 20" and 27" frame extensions (not bolt-on) for superior strength and reliability
- ▶ Available stainless-steel oil pan for reduced corrosion in highly corrosive applications



The battle-tested Navistar Defense Mine Resistant Ambush Protected (MRAP) vehicle is based on the HV™ Series



The new 12.4L International™ A26™ (HV513, HV613) is purpose-built to deliver uptime, fuel efficiency and quiet operation.



Huck® Bolt chassis fasteners provide superior clamping force, do not require re-torquing and are highly vibration resistant.



When it's time for service, the HV Series is all about quick turnaround time within the service bay or at any of the nearly 700 dealer locations across the U.S. and Canada.

- ▶ In-cab electrical panel is conveniently located under spill-resistant dash panel
- ▶ 3-piece hood for lower cost replacement during crash repair
- ▶ Routine service points are clearly labeled and easily accessed under the hood
- ▶ Commonly serviced fluid reservoirs are translucent for quick inspection and many of the caps are tethered to prevent dropped and/or lost caps—saving time and frustration
- ▶ Batteries can be located in the cab for easier servicing in harsh weather and to free up rail space for mounting other components



DRIVERFIRST: DESIGNED FOR THOSE BEHIND THE WHEEL.

In many ways, the International® HV™ Series was designed from the inside out based on our DriverFirst™ philosophy. After all, the care, comfort and safety of your drivers is what matters most. To ensure they hit the mark, International® engineers used feedback from drivers and body companies during the planning and design process.

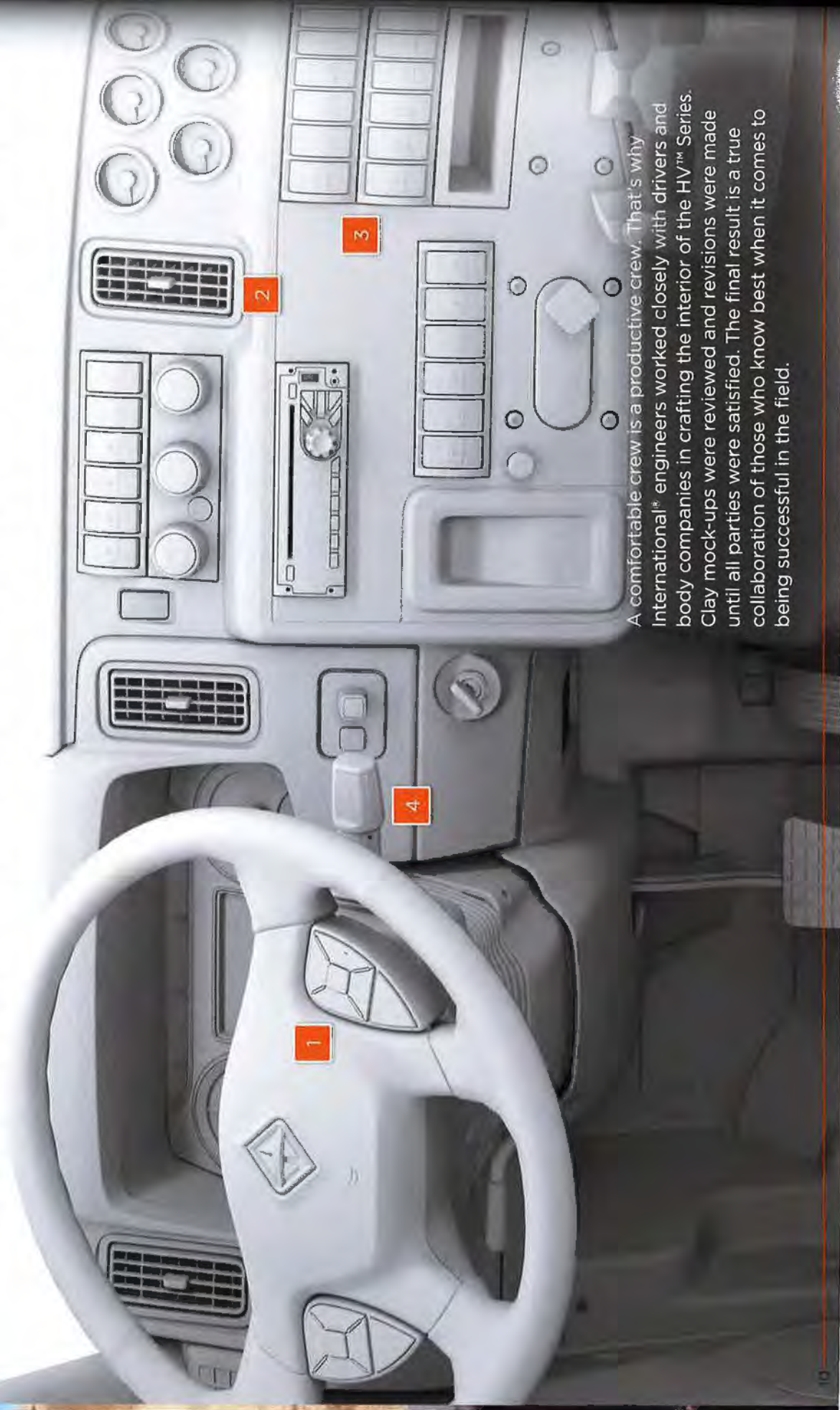
This collaboration is the reason behind many of the new driver-centric features like controls and switches that can be easily operated while wearing gloves. Or the available pedestal-mounted mirrors designed to reduce head-turn movement and increase visibility.

Of course, nothing contributes more to comfort than space, and the HV Series has one of the largest cabs in its class. It's these enhancements and much more that make the HV Series a true driver's truck.





TAKE A HANDS-ON APPROACH TO SUCCESS.



A comfortable crew is a productive crew. That's why International® engineers worked closely with drivers and body companies in crafting the interior of the HV™ Series. Clay mock-ups were reviewed and revisions were made until all parties were satisfied. The final result is a true collaboration of those who know best when it comes to being successful in the field.

Cab Features

	Classic	Diamond
Cab Trim Panels	Easy to Clean Soft Touch Vinyl	
Door Trim		Available with Black Cherry Accents - Padded Gray or Black Cherry Soft Touch Panels
Trim Inserts	Neutral	Woodgrain - Optional Black Cherry Door Toppers
Instrument Panel	Black	Black
Gauge Cluster	8-gauge, 3.5" Display with Odometer and Trip	Optional: Premium 8-Gauge, 5" Color Display with Virtual Gauges and Integrated Telemetry
Accent Color	Neutral	Neutral: Optional: Black Cherry
Sun Visors	Two	
Lighting	LED	
Window Controls	Manual or Power	Power
Lock Controls	Manual or Power	Power
Cup / Bottle Holders	Four	
Overhead Console	Molded Plastic with Retainer Nets and CB Radio Housing	
USB Accessory Port	Up to 3	



1 The all-new steering wheel adds more functions at the driver's fingertips with integrated laser-etched labeling for improved durability and visibility. Plus, all the controls within the cab are designed to be glove-friendly

2 An available flat instrument panel with center-mounted vent keeps the middle passenger cool while providing space for extra legroom or a large floor-mounted body control module

3 Factory-installed switches with custom labels are optimally positioned within the HV™ Series for use with integrated equipment

- ▶ Up to 30 customizable, user-replaceable switches are available for any application
- ▶ Large, easy-to-read backlit text
- ▶ Warning lights can be any of seven colors
- ▶ One common switch pack for wiring simplicity
- ▶ Any switch can be relocated by the customer without wiring changes
- ▶ Blank "windows" available for custom labeling by the customer

4 The innovative new shifter is mounted on the steering column, allowing your drivers to easily reach and smoothly operate shifting and engine braking while keeping their eyes on the road and hands on the wheel





COMMAND CENTRAL.

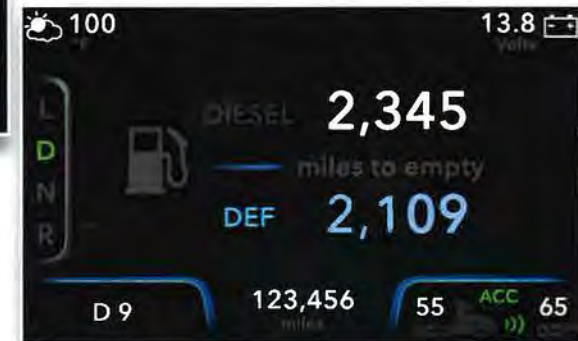
Uptime doesn't just mean fully-operational. It means giving your drivers the tools they need to be more productive. The gauges, for example, received numerous tests and refinements to optimize their readability, usability and positioning—even the colors were changed to ensure that key information and alerts are precisely where they need to be and can be seen without confusion or distraction.



The color, illumination, legibility and even the type font and size of gauges is designed to deliver optimal viewing in varying light conditions, maximizing alertness and minimizing eye fatigue.

A customizable digital display in the premium gauge cluster provides a wealth of information for the driver, including:

- ▶ Axle load*
- ▶ Custom gauge settings*
- ▶ Safety indicators*
- ▶ Digital speedometer
- ▶ Tire pressure*
- ▶ Additional virtual gauge options



Intuitive controls allow you to easily navigate between digital screens.

Back Button - navigate to previous page/sub category and then to main home screen

Navigation Button - navigate up and down to move within categories, navigate left or right to access the main menu and to move from one category to another

OK/Reset Button - select a highlighted category or hold for 3 seconds to reset the item

* When added with optional feature code for required sensors.



DIAMOND LOGIC[®]. ADVANCING THE SCIENCE OF PRODUCTIVITY.



The International® truck Diamond Logic® electrical system is considered the most advanced in the industry—and for good reason. Diamond Logic streamlines chassis and body equipment integration and allows customers to program automated tasks. This means more consistent performance and increased equipment protection and crew safety. It's easy to spec, simplifies integration, and includes on-board diagnostics that self-monitor all vehicle components to reduce downtime.



HV™ Series features a programmable key fob that allows two Diamond Logic tasks to be activated with the push of a button

1 Body Controller

- ▶ New microprocessor is 6 times faster
- ▶ 30 more input and output pins
- ▶ Three more J1939 data links for a total of five
- ▶ Internal clock for programming timed features like auto-start

2 Switch Packs

- ▶ All switches are controlled via 6 wires
- ▶ Blinking backlights provide equipment status
- ▶ Switches can be moved without moving wiring
- ▶ Up to seven colors of lights can be used

3 PTO Power Take Off

- ▶ Engagement and disengagement based on chassis and body conditions (engine speed, road speed, outrigger deployed before boom can raise, park brake set, transmission in neutral, etc.)
- ▶ All data links can be used as an interlock
- ▶ Engine speed can be controlled (in most cases) while using the PTO with no additional wiring needed

4 Remote Power Modules

- ▶ All 12-volt outputs are automatically fused (auto resettable) with solid state technology

5 Outriggers

- ▶ Diamond Logic can control deployment
- ▶ Can sense when they are not properly stowed (not letting transmission come out of neutral) and will illuminate an indicator light in the switch packs

6 Diff-lock

- ▶ Diamond Logic can control when the axle differential locks and unlocks depending on road speed, protecting the driveline from damage due to excessive speeds in a locked position

7 Work Light

- ▶ Diamond Logic can automatically turn on or off the light based on chassis functions (for example: rear-facing light could be programmed to turn on any time the transmission is in reverse, adding additional lighting)
- ▶ Automatically shut off the light based on a timer (1-min to several hours) preventing dead batteries

8 Boom Hydraulics

- ▶ Diamond Logic can prevent the transmission from shifting into drive and can illuminate an indicator light until the boom is stowed correctly

9 Pre-Trip Light inspections

- ▶ Driver can press a button and all the exterior lights will blink in sequence, allowing daily DOT light inspection with just one person

10 Solenoid Air Packs

- ▶ Air can be turned on with a switch in the dash or controlled based on chassis and/or body functions (for example: tailgate air lock in dump applications can be programmed to not unlock unless the truck is driving below a certain speed)



WHATEVER YOUR APPLICATION, DIAMOND LOGIC[®] IS PROGRAMMED TO SUCCEED.

Whether you're a municipality looking for an efficient, cost-effective solution, a Truck Equipment Manufacturer (TEM) looking for a rock-solid foundation to build on, or a construction company wanting the toughest truck in the business, the HV[™] Series combined with the Diamond Logic System will get the job done with safety and precision others simply can't match.



UTILITY

- ▶ Utility Indicator Lights
 - Factory-installed indicator lights and audible alarms for Boom Out of Stow and Outriggers Down warning.
- ▶ Protect Equipment Through Interlocks
 - Require outriggers be deployed and the park brake set before allowing boom to rise



DUMP

- ▶ Dump Bed and Gate Open Indicators
 - Hydraulic system monitoring performed through custom programming
- ▶ Lights On With Wipers
 - Lights automatically turn on when wipers are activated to meet the legal requirement of many states



MIXER

- ▶ Programmable PTO Accommodations
 - Remote body switches can be custom-programmed to control concrete chutes and water valves
- ▶ Pre-Trip Light Inspection
 - Automated vehicle light check

1

Order from nearly 200
preprogrammed tasks

WAYS TO USE DIAMOND LOGIC[®]

2

Work with International[®] to create
custom tasks

3

International can train and
certify your technicians
on Diamond Logic Builder
software to independently
program new tasks



CRANE

- ▶ Protect Equipment Through Interlocks
 - Require outriggers be deployed and the park brake set before allowing boom to rise
- ▶ Park Brake Alarm
 - Alerts driver of park brake not set using city horn

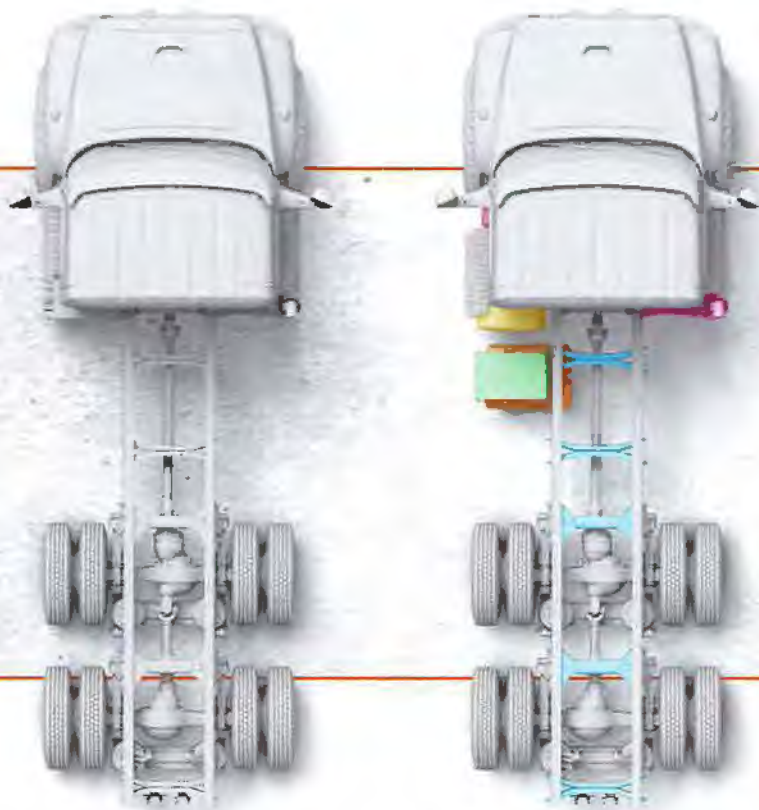


DIAMOND LOGIC BUILDER

HV[™] Series customers have the ability to write custom logic so Diamond Logic can be easily expanded, configured and updated in the field to meet specific application requirements.



FIT TO BE UPFITTED.



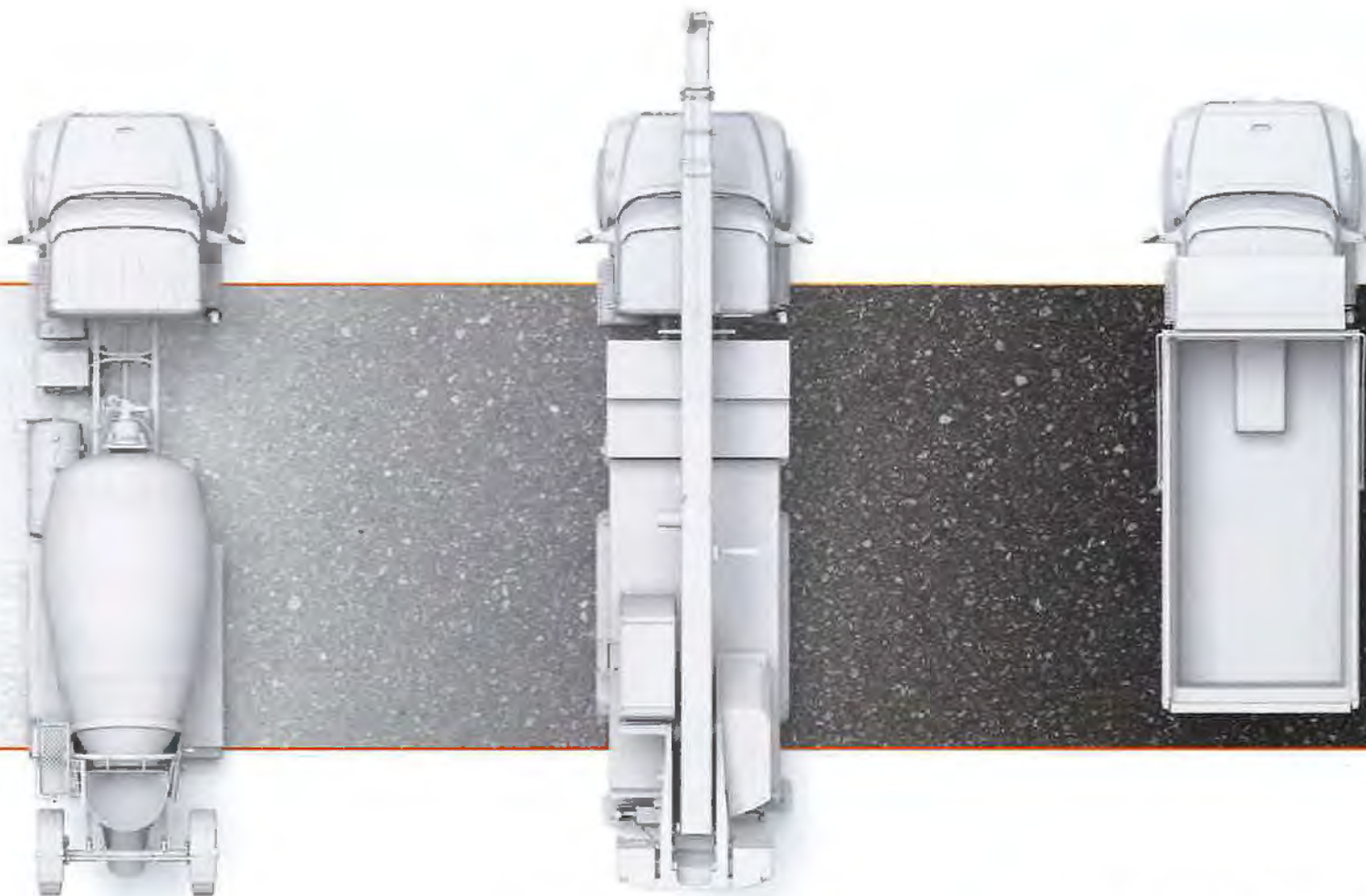
The International® HV™ Series provides the ideal foundation for an almost unlimited number of applications. This is the result of our extensive experience working directly with customers as well as our unsurpassed engineering capabilities. Ordering the specific foundation needed for your application upfront substantially reduces time and expense upfitting the vehicle post-production.

Every HV Series starts with a Huck® Bolted frame and cross member system to deliver maximum vocational durability as well as a number of frame rail options. Plus, air tank installations can be mounted between the frame rails, freeing up space for other equipment. The HV Series is also available with a clean Cab-to-Axle (CA) configuration to minimize costly post-production modifications. In addition, a new 20,000 lb. off-set bowl front drive axle allows for a lower ride height than a traditional center bowl.

International Truck Specialty Centers provide quick, efficient and cost-effective customization:

- ▶ Modifications covered under manufacturer's warranty
- ▶ Process supervised by International engineers to ensure factory production-level quality
- ▶ Expertise to identify and resolve problems quickly
- ▶ Optimized delivery cycle times and comprehensive factory support



**Body Company Benefits—Mixer:**

- ▶ New, lighter 9L engine configuration
- ▶ Specific cross-member location to accommodate mixer PTO pump
- ▶ Factory-installed transition brackets for body mounting
- ▶ Inverted after-frame cross members for booster axle ram clearance

Body Company Benefits—Crane:

- ▶ Customized frame ladder and component locations to meet body packaging requirements
- ▶ Available integral front frame extensions
- ▶ Single 1/2", 3.35 million RBM straight frame rail provides high strength for high capacity crane applications

Body Company Benefits—Dump:

- ▶ Single 1/2", 3.35 million RBM straight frame rail provides high strength without added weight or risk of corrosion
- ▶ Factory installed lift axles with many customizable chassis packaging options
- ▶ Available in-cab battery box provides increased chassis packaging flexibility

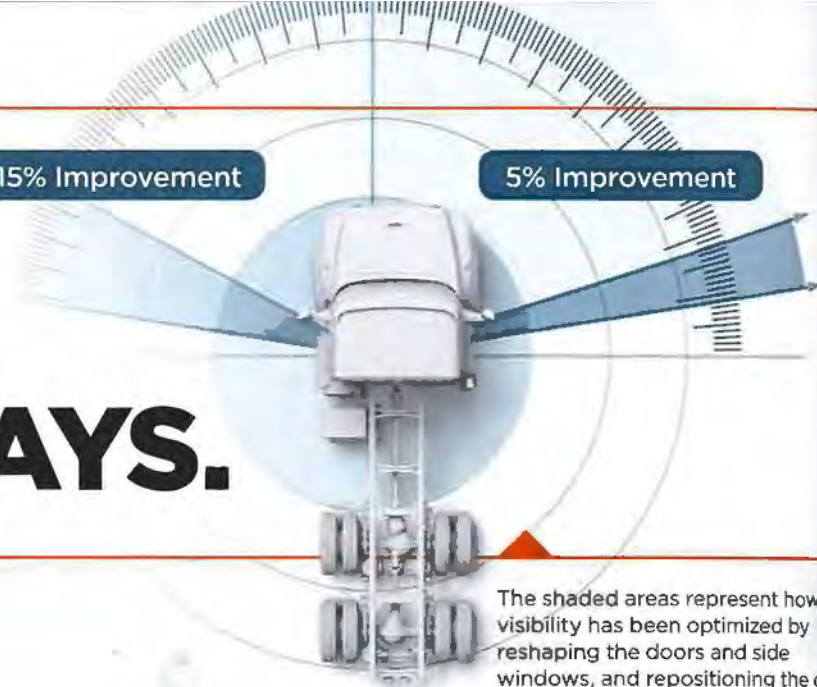




SAFETY FIRST, LAST AND ALWAYS.

15% Improvement

5% Improvement



Traditional Hood

Sloped Hood

The available sloped hood increases forward visibility by nearly 90 inches. This means objects closer to the vehicle are more visible to the driver, improving safety.

89.2"

The shaded areas represent how visibility has been optimized by reshaping the doors and side windows, and repositioning the cab mirrors so drivers turn their heads less. This increased visibility reduces driver stress and neck strain to enhance productivity.



The safety of drivers and occupants is a top priority on every International® truck, and the HV™ Series is no exception. Safety often comes down to seeing potential hazards and successfully avoiding them. That's why the HV Series has been engineered to provide a clear field of view with an excellent turning radius.

An optional heated windshield keeps ice and snow from collecting on the wipers, keeping them ready to go. The available air disc brakes provide shorter stops with longer lining and rotor life for less maintenance. Plus, the available electronic stability control system helps drivers maintain control during heavy braking and slick roads.



BENDIX® WINGMAN® ADVANCED

Available on select HV Series, the Bendix Wingman Advanced combines adaptive cruise control collision mitigation and stability technologies to help drivers potentially avoid a collision or reduce its severity by providing alerts and, if necessary, automatically applying the brakes.

UP TO 50° INSIDE WHEEL CUT

OUTSTANDING MANEUVERABILITY

With an inside wheel cut of up to 50 degrees, the HV™ Series can easily navigate tight city streets or construction sites, saving driver time, reducing work-site collisions and boosting productivity.



INDUSTRY-LEADING HVAC

The all-new HVAC system employs advanced heating and cooling technology to deliver outstanding comfort and visibility. During testing at a frigid 0°F, the MAX defrost feature cleared 100% of the windshield in under 30 minutes from start-up — quicker than any competitor measured.



INTERNATIONAL[®] A26[™]



DISPLACEMENT	HORSEPOWER	TORQUE lb.-ft.
12.4L	370-475	1350-1700

ENGINEERED WITH UPTIME IN ITS DNA.

THE A26 IS AN EFFICIENT AND POWERFUL WORKHORSE DESIGNED FOR THE TOUGHEST VOCATIONAL APPLICATIONS.

The big bore International A26 was engineered to set a new standard in uptime, fuel efficiency and quiet operation. Producing up to 475 HP and 1,700 lb.-ft. of torque in the HV™ Series, this 12.4L diesel includes a Variable Geometry Turbocharger (VGT) with a titanium compressor wheel for superior longevity versus aluminum designs. The A26 is also backed by the industry's best warranty and is the first engine to meet the B10 standard that requires 90% of delivered engines to travel 1,200,000 miles before a major repair.

Technical Specifications

Engine Type	Diesel, 4-Cycle
Configuration	Inline 6-Cylinder
Displacement	12.4 L (758 cu. in.)
Bore & Stroke	4.96 in. & 6.54 in. (126 mm & 166 mm)
Compression Ratio	18.5:1
Aspiration	Variable Geometry Turbocharger with Charge Air Cooler
Combustion System	2500 bar High Pressure Common Rail
Engine Lubrication	42 Quarts (40 L)
Total Engine Weight (Dry)	2,299 lbs. (1099 kg)
Valves	4 Valves Per Cylinder, Single Overhead Camshaft
B10 Design Life	1,200,000 mi (1,931,000 km)

A26



Free breathing intake port geometry

Lower water jacket cools the flame deck first

Better flow achieved through the exhaust ports

The **crankcase** is constructed with North America's first big bore Compacted Graphite Iron (CGI) design for 75% higher tensile strength and 45% greater stiffness while reducing weight, noise and vibration.



ALL-NEW CYLINDER HEAD

The innovative A26™ cylinder head achieves the perfect balance between optimal weight, strength, cooling and breathing:

- ▶ Innovative gray iron material offers the high strength and thermal conductivity needed for advanced breathing and cooling
- ▶ Extensive computer modeling and analysis optimizes port flow geometry to substantially reduce air restriction, helping the engine breathe more consistently from cylinder to cylinder for increased fuel efficiency
- ▶ New water jacket geometry ensures that more coolant flows to the hottest areas of the cylinder head that need it most, with less restrictive flow that reduces parasitic loss to the water pump for improved fuel economy



Pistons are engineered with a low-friction skirt coating and advanced piston ring geometry to reduce parasitic losses and enhance fuel economy.



The **single stage EGR cooler** is constructed of laser-welded stainless steel to deliver proven reliability and performance in a compact, easy-to-service design.



Gear teeth are produced using an innovative grinding process for smoother, harder and quieter gear surfaces.

A CHOICE OF FLO-GRIP™
PROVEN™



Cummins® B6.7 (200-360* HP)

Every aspect of the B6.7 has been engineered for reliability, durability and fuel efficiency to deliver the lowest cost of ownership with maximum uptime. Add industry-leading service from International® and Cummins, plus a two-year, unlimited mileage engine warranty, and it's easy to see why the B6.7 is the best-selling engine in the medium-duty truck market



Specifications

	Cummins B6.7	Cummins L9
Engine Type:	Diesel, 4-Cycle	Diesel, 4-Cycle
Configuration:	Inline 6-Cylinder	Inline 6-Cylinder
Displacement:	409 cu. in. (6.7L)	543 cu. in. (8.9L)
Bore and Stroke:	4.21 X 4.88 in	4.49 X 5.69 in
Aspiration:	Variable Geometry Turbocharger	Variable Geometry Turbocharger
Combustion System:	Direct Injection*	Direct Injection
Engine Lubrication:	15L	15L
Total Engine Weight (Dry):	1,150 lbs.	1,695 lbs

Cummins® L9 (260-450* HP)

The Cummins L9 has established a solid reputation as a dependable engine for medium duty applications. Its XPI Fuel System features multiple injection events per cycle for smoother, quieter operation. This, combined with its proprietary Variable Geometry Turbocharger (VGT), means the L9 has the highest power density of any engine in its class. In addition, replaceable wet liners help make the L9 easier and less expensive to rebuild, plus heavy-duty roller followers, bypass oil filtration and targeted piston cooling all contribute to longer service life.



* Higher ratings limited to Fire and Rescue applications





DESIGNED FOR DRIVERS IN THE TOUGHEST APPLICATIONS – YOURS.



HV507 REGULAR CAB



HV507 EXTENDED CAB



HV507 CREW CAB

Model Nomenclature Key

Model Designation	Axle Configuration	BBC in inches	
HV	5 = Set-Forward	07	13
	6 = Set-Back	07	13

HV507 = = HV with set-forward axle and a 107" BBC



Configuration	Model	Axles
Set-Forward Axle	HV507	4X2
		4X4
		6X4
		6X6
	HV513	4X2
		6X4

Configuration	Model	Axles
Set-Back Axle	HV607	4X2
		6X4
	HV613	4X2
		6X4
		8X6



HV™ SERIES SPECIFICATIONS.

GVW

- 4x2: 51,000 – 53,000 lbs.
- 4x4: 50,000 lbs.
- 6x4: 68,000 – 74,000 lbs.
- 6x6: 66,000 lbs.
- 8x6: 73,000 lbs.

Models/BBC/BA

- HV507: 107" BBC, 32.4" BA
- HV513: 113" BBC, 29.5" BA (45.9" BA Tridem)
- HV607: 107" BBC, 40.3" BA
- HV613: 113" BBC / 45.9" BA

Wheelbase Options

- 107" – 340"

Axle Configurations

- 4x2
- 4x4 (HV507)
- 6x4
- 6x6 (HV507, HV513)
- 8x6 Tridem (HV513, HV613)

Front Axle

- Dana Spicer
 - Non-Driving: 10,000 – 22,000 lbs.
- Meritor
 - Non-Driving: 10,000 – 22,000 lbs.
 - Driving: 10,000 – 18,000 lbs. (HV507, HV513)
- Fabco
 - Driving: 10,000 – 21,000 lbs. (HV507, HV513)

Rear Axle

- SINGLE REAR AXLE (4x2)
 - Meritor
 - Single Reduction: 17,000 – 30,000 lbs.
 - Double Reduction: 26,000 – 38,000* lbs.
 - Two-Speed: 21,000 – 23,000 lbs.
 - Dana Spicer
 - Single Reduction: 17,500 – 31,000 lbs.
 - Two-Speed: 19,000 – 23,000* lbs.
- TANDEM REAR AXLE (6x4)
 - Meritor:
 - Single Reduction: 34,000 – 52,000 lbs.
 - Dana Spicer:
 - Single Reduction: 46,000 lbs.
- TRIDEM REAR AXLE (HV613)
 - Meritor:
 - Single Reduction: 53,000 lbs.

Front Suspension

- •Spring Multileaf: 14,000 – 20,000 lbs.
- Parabolic Taperleaf: 8,000 – 23,000 lbs.

Rear Suspension

- Chalmers: 23,000 – 52,000 lbs.
- Hendrickson
 - RT: 34,000 – 52,000 lbs.
 - HAS: 23,000* – 46,000 lbs.
 - HMX: 40,000 – 46,000 lbs.
 - PRIMAAX: 20,000 – 46,000 lbs., 69,000 lbs. (Tridem)
- Link: 46,000 lbs.
- International: 20,000 – 40,000* lbs.

Frames

- Heat Treated Alloy Steel 120,000 PSI
- 11.25" x .5" Super Single Rail

Electrical System

- ALTERNATORS
 - Bosch: 12 Volt, 160 – 200 Amp
 - Leece-Neville: 12 Volt, 160 – 325 Amp
 - Delco Remy: 12 Volt, 165 – 240 Amp
- BATTERY SYSTEMS
 - JCI: 12 Volt 1400 – 2100 CCA
 - Fleetrite®: 12 Volt 1320 – 3800 CCA
 - Deka: 12 Volt 2775 CCA

Exhaust System

- Single canister after-treatment device
- Frame Mounted Right Side, Back of Cab or Under Cab
- Short Horizontal Tailpipe
- Single Vertical Tailpipe, Right Side Back of Cab

Brakes

- Air Drum Brakes with ABS, Optional Traction Control, Optional Electronic Stability Program with Traction Control
- Air Disc Brakes

Power Steering

- Single Power
- Dual Power on Front Axle 16,000 lbs. and Above

Engines

- Cummins® B6.7: Up to 360 hp, 800 lb. – ft. of Torque** (HV507, HV607)
- Cummins® L9: Up to 450 hp, 1250 lb. – ft. of Torque** (HV507, HV607)
- International® A26™: Up to 475 hp, 1700 lb. – ft. of torque (HV513, HV613)

Transmissions

- Eaton® Fuller: 6-, 10-, 11-, 13-, 15-Speed Manual
- Eaton UltraShift+™: 10-, 11-, 13-, 18-Speed Automated Manual
- Eaton Fuller Advantage™ Series: 10-speed Automated Manual
- Allison: 3000, 4000 Series (HS®, EVS, RDS) Automatic

Fuel Tanks

- 40 – 120 Gallons, Single or Dual, Non-Polished or Polished Aluminum, Mounted Right or Left Side Under Cab

Tires

- Continental, Michelin, Goodyear, Bridgestone

Specifications apply to HV Series as a whole. Individual model specification restrictions apply. Please see model spec cards for model-specific specifications.

* Application restriction

** Higher ratings available for fire and rescue applications





ONCOMMAND® CONNECTION. ALL MAKES. ALL MODELS.

CONNECT YOUR ENTIRE FLEET THROUGH A SINGLE PORTAL.

If your fleet includes more than one truck make and model, chances are you're using more than one remote diagnostic system to help monitor and manage the health of your vehicles. That's the genius of OnCommand® Connection. It's the first and only all-makes diagnostic system that enhances your uptime by efficiently and accurately monitoring all the trucks in your fleet in real time.

ONCOMMAND CONNECTION HELPS YOU:

- ▶ Monitor and manage the hundreds of fault codes in all your trucks
- ▶ Connect your fleet with service centers and manufacturers
- ▶ Comply with safety standards by taking action on critical faults
- ▶ Make informed choices to manage your fleet for maximum productivity

ONCOMMAND CONNECTION HAS THE CAPABILITIES TO:

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- ▶ Get action plans for more than 18,000 engine and vehicle faults
- ▶ Prioritize needed repairs while avoiding unnecessary service visits

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REMOTE DIAGNOSTICS FOR ALL MAKES OF VEHICLES.



Use OnCommand Connection to proactively identify potential problems, control maintenance, lower repair costs and maximize uptime.



ALL THE TOOLS YOU NEED AT YOUR FINGERTIPS

OnCommand[®] Connection is designed to keep your vehicles moving and your profits rising through powerful features such as **interactive mapping, engineer-designed action plans and access to your online portal** through your preferred interface - computer, tablet, smartphone or email.



Reduce en route events by proactively scheduling maintenance and repairs



Map tools that plot truck locations, nearest dealers, hotels and local towing providers



Generate real-time comprehensive vehicle health reports



Understand fault codes quickly and easily with descriptions in plain English



Gain more insight with fault code action plans that provide severity information and recommend solutions



NAVISTAR[®] **CAPITAL**

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Navistar Capital is an industry leader in commercial vehicle financing with over 40 years of experience. We provide customized leases and secured loans with flexible structuring for International[®] heavy and medium duty commercial vehicles. Contact your local International Truck dealer for more information.



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For more than 40 years, Fleetrite[®] have provided quality parts for all truck and bus makes sold exclusively at your International[®] Truck dealer. Every part is Navistar quality approved and is covered under a 1-year parts and labor warranty. Parts you can trust and affordability you can bank on.



WE HAVE YOUR BACK SO YOU CAN KEEP MOVING FORWARD

Your International® dealer is one of the best in the business, and a strong link in the industry's broadest, most capable parts distribution and dealer network.



DIAMOND EDGESM CERTIFIED INTERNATIONAL[®] TRUCK DEALERS

This select network of International dealer service departments has passed rigorous parts and service certification guidelines to provide you with faster turnarounds, immediate parts availability and a higher level of servicing expertise. Their ongoing pledge is to maximize your uptime and deliver a best-in-class customer experience.

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Saturday
393
Locations

Sunday
36
Locations

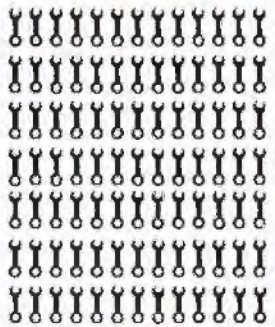
7,500+

TECHNICIANS



7,600+

SERVICE BAYS

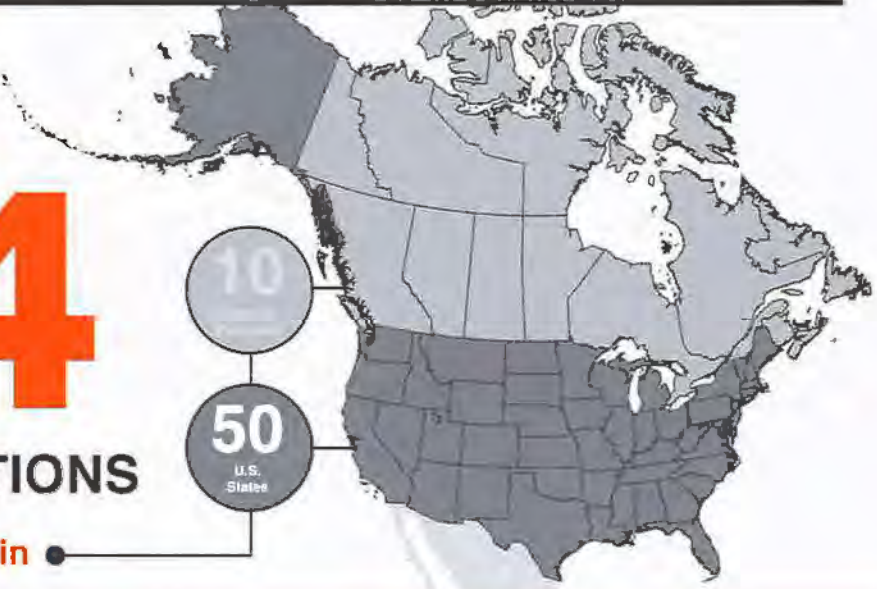


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Note: The information and conclusions contained herein are believed to be correct at time of publication, but do not necessarily apply to similar vehicles with different specifications or with production dates after the production of this publication. Vehicles with different specifications or later dates of production may yield different results. Vehicle specifications are subject to change without notice. TAD17023 09/2017 ©2017 NAVISTAR Inc. All rights reserved. All marks are trademarks of their respective owners.