

**SNOW PLOW TRUCK TURNKEY
PACKAGE
CONTRACT AND SPECIFICATIONS
APRIL 30, 2013 – DECEMBER 31, 2014**

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
CONTRACT FOR PROCUREMENT**

REQUEST FOR PROPOSAL TITLE: Snow Plow Truck Turnkey Package

REQUEST FOR PROPOSAL NO.: 065-30-13-030

This agreement is entered into between the state of North Dakota, acting by and through its Director of Transportation, hereinafter referred to as NDDOT, whose address is 608 East Boulevard Avenue, Bismarck, North Dakota, and Northern Truck Equipment, hereinafter referred to as the Contractor, whose address is P.O. Box 2435 Sioux Falls, SD 57101-2435.

In consideration of the mutual covenants herein set forth, NDDOT and the Contractor agree as follows:

1. That in consideration of the payments to be made by NDDOT, the Contractor agrees to provide the services and/or goods in accordance and in conformity with this contract, the Contractor's proposal, dated March 28, 2013, NDDOT's request for proposal issued on February 20, 2013, and any purchase orders issued as a result of this contract. The Contractor's proposal, NDDOT's request for proposal, and any purchase orders are incorporated by reference herein. If discrepancies exist between the Contractor's proposal, and NDDOT's request for proposal, or this contract, NDDOT's request for proposal, and this contract shall govern.
2. NDDOT agrees to pay the Contractor for the work, when completed and accepted in accordance with this contract.

Payments are to be made upon presentation of an invoice by the Contractor, and by the terms of this contract.
3. The work shall be done pursuant to this contract, to the laws of the state of North Dakota, and to the satisfaction of NDDOT, in accordance with the rules and regulations made pursuant to state and federal law.
4. The Contractor, in employing and maintaining labor, shall do so in conformity with state and federal law and this contract.
5. Payments by NDDOT beyond the current state biennium shall be contingent on sufficient funds being appropriated by the Federal Government or State Legislature for the Department. In the event of insufficient appropriations in future bienniums, NDDOT may give a minimum of 30 days notice to terminate this agreement/contract and have no further obligation to the Contractor.
6. All work products and copyrights of the contract which result from this contract are the exclusive property of NDDOT.
7. Notwithstanding any rules regarding the choice of law or venue, it is agreed by the parties that this contract shall be governed by and construed in accordance with applicable Federal Law and the laws of the state of North Dakota, at the time this contract was executed. All disputes arising from this agreement shall be brought in the South Central District Court of the state of North Dakota.
8. This agreement constitutes the entire agreement between the parties. No waiver, consent, modification, or change of terms of this agreement shall bind either party unless in writing and signed by both parties. Such waiver, consent, modification, or change, if made, shall be effective only in the specific instance and for the specific purpose given. There are no understandings, agreements, or representations, oral or written, not specified herein regarding this agreement. The Contractor, by the signature below of its authorized representative, hereby acknowledges that the Contractor has read this agreement, understands it, and agrees to be bound by its terms and conditions.



9. The terms of this agreement shall not be waived, altered, modified, supplemented, or amended, in any manner whatsoever, except by written instrument signed by the parties.
 10. The Contractor shall not assign any portion of the work under this agreement, execute any contract, or obligate itself in any manner with a third party with respect to its rights and responsibilities to this agreement without written consent of NDDOT. Any agreement with a subcontractor does not create a contractual relationship between the NDDOT and the subcontractor.
 11. The Contractor shall not assign nor transfer the contractor's interests or duties under this agreement without the express written consent of the state.
 12. The Contractor agrees to comply with all applicable laws and rules, including, but not limited to, those relating to nondiscrimination, accessibility, and civil rights.
 13. The Civil Rights Appendix, attached, is hereby incorporated into and made a part of this agreement.
 14. Termination
 - a. This contract may be terminated by mutual consent of both parties, or by either party upon 30 days' notice, in writing and delivered by certified mail or in person.
 - b. In addition, NDDOT may terminate this contract effective upon delivery of written notice to the Contractor, or at such later date as may be established by NDDOT, under any of the following conditions:
 - i. If NDDOT funding from federal, state, or other sources is not obtained and continued at levels sufficient to allow for purchase of the indicated quantity of services. The contract may be modified by agreement of the parties in writing to accommodate a reduction in funds.
 - ii. If federal or state regulations or guidelines are modified, changed, or interpreted in such a way that the services are no longer allowable or appropriate for purchase under this contract or are no longer eligible for the funding proposed for payments authorized by this contract.
 - iii. If any license or certificate required by law or regulation to be held by the Contractor to provide the services required by the contract is for any reason denied, revoked, or not renewed.
- Any such termination of this contract under (i), (ii), or (iii), above, shall be without prejudice to any obligations or liabilities of either party already accrued prior to such termination.
- c. NDDOT, by written notice to the Contractor, may terminate the whole or any part of this agreement.
 - i. If the Contractor fails to provide services called for by this contract within the time specified herein or any extension thereof; or
 - ii. If the Contractor fails to perform any of the other provisions of this contract, or so fails to pursue the work as to endanger performance of this contract in accordance with its terms, and after receipt of written notice from NDDOT, fails to correct such failures within ten days or such longer period as NDDOT may authorize.
15. The Risk Management Appendix, attached, is hereby incorporated into and made a part of this agreement.



16. This agreement becomes effective when all parties have signed and it shall terminate on December 31, 2014.

EXECUTED the date last below signed.

WITNESS:

CONTRACTOR:

DEAN R. WARTENBEE
NAME (TYPE OR PRINT)
Dean R. Wartenbee
SIGNATURE

To be signed by Owner; Partner; Corp. Pres., Vice Pres., or other authorized Corp. Officer. (If signed by other authorized Corp. Officer, please attach copy of Power of Attorney or other documentation showing authority to sign.)

JOHN WARTENBEE
NAME (TYPE OR PRINT)
John Wartenbee
SIGNATURE

VICE PRESIDENT
TITLE

APRIL 18 2013
DATE

WITNESS:

NORTH DAKOTA
DEPARTMENT OF TRANSPORTATION

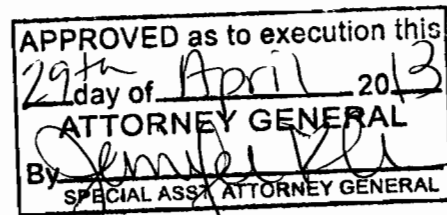
Sylvia Savenko
NAME (TYPE OR PRINT)
Sylvia Savenko
SIGNATURE

Grant Levi
DIRECTOR (TYPE OR PRINT)
by Dan E. Lipton
SIGNATURE
4/30/13
DATE

APPROVED as to substance by:

Robin Rehborg
DIVISION DIRECTOR (TYPE OR PRINT)
Robin Rehborg
SIGNATURE
4-29-13
DATE

CLA 1043 (Div. 50)
L.D. Approved 2-17-05; 3-11



NORTH DAKOTA DEPARTMENT OF TRANSPORTATION CIVIL RIGHTS APPENDIX

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the Contractor), agrees as follows:

1. Compliance with Regulations: The Contractor shall comply with the regulations relative to nondiscrimination in federally-assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
2. Nondiscrimination: The Contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, national origin, sex, age, disability/handicap, or income status**, in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor shall not participate, either directly or indirectly, in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding or negotiation, made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, national origin, sex, age, disability/handicap, or income status.**
4. Information and Reports: The contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information and its facilities as may be determined by the North Dakota Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the North Dakota Department of Transportation, or the Federal Highway Administration, as appropriate, and shall set forth what efforts it has made to obtain the information.
5. Sanctions for Noncompliance: In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, the North Dakota Department of Transportation shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including but not limited to:
 - a. withholding of payments to the Contractor under the contract until the Contractor complies, and/or
 - b. cancellation, termination, or suspension of the contract, in whole or in part.
6. Incorporation of Provisions: The Contractor shall include the provisions of paragraphs 1 through 6 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto.

The Contractor shall take such action with respect to any subcontract or procurement as the North Dakota Department of Transportation or the Federal Highway Administration may direct as a means of enforcing such provisions, including sanctions for noncompliance provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation by a subcontractor or supplier as a result of such direction, the Contractor may request the North Dakota Department of Transportation to enter into such litigation to protect the interests of the State; and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

**The Act governs race, color, and national origin. Related Nondiscrimination Authorities govern sex, 23 U.S.C. 324; age, 42 U.S.C. 6101; disability/handicap, 29 U.S.C. 790; and low income, E.O. 12898.



Risk Management Appendix

Supply Contracts with Private Individuals, Companies, Corporations, Etc.:

Each party agrees to assume its own liability for any and all claims of any nature including all costs, expenses and attorney's fees which may in any manner result from or arise out of this agreement.

Contractor, or Contractor's delivery agent, shall secure and keep in force during the term of this agreement, from insurance companies, government self-insurance pools or government self-retention funds authorized to do business in North Dakota, the following insurance coverages:

- 1) **Commercial general liability and automobile liability** insurance.
- 2) **Workers compensation** insurance.

Contractor shall produce certificates of insurance or copies of insurance policies upon request by the State.

When a portion of a Contract is sublet, the Contractor shall obtain insurance protection (as outlined above) to provide liability coverage to protect the Contractor and the State as a result of work undertaken by the Subcontractor. In addition, the Contractor shall ensure that any and all parties performing work under the Contract are covered by public liability insurance as outlined above. All Subcontractors performing work under the Contract are required to maintain the same scope of insurance required of the Contractor. The Contractor shall be held responsible for ensuring compliance with those requirements by all Subcontractors.

RM Consulted 2007
Revised 6-07





CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
2/25/2013

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Howalt+McDowell Insurance, Inc. 300 N. Cherapa Place, Ste 601 PO Box 5113 Sioux Falls SD 57117-5113	CONTACT NAME: Kathy Dains, CIC, ACSR	
	PHONE (A/C, No. Ext): (605) 339-3874 FAX (A/C, No.): (605) 339-3620 E-MAIL ADDRESS: kdains@howaltmcdowell.com	
INSURED Northern Truck Equipment Corporation 47213 Schweigers Circle PO Box 2435 Sioux Falls SD 57101-2435	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A: Cincinnati Insurance Company	
	INSURER B: First Dakota Indemnity	
	INSURER C:	
	INSURER D:	
	INSURER E:	
	INSURER F:	

COVERAGES

CERTIFICATE NUMBER: 1314REG

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS		
A	GENERAL LIABILITY			EPP0065460	3/1/2013	3/1/2014	EACH OCCURRENCE	\$ 1,000,000	
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 500,000	
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						MED EXP (Any one person)	\$ 10,000	
							PERSONAL & ADV INJURY	\$ 1,000,000	
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	\$ 2,000,000	
	<input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC						PRODUCTS - COMP/OP AGG	\$ 2,000,000	
								\$	
A	AUTOMOBILE LIABILITY			EPP0065460	3/1/2013	3/1/2014	COMBINED SINGLE LIMIT (Ea accident)	\$ 1,000,000	
	<input type="checkbox"/> ANY AUTO						BODILY INJURY (Per person)	\$	
	<input checked="" type="checkbox"/> ALL OWNED AUTOS <input checked="" type="checkbox"/> SCHEDULED AUTOS						BODILY INJURY (Per accident)	\$	
	<input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	\$	
							Blanket Waiver of Subrogation	\$	
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR			EPP0065460	3/1/2013	3/1/2014	EACH OCCURRENCE	\$ 4,000,000	
	<input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE						AGGREGATE	\$ 4,000,000	
	<input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$	0						\$	
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			WC20-0004642-01	8/28/2012	8/28/2013	<input checked="" type="checkbox"/> WC STATU-TORY LIMITS <input type="checkbox"/> OTH-ER		
ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	N/A	E.L. EACH ACCIDENT				\$ 500,000		
If yes, describe under DESCRIPTION OF OPERATIONS below			E.L. DISEASE - EA EMPLOYEE				\$ 500,000		
			E.L. DISEASE - POLICY LIMIT				\$ 500,000		

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, If more space is required)
Proof of Insurance.

CERTIFICATE HOLDER

CANCELLATION

To Whom It May Concern

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

J Muller, CIC, CRIS/D *Janod Muller*

STATE OF NORTH DAKOTA

North Dakota Department of Transportation
State Fleet Services
608 East Boulevard Avenue
Bismarck, ND 58505-0700

Request For Proposal (RFP)

RFP Title: **Snow Plow Truck Turnkey Package**

RFP Number: **065-30-13-030**

Date of Issue: **2/20/13**

Purpose of RFP:

The North Dakota Department of Transportation, State Fleet Services, is soliciting proposals for the purchase and installation of approximately 17 turnkey snow and ice control truck packages beginning in July 2013 to be completed for the 2013-2014 winter season and an additional order of approximately 18 snow and ice control turnkey truck packages to be completed in 2014 for the 2014-2015 winter season.

The turnkey packages include dump bodies, hydraulic systems, emergency lighting, anti-icing, sanding, and snow removal equipment installed on NDDOT provided tandem axle truck chassis. It is relevant that the units meet the requirements to operate in the extreme adverse winter weather conditions experienced while performing snow removal from the North Dakota state highway system.

The units shall include features which are regularly featured as standard production. The units shall conform in strength, quality of material, and workmanship to that provided by the best manufacturing and engineering practices of the industry.

Offerors shall represent, by proposals submitted, that the equipment is new, current model year, completely assembled, painted, tested, and ready for operation.

Offerors shall provide, in their proposals, complete equipment specifications, manufacturer brochures, a list of three users with letters of reference, phone numbers of contact persons, warranties, parts and service location, detailed list of optional equipment and accessory prices, and proposed delivery schedule.

Procurement Officer: Robin Rehborg
PHONE: 701-328-2543
FAX: 701-328-2514
E-MAIL: rrehborg@nd.gov

Offerors are not required to return this form.

TABLE OF CONTENTS

SECTION ONE

Introduction and Instructions

- 1.01 Purpose of the RFP
- 1.02 Contact Person, Telephone, Fax Numbers and E-mail
- 1.03 RFP Schedule
- 1.04 Return Mailing Address and Deadline for Receipt of Proposals
- 1.05 Assistance to Offerors with a Disability
- 1.06 Deadline for Receipt of Questions and Objections
- 1.07 Approved Vendor Registration Requirements
- 1.08 Pre-proposal Conference
- 1.09 Amendments to the RFP
- 1.10 News Releases
- 1.11 Notice Provided
- 1.12 Letter of Interest

SECTION TWO

Background Information

- 2.01 Background Information

SECTION THREE

Scope and Schedule

- 3.01 Scope of Work/Specification Guidelines
- 3.02 Location of Work
- 3.03 Prior Experience
- 3.04 Required Licenses
- 3.05 Federal Requirements
- 3.06 Deliverables

SECTION FOUR

General Contract Information

- 4.01 Contract Terms
- 4.02 Contract Type
- 4.03 Standard Contract Provisions
- 4.04 Proposal as a Part of the Contract
- 4.05 Additional Terms and Conditions
- 4.06 Supplemental Terms and Conditions
- 4.07 Contract Approval
- 4.08 Contract Changes – Unanticipated Amendments
- 4.09 Indemnification and Insurance Requirements
- 4.10 Taxes and Taxpayer Tax Identification
- 4.11 F.O.B. Point and Freight
- 4.12 Proposed Payment Procedures
- 4.13 Contract Funding
- 4.14 Payment Terms
- 4.15 Contract Personnel
- 4.16 Right to Inspect Place of Business
- 4.17 Inspection & Modification - Reimbursement for Unacceptable Deliverables
- 4.18 Termination for Default
- 4.19 Confidentiality
- 4.20 Work Product, Equipment, and Material
- 4.21 Assignment
- 4.22 Disputes - Applicable Law and Venue

SECTION FIVE

Evaluation Criteria and Contractor Selection

- 5.01 Applicability and Specifications
- 5.02 Parts and Service
- 5.03 Product History, Experience and References
- 5.04 Warranty
- 5.05 Contract Cost
- 5.06 Site Inspections of Offeror's Facility

SECTION SIX

Proposal Format and Content

- 6.01 Proposal Format and Content
- 6.02 Introduction
- 6.03 Applicability and Specifications
- 6.04 Parts and Service
- 6.05 Product History, Experience and References
- 6.06 Warranty
- 6.07 Cost Proposal
- 6.08 Required Enclosures

SECTION SEVEN

Standard Proposal Information

- 7.01 Authorized Signature
- 7.02 State Not Responsible for Preparation Costs
- 7.03 Conflict of Interest
- 7.04 Offeror's Certification
- 7.05 Offer Held Firm
- 7.06 Amendments to Proposals and Withdrawal of Proposals
- 7.07 Alternate Proposals
- 7.08 Subcontractors
- 7.09 Joint Ventures
- 7.10 Disclosure of Proposal Contents and Compliance with North Dakota Open Records Laws
- 7.11 Evaluation of Proposal
- 7.12 Right of Rejection
- 7.13 Clarification of Offers
- 7.14 Discussion and Best and Final Offers
- 7.15 Preference Laws
- 7.16 Contract Negotiation
- 7.17 Failure to Negotiate
- 7.18 Notice of Intent to Award – Offeror Notification of Selection
- 7.19 Protest and Appeal

SECTION EIGHT

Attachments

- 8.01 Attachments
 - 1. Proposal Evaluation Form
 - 2. Contract Form
 - 3. Indemnification and Insurance Requirements Appendix
 - 4. Proposal Response Sheet
 - 5. Sample Notice of Intent to Award
 - 6. Offeror Checklist

SECTION ONE INTRODUCTION AND INSTRUCTIONS

1.01

Purpose of the RFP

The North Dakota Department of Transportation, State Fleet Services, hereafter known as "purchasing agency" is soliciting proposals for the purchase and installation of approximately 17 snow and ice control turnkey truck packages beginning in July 2013 to be completed for the 2013-2014 winter season and an additional order of approximately 18 snow and ice control turnkey truck packages to be completed in 2014 for the 2014-2015 winter season. These numbers are approximate and NDDOT reserves the right to add or delete from these numbers based upon budget authority and need.

The turnkey packages include dump bodies, hydraulic systems, emergency lighting, anti-icing, sanding, and snow removal equipment installed on NDDOT provided tandem axle truck chassis. It is relevant that the units meet the requirements to operate in the adverse weather conditions experienced while performing snow removal from the North Dakota state highway system.

1.02

Contact Personnel, Telephone, Fax, E-mail

The procurement officer is the point of contact for this RFP. All vendor communications regarding this RFP must be directed to the procurement officer. Unauthorized contact regarding the RFP with other State employees of the purchasing agency may result in the vendor being disqualified, and the vendor may also be suspended or disbarred from the state bidders list.

PROCUREMENT OFFICER: **Robin Rehborg**
PHONE: **701-328-2543**
FAX: **701-328-2514**
TTY Users call: 7-1-1
E-MAIL: rrehborg@nd.gov

PROJECT MANAGER: **Tim Paul**
PHONE: **701-328-1465**
FAX: **701-328-2514**
TTY Users call: 7-1-1
E-MAIL: tpaul@nd.gov

1.03

RFP Schedule

This schedule of events represents the State's best estimate of the schedule that will be followed for this RFP. If a component of this schedule, such as the deadline for receipt of proposals, is delayed, the rest of the schedule will be shifted by the same number of days.

The approximate RFP schedule is as follows:

- RFP Issued: **2/20/13**
- Deadline for receipt of questions and objections related to the RFP: **3/14/13**
- Responses to questions / RFP amendments (if required) **3/19/13**
- Proposals due by: **3/28/13**
- Proposal Evaluation Committee evaluation completed by approximately : **4/11/13**
- State issues Notice of Intent to Award a Contract approximately: **4/12/13**
- State issues contract approximately: **4/22/13**
- Contract start: **4/30/13**

1.04

Return Mailing Address and Deadline for Receipt of Proposals

Offerors must submit ONE ORIGINAL (1) AND FOUR COPIES (4) of its proposal without pricing in a sealed envelope or package.

ONE (1) cost proposal is to be submitted in a separate sealed envelope or package, clearly labeled "cost proposal."

Envelopes or packages containing proposals must be clearly addressed as described below to ensure proper delivery and to avoid being opened by the State before the deadline for receipt. Envelopes or packages must be addressed as follows:

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
STATE FLEET SERVICES DIVISION, Rm. 427
RFP 065-30-13-030, Snow Plow Truck Turnkey Package
608 East Boulevard Avenue
Bismarck, ND 58505-0700

Proposals must be received by the purchasing agency at the location specified no later than **3:00 P.M., CENTRAL**, on **March 28, 2013**. Proposals will not be publicly read at the opening.

Proposals may not be delivered orally, by facsimile transmission, by other telecommunication or electronic means. Offerors may fax or electronically transmit signed proposals to a third party who must deliver the proposal to the location indicated above by the date and time designated as the deadline for receipt of proposals.

Offerors assume the risk of the method of dispatch chosen. The State of North Dakota ("State") assumes no responsibility for delays caused by any delivery service. Postmarking by the due date will not substitute for actual proposal receipt by the State. An offeror's failure to submit its proposal prior to the deadline will cause the proposal to be rejected. Late proposals or amendments will not be opened or accepted for evaluation.

1.05

Assistance to Offerors with a Disability

Offerors with a disability that need an accommodation should contact the procurement officer prior to the deadline for receipt of proposals so that reasonable accommodation can be made.

1.06

Deadline for Receipt of Questions and Objections

Offerors must carefully review this solicitation, the contract, risk management provisions, and all attachments for defects, questionable, or objectionable material. All questions must be in writing and directed to the purchasing agency, addressed to the procurement officer, and cite the subject RFP number. The procurement officer must receive these written requests by the deadline specified in the RFP Schedule of Events to allow issuance of any necessary amendments.

This will also help prevent the opening of a defective solicitation and exposure of offeror's proposals upon which an award could not be made. Protests based on the content of the solicitation will be disallowed if these faults have not been brought to the attention of the procurement officer, in writing, before the time indicated in the Schedule of Events.

If the question may be answered by directing the questioner to a specific section of the RFP, then the procurement officer may answer the question over the telephone. Other questions may be more complex and may require a written amendment to the RFP. The procurement officer will make this determination. Oral communications is considered unofficial and non-binding on the State. The offeror must confirm telephone conversations in writing.

1.07

Approved Vendor Registration Requirements

VENDORS MUST BE APPROVED BEFORE CONTRACT AWARD

Proposals will be accepted from vendors that are not currently approved vendors on the State's bidders list; however, the successful offeror will be required to become approved prior to award.

To become an approved vendor, offerors must: 1) be registered with the North Dakota Secretary of State (fees apply), and 2) submit a completed Bidders List Application to the North Dakota Vendor Registry Office. Prospective offerors may access the Procurement Vendor Database on-line to verify whether their firm is currently on the bidders list. The bidders list that will be used for this solicitation is commodity code **065-30**.

The Procurement Vendor Database, registration instructions and forms are available on-line at: <http://www.nd.gov/spo/vendor/registry/>. Contact the Vendor Registry Office at 701-328-2683 or infospo@nd.gov for assistance.

The successful offeror must register and become approved within **60 CALENDAR DAYS** from the date of the Notice of Intent to Award. If an offeror fails to become approved by the time specified by the Procurement Officer, its proposal will be determined to be non-responsive, and its proposal will be rejected.

1.08

Pre-proposal Conference

No pre-proposal conference will be held for this RFP. Offerors are advised to carefully review the RFP and all attachments and submit all questions to the procurement officer by the deadline indicated for submission of questions in the schedule of events.

1.09

Amendments to the RFP

If an amendment to this RFP is issued, it will be provided to all offerors that were mailed a copy of the RFP and to those that have requested a copy of the RFP from the procurement officer.

1.10

News Releases

News releases related to this RFP will not be made without prior approval of the procurement officer or project manager designated by the State.

1.11

Notice Provided

The Request for Proposal and any amendments to the RFP will be posted on the following website: <http://www.nd.gov/spo/>

1.12

Letter of Interest

Vendors interested in receiving any notices related to this RFP are invited to contact the procurement officer with the name of their firm, contact person, mailing address, telephone number, fax number, and e-mail address. The sole purpose of the letter of interest is to provide the purchasing agency with a contact person to receive any notices related to the RFP. Submission of a letter of interest is not a requirement for submitting a proposal.

SECTION TWO BACKGROUND INFORMATION

2.01

Background Information

The North Dakota Department of Transportation, State Fleet Services is soliciting proposals for the purchase and installation of approximately 17 snow and ice control turnkey truck packages beginning in July 2013 to be completed for the 2013-2014 winter season and an additional order of approximately 18 snow and ice control turnkey truck packages to be completed in 2014 for the 2014-2015 winter season. These numbers are approximate and NDDOT reserves the right to add or delete from these numbers based upon budget authority and need.

The turnkey packages include dump bodies, hydraulic systems, emergency lighting, anti-icing, sanding, and snow removal equipment installed on NDDOT provided tandem axle truck chassis. It is relevant that the units meet the requirements to operate in the adverse weather conditions experienced while performing snow removal from the North Dakota state highway system.

The units shall include features, which are regularly featured as standard production. The units shall conform in strength, quality of material, and workmanship to that provided by the best manufacturing and engineering practices of the industry.

Offerors shall represent, by proposals submitted, that the equipment is new, current model year, completely assembled, painted, tested, and ready for operation.

Offerors shall provide, in their proposals, complete equipment specifications, manufacturer brochures, warranties, parts and service location, detailed list of optional equipment and accessory prices, a proposed delivery schedule, and a list of three users with letters of reference, phone numbers of contact persons.

SECTION THREE SCOPE OF WORK

3.01

Scope of Work/Specification Guidelines

NOTE: These guidelines are intended to provide offeror with a detailed description of the turnkey packages. The State of North Dakota realizes that manufacturers differ in their design, encourage the submission of more than one proposal, and will objectively review all proposals.

The "Snow Plow Turnkey Truck Package" specifications including additional terms & conditions for delivery schedule and project bonus for early completion are posted as a separate attachment and must be completed and included with the proposal.

The make, model and configuration of the truck chassis will be provided via addendum to proposal labeled "Chassis Specifications" approximately one to two weeks in advance of proposal opening to assist the offeror with planning and pricing.

3.02

Location of Work

The work is to be performed, completed, and managed at the vendor's location.

The State WILL NOT provide workspace for the contractor.

The offeror should include in its price proposal: Transportation, lodging, and per diem costs sufficient to pay for one or more person(s) to make the trips necessary to the specified delivery locations to deliver the completed units.

3.03 Prior Experience

No specific minimums have been set for this RFP; however experience will be weighted by the proposal review team.

3.04 Required Licenses

At the time specified by the deadline for submission of proposals, the offeror must have and keep current any professional licenses and permits required by federal, state, and local laws for performance of this contract. Offerors that do not possess required licenses at the time proposals are due will be determined non-responsive.

3.05 Federal Requirements

The offeror must identify all known federal requirements that apply to the proposal, the evaluation, or the contract.

3.06 Deliverables

The contractor will be required to provide the following deliverables;

- a. Approximately 35 snow plow trucks completed, inspected and approved by NDDOT and ready for operation
- b. Operating CDs and/or manuals including maintenance information wiring diagrams, and parts lists for equipment installed
- c. Minimum twelve month warranty

SECTION FOUR GENERAL CONTRACT INFORMATION

4.01 Contract Terms

The State intends to enter into a contract with an effective date beginning **4/30/2013** and ending **12/31/2014**.

4.02 Contract Type

This contract is a FIRM FIXED PRICE contract.

4.03 Standard Contract Provisions

The successful offeror will be required to sign and submit the contract attached to this RFP (Appendix A). The contractor must comply with the contract provisions set out in this attachment. Any objections to the contract provisions must be set out in the offeror's proposal. No alteration of these provisions will be permitted without prior written approval from the purchasing agency.

Offerors are instructed to contact the procurement officer in writing by the deadline set for questions with any concerns regarding the contract provisions.

4.04 Proposal as a Part of the Contract

Part or all of this RFP and the successful proposal may be incorporated into the contract.

4.05

Additional Terms and Conditions

The State reserves the right to add, delete, or modify terms and conditions during contract negotiations. These terms and conditions will be within the scope of the RFP and will not affect the proposal evaluations.

4.06

Supplemental Terms and Conditions

Proposals including supplemental terms and conditions will be accepted, but supplemental conditions that conflict with those contained in this RFP or that diminish the State's rights under any contract resulting from the RFP will be considered null and void. The State is not responsible for identifying conflicting supplemental terms and conditions before issuing a contract award. After award of contract:

- (a) if conflict arises between a supplemental term or condition included in the proposal and a term or condition of the RFP, the term or condition of the RFP will prevail; and
- (b) if the State's rights would be diminished as a result of application of a supplemental term or condition included in the proposal, the supplemental term or condition will be considered null and void.

4.07

Contract Approval

This RFP does not, by itself, obligate the State. The State's obligation will commence when the purchasing agency approves the contract. Upon written notice to the contractor, the State may set a different starting date for the contract. The State will not be responsible for any work done by the contractor, even work done in good faith, if it occurs prior to the contract start date set by the State.

4.08

Contract Changes - Unanticipated Amendments

During the course of this contract, the contractor may be required to perform additional work. That work will be within the general scope of the initial contract. When additional work is required, the project manager designated by the State will provide the contractor a written description of the additional work and request the contractor to submit a firm time schedule for accomplishing the additional work and a firm price for the additional work. Cost and pricing data must be provided to justify the cost of amendments.

The contractor will not commence additional work until the project director has secured any required State approvals necessary for the amendment and issued a written contract amendment, approved by the purchasing agency.

4.09

Indemnification and Insurance Requirements

Offerors must review the attached Risk Management Appendix for indemnification and insurance requirements. The indemnification and insurance provisions will be incorporated into the final contract.

Objections to any of the provisions of the Indemnification and Insurance Requirements must be made in writing to the attention of the procurement officer by the time and date set for receipt of questions. No alteration of these provisions will be permitted without prior written approval from the purchasing agency in consultation with the North Dakota Risk Management Division.

Upon receipt of the Notice of Intent to Award, the successful offeror must obtain the required insurance coverage and provide the procurement officer with proof of coverage prior to contract approval. The coverage must be satisfactory to the purchasing agency, in consultation with the North Dakota Risk Management Division. An offeror's failure to provide evidence of insurance coverage is a material breach and grounds for withdrawal of the award or termination of the contract.

4.10

Taxes and Taxpayer Identification

The contractor must provide a valid Vendor Tax Identification Number as a provision of the contract.

The State is not responsible for and will not pay local, state, or federal taxes. The State sales tax exemption number is E-2001, and certificates will be furnished upon request by the purchasing agency.

A contractor performing any contract, including service contracts, for the United States Government, State of North Dakota, counties, cities, school districts, park board or any other political subdivisions within North Dakota is not exempt from payment of sales or use tax on material and supplies used or consumed in carrying out contracts. In these cases, the contractor is required to file returns and pay sales and use tax just as required for contracts with private parties. Contact the North Dakota Tax Department at 701-328-3470 or visit its website at www.nd.gov/tax/ for more information.

A contractor performing any contract, including a service contract, within North Dakota is also subject to the corporation income tax, individual income tax, and withholding tax reporting requirements, whether the contract is performed by a corporation, partnership, or other business entity, or as an employee of the contractor. In the case of employees performing the services in the state, the contractor is required to withhold state income tax from the employees' compensation and remit to the state as required by law. Contact the North Dakota Tax Department at 701-328-3125 or visit its web site for more information

4.11

F.O.B. Point and Freight

All commodities purchased through this contract will be Free on Board ("F.O.B.") final destination, freight prepaid. Unless specifically stated otherwise, all prices offered must include the delivery costs to any location within the State of North Dakota. Title will pass to the State at destination, and the vendor will be responsible for any freight claims,

4.12

Proposed Payment Procedures

The State will make payments based on completed and inspected individual delivered units. Each billing must consist of an invoice including serial numbers of installed equipment, delivery location, and NDDOT assigned vehicle license number. No payment will be made until the project director has approved invoice.

4.13

Contract Funding

Approval or continuation of a contract resulting from this solicitation is contingent upon continuing appropriation. The contract may be terminated by the state or modified by agreement of both parties in the event funding from federal, state, or other sources is not obtained and continued at sufficient levels.

4.14

Payment Terms

No payment will be made until the purchasing agency approves the contract.

Payment for commodities and services received under contracts will normally be made within 30 calendar days after receipt and acceptance by the purchasing agency or after receipt of a correct invoice, whichever is later. Payment inquiries must be directed to the purchasing agency.

Prompt Payment Discount Terms offered by the contractor may be taken by the purchasing agency if payment is made within the specified terms.

4.15

Contract Personnel

The project manager designated by the purchasing agency must approve any change of the contractor's project team members named in the proposal, in advance and in writing. Personnel changes that are not approved by the State may be grounds for the State to terminate the contract.

4.16

Right to Inspect Place of Business

At reasonable times, the State may inspect those areas of the contractor's place of business that are related to the performance of a contract. If the State makes an inspection, the contractor must provide reasonable assistance.

4.17

Inspection & Modification - Reimbursement for Unacceptable Deliverables

The contractor is responsible for the completion of all work set out in the contract. All work is subject to inspection, evaluation, and approval by the project manager designated by the State. The State may employ all reasonable means to ensure that the work is progressing and being performed in compliance with the contract. Should the project manager determine that corrections or modifications are necessary in order to accomplish its intent, the project manager may direct the contractor to make changes. The contractor will not unreasonably withhold changes.

Substantial failure of the contractor to perform the contract may cause the State to terminate the contract. In this event, the State may require the contractor to reimburse monies paid (based on the identified portion of unacceptable work received) and may seek associated damages.

4.18

Termination for Default

If the project manager designated by the purchasing agency determines that the contractor has refused to perform the work or has failed to perform the work with diligence as to ensure its timely and accurate completion, the State may, by providing written notice to the contractor, terminate the contractor's right to proceed with part or all of the remaining work.

This clause does not restrict the State's right to termination under the contract provisions of the Service Contract, attached.

4.19

Open Records Laws - Confidentiality

Any records that are obtained or generated by the contractor under this contract are subject to North Dakota open records law regarding public records and handling of confidential information.

4.20

Work Product, Equipment, and Material

All work product, equipment or materials created or purchased under this contract belong to the State and must be delivered to State at State's request upon termination of this contract, unless otherwise agreed in writing by the purchasing agency.

4.21

Assignment

Contractor may not assign or otherwise transfer or delegate any right or duty without the State's express written consent. However, the contractor may enter into subcontracts provided that the subcontract acknowledges the binding nature of this contract and incorporates this contract, including any attachments.

4.22

Disputes - Applicable Law and Venue

Any dispute arising out of this agreement will be resolved under the laws of the State of North Dakota.

SECTION FIVE EVALUATION CRITERIA AND CONTRACTOR SELECTION

THE TOTAL NUMBER OF POINTS USED TO SCORE THIS CONTRACT IS 100

5.01

Applicability and Specifications

Thirty five Percent (35%) of the total possible evaluation points will be assigned to this criterion.

Proposals will be evaluated against the questions set out below:

- [a] Has the offeror demonstrated a thorough understanding of the applicability of the snow plow unit?
- [b] How well has the offeror presented the specifications and literature about their snow plow truck package with minimal specification deviations?
- [c] Has the offeror demonstrated an understanding of the deliverables the State expects it to provide?
- [d] Does the offer propose a delivery schedule that is acceptable to the State of North Dakota?
- [e] Is the proposal submitted responsive to all material requirements in the RFP?

5.02

Parts and Service

Ten Percent (10%) of the total possible evaluation points will be assigned to this criterion.

Proposals will be evaluated against the questions set out below:

- [a] Does the offeror provide a means for prompt delivery of parts?
- [b] Does the offeror have a distributor for parts within ND or in a bordering city?
- [c] Does the offeror have a servicing vendor within ND or in a bordering city?
- [d] Does the offeror provide a means for prompt repair service and support for all delivery locations?

5.03

Product History, Experience and References

Ten Percent (10%) of the total possible evaluation points will be assigned to this criterion.

Proposals will be evaluated against the questions set out below:

- [a] Does the offeror provide a good history of their products?
- [b] Does the offeror provide the minimum number of references as required in the specifications?
- [c] Are the referenced users satisfied with their existing units?
- [d] Has the offeror provided evidence of a high level of experience in the manufacturing and support of the product?

5.04 Warranty

Five Percent (5%) of the total possible points will be assigned to this criterion.

Proposals will be evaluated against the questions set out below:

[a] Does the offeror provide a prompt means to handle warranty repair?

[b] Does the warranty coverage meet the needs of the State of North Dakota?

[c] Does the offeror provide a vendor to handle warranty repairs within ND or a bordering city?

[d] Does the offeror provide follow up services to the eight delivery locations for the purposes of correcting any problems that may arise during the warranty period?

5.05 Contract Cost

Forty Percent (40%) of the total possible evaluation points will be assigned to cost.

Any prompt payment discounts terms proposed by the offeror will not be considered in evaluating cost. The cost amount used for evaluation may be affected by the application of North Dakota preference laws (N.D.C.C. § 44-08-01). The lowest cost proposal will receive the maximum number of points allocated to cost. The point allocations for cost on the other proposals will be evaluated according to the method set forth in the Proposal Evaluation form attached to this RFP.

5.06 Site Inspection of Offeror's Facility

The State may conduct on-site visits to the offeror's firm or offeror's customer where comparable service is being performed to evaluate the offeror's capacity to perform the contract. An offeror must agree, at risk of being found non-responsive and having its proposal rejected, to provide the State reasonable access to relevant portions of its work sites. Individuals designated by the purchasing agency will conduct the site inspection at the State's expense.

SECTION SIX PROPOSAL FORMAT AND CONTENT

6.01 Proposal Format and Content

The State discourages overly lengthy and costly proposals; however, in order for the State to evaluate proposals fairly and completely, offerors must follow the format set out in this RFP and provide all information requested.

6.02 Introduction

Proposals must include the complete name and address of offeror's firm and the name, mailing address, and telephone number of the person the State should contact regarding the proposal.

Proposals must confirm that the offeror will comply with all provisions in this RFP. The proposal must disclose any instances where the firm or any individuals working on the contract has a possible conflict of interest and, if so, the nature of that conflict (e.g. employed by the State of North Dakota).

Proposals must be signed by a company officer empowered to bind the company. An offeror's failure to include these items in the proposals may cause the proposal to be determined to be non-responsive and the proposal may be rejected.

6.03

Applicability and Specifications

Offerors must provide comprehensive narrative statements that illustrate their understanding of the requirements of the snow plow truck turnkey package, deliverables, and contract terms and conditions. Offerors must also identify any pertinent issues and potential problems related to the project.

6.04

Parts and Service

Offerors must illustrate how they will provide the parts and services in a timely manner as required to support the installed equipment.

6.05

Product History, Experience and References

Offerors must provide comprehensive narrative statements that describe the company experience and product history. In addition, offerors must also provide three (3) reference names and phone numbers for similar units the offeror's firm has completed. The State reserves the right to contact any references provided by the offeror. Offerors are invited to provide letters of reference from previous clients.

6.06

Warranty

Offerors must provide detailed explanation of warranty coverage, methods of how warranty repairs will be handled promptly, and the vendor name and location handling the warranty repairs.

6.07

Cost Proposal

Offerors should describe any discounts terms for prompt payment. Discounts for prompt payment will not be considered in evaluating cost.

Offerors must complete cost proposal attached to this RFP or prepare a cost proposal following the same format.

6.08

Required Enclosures

Offerors must provide all documents, samples, or other information specifically required in this RFP.

1. Proposal Response Sheet
2. Completed specifications with any deviations
3. Product Literature
4. Letters of reference
5. History of products installed
6. Warranty information
7. Parts and service information

SECTION SEVEN STANDARD PROPOSAL INFORMATION

7.01

Authorized Signature

An individual authorized to bind the offeror to the provisions of the RFP must sign all proposals.

7.02

State Not Responsible for Preparation Costs

The State will not pay any cost associated with the preparation, submittal, presentation, or evaluation of any proposal.

7.03

Conflict of Interest

Offerors must disclose any instances where the firm or any individuals working on the contract has a possible conflict of interest and, if so, the nature of that conflict (e.g. employed by the State of North Dakota). The State reserves the right to cancel the award if any interest disclosed from any source could either give the appearance of a conflict or cause speculation as to the objectivity of the offeror's proposal. The State's determination regarding any questions of conflict of interest is final.

7.04

Offeror's Certification

By signature on the proposal, an offeror certifies that it complies with:

- a) the laws of the State of North Dakota;
- b) North Dakota Administrative Code;
- c) all applicable local, state, and federal laws, code, and regulations;
- d) the applicable portion of the Federal Civil Rights Act of 1964;
- e) the Equal Employment Opportunity Act and the regulations issued by the federal government;
- f) the Americans with Disabilities Act of 1990 and the regulations issued by the federal government;
- g) all terms, conditions, and requirements set forth in this RFP;
- h) a condition that the proposal submitted was independently arrived at, without collusion;
- i) a condition that the offer will remain open and valid for the period indicated in this solicitation; and
- j) a condition that the firm and any individuals working on the contract do not have a possible conflict of interest (e.g. employed by the State of North Dakota).

If any offeror fails to comply with the provisions stated in this paragraph, the State reserves the right to reject the proposal, terminate the contract, or consider the contractor in default.

7.05

Offer Held firm

Proposals must remain open and valid for at least **90 DAYS** from the deadline specified for submission of proposals. In the event award is not made within **90 DAYS**, the State will send a written request to all offerors deemed susceptible for award asking offerors to hold their price firm for a longer specified period of time.

7.06

Amendments to Proposals and Withdrawals of Proposals

Offerors may amend or withdraw proposals prior to the deadline set for receipt of proposals. No amendments will be accepted after the deadline unless they are in response to the State's request. After the deadline, offerors may make a written request to withdraw proposals and provide evidence that a substantial mistake has been made. The procurement officer may permit withdrawal of the proposal upon verifying that a substantial mistake has been made, and the State may retain the offeror's bid bond or other bid type of bid security, if one was required.

7.07

Alternate Proposals

Offerors may submit more than one proposal for evaluation.

Alternate proposals (proposals that offer something different than what is requested) will be considered.

7.08

Subcontractors

Subcontractors may be used to perform work under this contract. If an offeror intends to use subcontractors, the offeror must identify this information in the proposal:

- (a) The complete name of the subcontractor;
- (b) the complete address of the subcontractor;
- (c) the type of work the subcontractor will be performing;
- (d) the percentage of work the subcontractor will be providing;
- (e) and three references from customers of each named subcontractor.

If a proposal with subcontractors is selected, the offeror must provide the following information concerning each prospective subcontractor within **SEVEN WORKING DAYS** from the date of the State's request:

- (a) Evidence, as set out in the relevant section of this RFP, that the subcontractor is a registered bidder and, if applicable, holds a valid North Dakota business license; and
- (b) a written statement, signed by each proposed subcontractor, that clearly verifies that the subcontractor is committed to render the services required by the contract,

An offeror's failure to provide this information, within the time set, may cause the State to consider its proposal non-responsive and reject it. The substitution of one subcontractor for another may be made only at the discretion and prior written approval of the State's procurement officer or contract manager designated by the State.

7.09

Joint Ventures

Joint ventures will not be allowed.

7.10

Disclosure of Proposal Contents and Compliance with North Dakota Open Records Laws

All proposals and other material submitted become the property of the State and may be returned only at the State's option. All proposals and related information, including detailed cost information, are exempt records and will be held in confidence until an award is made, in accordance with N.D.C.C. § 54-44.4-10(2).

Offerors may make a written request that trade secrets and other proprietary data contained in proposals be held confidential. Material considered confidential by the offeror must be clearly identified, and the offeror must include a brief statement that sets out the reasons for confidentiality. See the North Dakota Office of the Attorney General website for additional information. <http://www.ag.state.nd.us/OpenRecords/ORM.htm>

After award, proposals will be subject to the North Dakota open records law. Records are closed or confidential only if specifically stated in law. If a request for public information is received, the procurement officer, in consultation with the Office of the Attorney General, will determine whether the information is an exception to the North Dakota open records law, and the information will be processed appropriately.

7.11

Evaluation of Proposals

All proposals will be reviewed to determine if they are responsive to the requirements of this solicitation. The procurement officer or an evaluation committee will evaluate responsive proposals. The evaluation will be based solely on the evaluation factors set forth in this RFP. The evaluation will consider information obtained subsequent to any discussions with offerors determined to be reasonable for award and any demonstrations, oral presentations, or site inspections, if required in this RFP.

7.12

Right of Rejection

The State reserves the right to reject any proposals, in whole or in part. Proposals received from debarred or suspended vendors will be rejected. The procurement officer may reject any proposal that is not responsive to all of the material and substantial terms, conditions, and performance requirements of the RFP.

Offerors may not qualify the proposal nor restrict the rights of the State. If an offeror does so, the procurement officer may determine the proposal to be a non-responsive counter-offer and the proposal may be rejected.

The procurement officer may waive minor informalities that:

- do not affect responsiveness;
- are merely a matter of form or format;
- do not change the relative standing or otherwise prejudice other offers;
- do not change the meaning or scope of the RFP;
- are insignificant, negligible, or immaterial in nature;
- do not reflect a material change in the work; or
- do not constitute a substantial reservation against a requirement or provision,

The State reserves the right to reject any proposal determined to be not responsive, and to reject the proposal of an offeror determined to be not responsible. The State also reserves the right to refrain from making an award if it determines it to be in its best interest.

7.13

Clarification of Offers

In order to determine if a proposal is reasonably susceptible for award, communications by the procurement officer or the proposal evaluation committee are permitted with an offeror to clarify uncertainties or eliminate confusion concerning the contents of a proposal and determine responsiveness to the RFP requirements. Clarifications may not result in a material or substantive change to the proposal. The initial evaluation may be adjusted because of a clarification under this section.

After receipt of proposals, if there is a need for any substantial clarification or material change in the RFP, an amendment will be issued. The amendment will incorporate the clarification or change, and a new date and time established for new or amended proposals. Evaluations may be adjusted as a result of receiving new or amended proposals.

7.14

Discussions and Best and Final Offers

The State may conduct discussions or request best and final offers with offerors that have submitted proposals determined to be reasonably susceptible for award. The State is not obligated to do so, therefore, vendors should submit their best terms (cost and technical). The purpose of these discussions is to ensure full understanding of the requirements of the RFP and the offeror's proposal. Discussions will be limited to specific sections of the RFP or proposal identified by the procurement officer. Discussions, if held, will be after initial evaluation of proposals by the proposal evaluation committee. If modifications to the proposal are made as a result of these discussions, the modifications must be put in writing.

Offerors with a disability needing accommodation should contact the procurement officer prior to the date set for discussions so that reasonable accommodation can be made.

7.15

Preference Laws

The preference given to a resident North Dakota offeror will be equal to the preference given or required by the state of the nonresident bidder. A "resident" North Dakota bidder, offeror, seller, or contractor is one that has maintained a bona fide place of business within this State for at least one year prior to the date on which a contract was awarded. For a listing of state preference laws, visit the following website:

http://egov.oregon.gov/DAS/PFSS/SPO/reciprocal_detail.shtml or contact the North Dakota State Procurement Office at 701-328-2740.

7.16

Contract Negotiation

After final evaluation, the procurement officer may negotiate with the offeror of the highest-ranked proposal. Negotiations, if held, will be within the scope of the request for proposals and limited to those items that would not have an effect on the ranking of proposals. If the highest-ranked offeror fails to provide necessary information for negotiations in a timely manner, or fails to negotiate in good faith, the State may terminate negotiations and negotiate with the offeror of the next highest-ranked proposal.

If contract negotiations are commenced, they will be held:

North Dakota Department of Transportation
Transportation Building, 4th Floor, Rm 427
608 East Boulevard Avenue
Bismarck, ND

If contract negotiations are held, the offeror will be responsible for all cost including its travel and per diem expenses.

7.17

Failure to Negotiate

If the selected offeror:

- fails to provide the information required to begin negotiations in a timely manner;
- fails to negotiate in good faith;
- indicates it cannot perform the contract within the budgeted funds available for the project; or
- if the offeror and the State, after a good faith effort, cannot come to terms,

the State may terminate negotiations with the offeror initially selected and commence negotiations with the next highest ranked offeror.

7.18

Notice of Intent to Award - Offeror Notification of Selection

After the completion of contract negotiation the procurement officer will issue a written Notice of Intent to Award and send copies to all offerors. The Notice of Intent Award will set out the names and addresses of all offerors and identify the proposal selected for award. The scores and placement of other offerors will not be part of the Notice of Intent to Award.

The successful offeror named in the Notice of Intent to Award is advised not to begin work, purchase materials, or enter into subcontracts relating to the project until both the successful offeror and the State sign the contract.

7.19

Protest and Appeal

North Dakota law provides that an interested party may protest a solicitation.

If an interested party wishes to protest the content of this RFP, the protest must be received, in writing, by the procurement officer at least seven calendar days before the deadline for receipt of proposals.

An interested party may protest the award or proposed award of a contract.

If an offeror wishes to protest the award of a contract or proposed award of a contract, the protest must be received, in writing, by the procurement officer within seven calendar days after the date the Notice of Intent to Award was issued.

SECTION EIGHT ATTACHMENTS

8.01

Attachments

1. Proposal Evaluation Form
2. Contract Form
3. Indemnification and Insurance Requirements Appendix
4. Proposal Response Sheet
5. Sample Notice of Award
6. Offeror Checklist

PROPOSAL EVALUATION FORM

All proposals will be reviewed for responsiveness and then evaluated using the criteria set out herein.

INSTRUCTIONS FOR EVALUATORS

Each evaluation criterion has been assigned a specific number of points. The questions under each evaluated area help you measure the quality of the offeror's response. Do not assign points to individual questions, instead, award a total score for each evaluation criterion.

RATING SCALE FOR ASSESSING VENDOR RESPONSES

This rating scale is intended to establish guidelines within that range to ensure members of the RFP evaluation committee perform their evaluation with consistency. You may assign any value for a given criteria from 0 to the maximum number of points. A zero value typically constitutes no response or an inability of the vendor to meet the criterion. In contrast, the maximum value should constitute a high standard of meeting the criterion. If a specific criterion would only yield a yes or no response (e.g., offeror can submit an electronic report in required format by noon Friday), the evaluator should award either the maximum points or a zero.

For Example: "Experience and Qualifications" is an evaluation criteria receiving a weighting of 20% of the total possible points. Using a 100 Point Scale, a maximum of 20 points can be awarded. The rating scale would be:

Rating Scale (20 POINT Maximum)	
Point Value	Explanation
0	None. Not addressed or response of no value
1-5	Fair. Limited applicability
6-10	Good. Some applicability
11-15	Very Good. Substantial applicability
16-20	Excellent. Total applicability

COST PROPOSAL

If offerors were required to place cost proposals in a separate sealed envelope, do not open the cost proposal until the technical proposals have been evaluated.

Not all members of the evaluation need to evaluate the cost proposal. The cost proposals may be evaluated by selected members of the evaluation committee, reviewed by group, and recorded on the evaluation summary sheets.

Any prompt payment discounts terms offered by the vendor are not taken into consideration in evaluating cost. However, the cost proposals of nonresident offerors may be adjusted by the application of preference laws, if applicable. Contact the State Procurement Office at 701-328-2683 for assistance in applying preference laws.

EVALUATION CRITERIA AND SCORING

Person or Firm Name _____

Name of Proposal Evaluation (PEC) Member _____

Date of Review _____

RFP Title/Number _____

THE TOTAL NUMBER OF POINTS USED TO SCORE THIS CONTRACT IS 100

7.01

Applicability and Specifications

Weight **35 Percent**. Maximum Point Value for this Section

100 Points x **35 Percent** = **35 Points**

Rating Scale (35 POINT Maximum)	
Point Value	Explanation
0	None. Not addressed or response of no value
1-9	Fair. Limited applicability
10-17	Good. Some applicability
18-26	Very Good. Substantial applicability
27-35	Excellent. Total applicability

Proposals will be evaluated against the questions set out below. Do not assign points to individual questions, instead, award a total score for each evaluation criterion.

[a] Has the offeror demonstrated a thorough understanding of the applicability of the snow plow unit?

EVALUATOR'S NOTES _____

[b] How well has the offeror presented the specifications and literature about their snow plow truck package with minimal specification deviations?

EVALUATOR'S NOTES _____

[c] Has the offeror demonstrated an understanding of the deliverables the State expects it to provide?

EVALUATOR'S NOTES _____

[d] Does the offer propose a delivery schedule that is acceptable to the State of North Dakota?

EVALUATOR'S NOTES _____

[e] Is the proposal submitted responsive to all material requirements in the RFP?

EVALUATOR'S NOTES _____

EVALUATOR'S POINT TOTAL FOR 7.01 _____

7.02

Parts and Service

Weight **10 Percent**. Maximum Point Value for this Section
100 Points x **10 Percent** = **10 Points**

Rating Scale (10 POINT Maximum)	
Point Value	Explanation
0	None. Not addressed or response of no value
1-2	Fair. Limited applicability
3-5	Good. Some applicability
6-7	Very Good. Substantial applicability
8-10	Excellent. Total applicability

Proposals will be evaluated against the questions set out below. Do not assign points to individual questions, instead, award a total score for each evaluation criterion.

[a] Does the offeror provide a means for prompt delivery of parts?

EVALUATOR'S NOTES _____

[b] Does the offeror have a distributor for parts within ND or in a bordering city?

EVALUATOR'S NOTES _____

[c] Does the offeror have a servicing vendor within ND or in a bordering city?

EVALUATOR'S NOTES _____

[d] Does the offeror provide a means for prompt repair service and support for all delivery locations?

EVALUATOR'S NOTES _____

EVALUATOR'S POINT TOTAL FOR 7.02 _____

7.03
Product History and References

Weight **10 Percent**. Maximum Point Value for this Section
100 Points x **10 Percent** = **10 Points**

Rating Scale (10 POINT Maximum)	
Point Value	Explanation
0	None. Not addressed or response of no value
1-2	Fair. Limited applicability
3-5	Good. Some applicability
6-7	Very Good. Substantial applicability
8-10	Excellent. Total applicability

Proposals will be evaluated against the questions set out below. Do not assign points to individual questions, instead, award a total score for each evaluation criterion.

[a] Does the offeror provide a good history of their products?

EVALUATOR'S NOTES _____

[b] Does the offeror provide the minimum number of references as required in the specifications?

EVALUATOR'S NOTES _____

[c] Are the referenced users satisfied with their units?

EVALUATOR'S NOTES _____

[d] Has the offeror provided evidence of a high level of experience in the manufacturing and support of the product?

EVALUATOR'S NOTES _____

EVALUATOR'S POINT TOTAL FOR 7.03 _____

7.04**Warranty**

Weight **5 Percent**. Maximum Point Value for this Section
100 Points x **5 Percent** = **5 Points**

Rating Scale (5 POINT Maximum)	
Point Value	Explanation
0	None. Not addressed or response of no value
1-2	Fair. Limited applicability
3	Good. Some applicability
4	Very Good. Substantial applicability
5	Excellent. Total applicability

Proposals will be evaluated against the questions set out below. Do not assign points to individual questions, instead, award a total score for each evaluation criterion.

[a] Does the offeror provide a prompt means to handle warranty repair?

EVALUATOR'S NOTES _____

[b] Does the warranty coverage meet the needs of the State of North Dakota?

EVALUATOR'S NOTES _____

[c] Does the offeror provide a vendor to handle warranty repairs within ND or in a bordering city?

EVALUATOR'S NOTES _____

[d] Does the offeror provide follow up services to the eight delivery locations for the purposes of correcting any problems that may arise during the warranty period?

EVALUATORS NOTES _____

EVALUATOR'S POINT TOTAL FOR 7.04 _____

7.05

Contract Cost

Weight **40 Percent**. Maximum Point Value for this Section
100 Points x **40 Percent** = **40 Points**

Applying Preference Laws

Any prompt payment discounts terms proposed by the offeror will not be considered in evaluating cost. The cost amount used for evaluation may be affected by the application of North Dakota preference laws (N.D.C.C. § 44-08-01). The preference given to a resident offeror will be equal to the preference given or required by the state of the nonresident offeror (i.e. reciprocal preference).

When evaluating cost proposals from nonresident (out-of-state) offerors, determine whether the offeror's state of residence has a preference law for vendors resident in that state. The cost proposal of the nonresident offeror will be increased by the same percentage of preference given to vendors resident in that state.

For example, if the state law of the nonresident offeror requires a 5% preference for vendors resident in that state, the procurement officer will increase that offeror's cost proposal by 5% before evaluation.

See http://www.oregon.gov/DAS/SSD/SPO/reciprocal_detail.shtml for a list of States Preference Laws or contact the North Dakota State Procurement Office at 701-328-2683.

Converting Cost to Points

After applying any reciprocal preference, the lowest cost proposal will receive the maximum number of points allocated to cost. The point allocations for cost on the other proposals will be determined as follows:

Price of Lowest Cost Proposal

Price of Proposal Being Rated X Total Points for Cost Available = Awarded Points

COST PROPOSAL EVALUATION

See Attachment 4 – Proposal Response Sheet

EVALUATOR'S POINT TOTAL FOR 7.05 _____

**Request for Proposal
Evaluation Summary**

Name of RFP:		
RFP Number:		
Vendor Being Evaluated:		
Evaluator Name:		
Date:		
Technical Evaluation (Maximum 60 Points)	Maximum Points by Category	Score
1. Applicability and Specifications	35	
2. Parts and Service	10	
3. Product History, Experience and References	10	
4. Warranty	5	
Cost Evaluation (Maximum 40 Points) 1. Make adjustments for reciprocal preference, if necessary. See list of States Preference Laws: http://www.oregon.gov/DAS/SSD/SPO/reciprocal_detail.shtml 2. Calculated points awarded for price. <u>Price of Lowest Cost Proposal</u> Price of Proposal Being Rated X 40 points = Awarded Points		
5. Cost	40	
Total		

**Request for Proposal
Evaluation Totals**

Name of RFP:						
Name of Offeror:						
Date:						
Technical Evaluation Criteria	60 POINTS Maximum	Evaluator	Evaluator	Evaluator	Evaluator	Evaluator
1. Applicability and Specifications	35					
2. Parts and Service	10					
3. Product History, Experience and References	10					
4. Warranty	5					
Evaluator Totals						
Grand Total		Note: Sum of all individual scores.				
Technical Proposal Score		Note: Total of individual points divided by the number of evaluators (60 POINT MAXIMUM)				
Cost Propose Score		Note: (40 POINT MAXIMUM)				
TOTAL						

**Request for Proposal
Summary of Evaluation Committee Totals**

Name of RFP:						
Date:						
Technical Evaluation Criteria	60 POINTS Maximum	Vendor 1	Vendor 2	Vendor 3	Vendor 4	Vendor 5
1. Applicability and Specifications	35					
2. Parts and Service	10					
3. Product History and References	10					
4. Warranty	5					
Technical Proposal Score						
Cost Proposals Score						
Grand Total						

CONTRACT – Next 3 Pages

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
CONTRACT FOR PROCUREMENT**

REQUEST FOR PROPOSAL TITLE:

REQUEST FOR PROPOSAL NO.:

This agreement is entered into between the state of North Dakota, acting by and through its Director of Transportation, hereinafter referred to as NDDOT, whose address is 608 East Boulevard Avenue, Bismarck, North Dakota, and hereinafter referred to as the Contractor, whose address is

In consideration of the mutual covenants herein set forth, NDDOT and the Contractor agree as follows:

1. That in consideration of the payments to be made by NDDOT, the Contractor agrees to provide the services and/or goods in accordance and in conformity with this contract, the Contractor's proposal, dated NDDOT's request for proposal issued on , and any purchase orders issued as a result of this contract. The Contractor's proposal, NDDOT's request for proposal, and any purchase orders are incorporated by reference herein. If discrepancies exist between the Contractor's proposal, and NDDOT's request for proposal, or this contract, NDDOT's request for proposal, and this contract shall govern.
2. NDDOT agrees to pay the Contractor for the work, when completed and accepted in accordance with this contract.

Payments are to be made upon presentation of an invoice by the Contractor, and by the terms of this contract.
3. The work shall be done pursuant to this contract, to the laws of the state of North Dakota, and to the satisfaction of NDDOT, in accordance with the rules and regulations made pursuant to state and federal law.
4. The Contractor, in employing and maintaining labor, shall do so in conformity with state and federal law and this contract.
5. Payments by NDDOT beyond the current state biennium shall be contingent on sufficient funds being appropriated by the Federal Government or State Legislature for the Department. In the event of insufficient appropriations in future bienniums, NDDOT may give a minimum of 30 days notice to terminate this agreement/contract and have no further obligation to the Contractor.
6. All work products and copyrights of the contract which result from this contract are the exclusive property of NDDOT.
7. Notwithstanding any rules regarding the choice of law or venue, it is agreed by the parties that this contract shall be governed by and construed in accordance with applicable Federal Law and the laws of the state of North Dakota, at the time this contract was executed. All disputes arising from this agreement shall be brought in the South Central District Court of the state of North Dakota.
8. This agreement constitutes the entire agreement between the parties. No waiver, consent, modification, or change of terms of this agreement shall bind either party unless in writing and signed by both parties. Such waiver, consent, modification, or change, if made, shall be effective only in the specific instance and for the specific purpose given. There are no understandings, agreements, or representations, oral or written, not specified herein regarding this agreement. The Contractor, by the signature below of its authorized representative, hereby acknowledges that the Contractor has read this agreement, understands it, and agrees to be bound by its terms and conditions.

9. The terms of this agreement shall not be waived, altered, modified, supplemented, or amended, in any manner whatsoever, except by written instrument signed by the parties.
10. The Contractor shall not assign any portion of the work under this agreement, execute any contract, or obligate itself in any manner with a third party with respect to its rights and responsibilities to this agreement without written consent of NDDOT. Any agreement with a subcontractor does not create a contractual relationship between the NDDOT and the subcontractor.
11. The Contractor shall not assign nor transfer the contractor's interests or duties under this agreement without the express written consent of the state.
12. The Contractor agrees to comply with all applicable laws and rules, including, but not limited to, those relating to nondiscrimination, accessibility, and civil rights.
13. The Civil Rights Appendix, attached, is hereby incorporated into and made a part of this agreement.
14. Termination
 - a. This contract may be terminated by mutual consent of both parties, or by either party upon 30 days' notice, in writing and delivered by certified mail or in person.
 - b. In addition, NDDOT may terminate this contract effective upon delivery of written notice to the Contractor, or at such later date as may be established by NDDOT, under any of the following conditions:
 - i. If NDDOT funding from federal, state, or other sources is not obtained and continued at levels sufficient to allow for purchase of the indicated quantity of services. The contract may be modified by agreement of the parties in writing to accommodate a reduction in funds.
 - ii. If federal or state regulations or guidelines are modified, changed, or interpreted in such a way that the services are no longer allowable or appropriate for purchase under this contract or are no longer eligible for the funding proposed for payments authorized by this contract.
 - iii. If any license or certificate required by law or regulation to be held by the Contractor to provide the services required by the contract is for any reason denied, revoked, or not renewed.

Any such termination of this contract under (i), (ii), or (iii), above, shall be without prejudice to any obligations or liabilities of either party already accrued prior to such termination.

 - c. NDDOT, by written notice to the Contractor, may terminate the whole or any part of this agreement.
 - i. If the Contractor fails to provide services called for by this contract within the time specified herein or any extension thereof; or
 - ii. If the Contractor fails to perform any of the other provisions of this contract, or so fails to pursue the work as to endanger performance of this contract in accordance with its terms, and after receipt of written notice from NDDOT, fails to correct such failures within ten days or such longer period as NDDOT may authorize.
15. The Risk Management Appendix, attached, is hereby incorporated into and made a part of this agreement.

16. This agreement becomes effective when all parties have signed and it shall terminate on \${FIELD:TERMINATION_DATE}.

EXECUTED the date last below signed.

WITNESS:

CONTRACTOR:

NAME (TYPE OR PRINT)

NAME (TYPE OR PRINT)

SIGNATURE

SIGNATURE

To be signed by Owner; Partner; Corp. Pres., Vice Pres., or other authorized Corp. Officer. (If signed by other authorized Corp. Officer, please attach copy of Power of Attorney or other documentation showing authority to sign.)

TITLE

DATE

WITNESS:

NORTH DAKOTA
DEPARTMENT OF TRANSPORTATION

NAME (TYPE OR PRINT)

DIRECTOR (TYPE OR PRINT)

SIGNATURE

SIGNATURE

DATE

APPROVED as to substance by:

DIVISION DIRECTOR (TYPE OR PRINT)

SIGNATURE

DATE

CLA 1043 (Div. 50)
L.D. Approved 2-17-05; 3-11

RISK MANAGEMENT AND CIVIL RIGHTS APPENDIX – Next 2 Pages

Risk Management Appendix

Supply Contracts with Private Individuals, Companies, Corporations, Etc.:

Each party agrees to assume its own liability for any and all claims of any nature including all costs, expenses and attorney's fees which may in any manner result from or arise out of this agreement.

Contractor, or Contractor's delivery agent, shall secure and keep in force during the term of this agreement, from insurance companies, government self-insurance pools or government self-retention funds authorized to do business in North Dakota, the following insurance coverages:

- 1) **Commercial general liability and automobile liability** insurance.
- 2) **Workers compensation** insurance.

Contractor shall produce certificates of insurance or copies of insurance policies upon request by the State.

When a portion of a Contract is sublet, the Contractor shall obtain insurance protection (as outlined above) to provide liability coverage to protect the Contractor and the State as a result of work undertaken by the Subcontractor. In addition, the Contractor shall ensure that any and all parties performing work under the Contract are covered by public liability insurance as outlined above. All Subcontractors performing work under the Contract are required to maintain the same scope of insurance required of the Contractor. The Contractor shall be held responsible for ensuring compliance with those requirements by all Subcontractors.

RM Consulted 2007
Revised 6-07



**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
CIVIL RIGHTS APPENDIX**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the Contractor), agrees as follows:

1. Compliance with Regulations: The Contractor shall comply with the regulations relative to nondiscrimination in federally-assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
2. Nondiscrimination: The Contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, national origin, sex, age, disability/handicap, or income status**, in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor shall not participate, either directly or indirectly, in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding or negotiation, made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, national origin, sex, age, disability/handicap, or income status.**
4. Information and Reports: The contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information and its facilities as may be determined by the North Dakota Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the North Dakota Department of Transportation, or the Federal Highway Administration, as appropriate, and shall set forth what efforts it has made to obtain the information.
5. Sanctions for Noncompliance: In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, the North Dakota Department of Transportation shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including but not limited to:
 - a. withholding of payments to the Contractor under the contract until the Contractor complies, and/or
 - b. cancellation, termination, or suspension of the contract, in whole or in part.
6. Incorporation of Provisions: The Contractor shall include the provisions of paragraphs 1 through 6 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto.

The Contractor shall take such action with respect to any subcontract or procurement as the North Dakota Department of Transportation or the Federal Highway Administration may direct as a means of enforcing such provisions, including sanctions for noncompliance provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation by a subcontractor or supplier as a result of such direction, the Contractor may request the North Dakota Department of Transportation to enter into such litigation to protect the interests of the State; and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

**The Act governs race, color, and national origin. Related Nondiscrimination Authorities govern sex, 23 U.S.C. 324; age, 42 U.S.C. 6101; disability/handicap, 29 U.S.C. 790; and low income, E.O. 12898.



Proposal Response Sheets– Next 3 Pages

Instructions: ONE (1) completed set of cost proposal response sheets is to be submitted in a separate sealed envelope or package, clearly labeled "cost proposal."

Proposals must be signed by a company officer empowered to bind the company. An offeror's failure to include these items in the proposals may cause the proposal to be determined to be non-responsive and the proposal may be rejected.

STATE OF NORTH DAKOTA
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
608 EAST BOULEVARD AVENUE
BISMARCK, ND 58505-0700
TELEPHONE 701-328-2543 FAX NUMBER 701-328-2514

DATE

NOTICE OF INTENT TO AWARD

Request for Proposal (RFP) 065-30-13-030 Snow Plow Turnkey Truck Package was issued by the North Dakota Department of Transportation on 02/20/13.

The following vendors submitted proposals in response to the RFP:

LIST NAMES AND ADDRESSES OF ALL OFFERORS THAT SUBMITTED PROPOSALS OR INCLUDE AS AN ATTACHMENT.

A committee evaluated the proposals based upon the criteria stated in the RFP to select the offeror that submitted the most advantageous proposal. We announce our intent to award a contract to **NAME OF SUCCESSFUL OFFEROR**.

The successful offeror is instructed not to begin work, purchase materials, or enter into subcontracts relating to the project until both the recipient and the State sign the contract.

An offeror may protest this Notice of Intent to Award by submitting a written protest to the procurement officer within seven calendar days after the date of this notice.

On behalf of the North Dakota Department of Transportation, thank you for your efforts in preparing a proposal in response to this solicitation. We appreciate your interest in doing business with the State of North Dakota, and your company will remain our bidders list for any future solicitations of a similar nature.

If you have any questions, please feel free to contact me at (701) 328-2543.

Sincerely,

Robin Rehborg

Procurement Officer

CHECKLIST FOR OFFERORS

- ☒ Submit any questions, comments, or requests for clarification to the procurement officer by the deadline for submission of questions.
- ☒ Review the Attachments 2 and 3. State any objections to any of the provisions in the Contract Form or Indemnification and Insurance Requirements prior to the deadline for submission of questions.
- ☒ Be sure an individual authorized to bind the offeror to the provisions of the RFP signs the proposal.
- ☒ Comply with the North Dakota Secretary of State and the North Dakota State Procurement Office Registration requirements prior to the deadline stated in the RFP.
- ☒ Comply with professional licensing requirements, and provide copies of certifications, if required.
- ☒ Provide the information about the qualifications of the firm that will be working on the project.
- ☒ Provide the information about all subcontractors that will be working on the project as required in section 7.08 of the proposal.
- ☒ Identify all known federal requirements that apply to the proposal, the evaluation, or the contract.
- ☒ Provide the required number of letters of reference.
- ☒ Provide all documents or materials that must be submitted with the RFP.
- ☒ Identify and label and sections of the proposal you feel contain confidential information.
- ☒ Provide completed specifications with any deviations clearly stated.
- ☒ Provide product literature with history, warranty, service, parts, and product support information.
- ☒ Provide ONE ORIGINAL (1) AND FOUR COPIES (4) of the proposal without pricing in a sealed envelope or package.
- ☒ Provide proposal response sheets, completed in their entirety, plus complete list of options with pricing, submitted in a separate sealed envelope or package, clearly labeled "cost proposal".



Northern Truck Equipment Corp.

P.O. Box 347 • Watertown, SD 57201-0347 • Phone (605) 886-5816 • Fax: (605) 886-5819
P.O. Box 2435 • Sioux Falls, SD 57101-2435 • Phone (605) 543-5206 • Fax: (605) 543-5219
P.O. Box 130 • Rapid City, SD 57709-0130 • Phone (605) 341-8780 • Fax: (605) 341-8786
P.O. Box 9675 • Fargo, ND 58106-9675 • Phone (701) 281-1718 • Fax: (701) 281-1859

www.ntecorp.com

March 28, 2013

North Dakota Department Of Transportation
State Fleet Services Division
Robin Rehborg
608 East Boulevard Ave
Bismarck, ND 58505-0700

RE: RFP065-30-13-030, Snow Plow Truck Turnkey Package

Northern Truck Equipment Corp. understands the goal for the State Of North Dakota is to keep their snow plow trucks for 15-17 years and knowing this we will use quality parts and equipment to help reduce repair costs. NTEC represents manufacturers of snow and ice equipment with the same goals in mind. We will try to meet or exceed the specifications and if possible use parts that are asked for in the specifications while keep the quality in mind. NTEC is always trying to come up with new ideas that may help improve the equipment, quality of the installation, and to make maintenance easier. We understand the importance of routing hoses/wiring and hanging them or protecting them from the weight of the snow and ice buildup.

Hopefully with the extra steps NTEC takes installing your equipment means less repairs and down time.

In state parts, service and warranty center:

Northern Truck Equipment Corp.
3475 38th Street SW
Fargo, ND 58104
Phone 701-281-1718

Delivery of the equipment NTEC proposes to provide is approximately 150 days after receipt of order. NTEC proposes to deliver trucks 120 days after receipt of chassis and equipment. We will send the State Of North Dakota copies of NTEC purchase orders notifying the State the equipment has been ordered. We will provide the State of manufacturers build dates as soon as we receive acknowledgements from the manufacturers. We will keep in contact with the State to provide status report of the trucks during the build. NTEC will also notify the district shop and state fleet when completed trucks are going to be delivered

NTEC tries to keep fast moving parts or items requested by fleets in stock. NTEC has four locations with a parts inventory of approximately \$485,000.00. We will work with the State on repairs or warranty work as far as either bring the truck to NTEC or NTEC going to the location if required. If there is an issue that requires the manufacturer's attention NTEC will bring the manufacturer's representative out to look at the truck to help resolve the issue

NTEC has been providing truck equipment for over 80 years. NTEC has been a Monroe dealer for 21 years. TBEI Dump Body Group dealer for over 29 years and working with Force America for over 50 years. NTEC has installed like equipment for the State Of ND, State of SD, State of NE and for several municipalities in ND, SD, MN, IA, NE, and WY. NTEC has been a member





Northern Truck Equipment Corp.

P.O. Box 347 • Watertown, SD 57201-0347 • Phone (605) 886-5816 • Fax: (605) 886-5819
P.O. Box 2435 • Sioux Falls, SD 57101-2435 • Phone (605) 543-5206 • Fax: (605) 543-5219
P.O. Box 130 • Rapid City, SD 57709-0130 • Phone (605) 341-8780 • Fax: (605) 341-8786
P.O. Box 9675 • Fargo, ND 58106-9675 • Phone (701) 281-1718 • Fax: (701) 281-1859

www.ntecorp.com

of the National Truck Equipment Association for over 47 years and have met the requirements to be a MVP (Member Verification Program) member. In addition NTEC has 30% of our technicians AWS (American Welding Society Standards) certified and 50% of them ASE certified. After NTEC completes the installation NTEC certifies the truck as a completed unit in accordance with the NHTSA Regulations as well as being registered with NHTSA to do installations of truck equipment. NTEC has also incorporated an installation check list to make sure all items are installed properly. Copies of this check list are sent with the completed unit and also mailed with the invoice. NTEC has fenced in lots for secure truck storage. Listed below are references and attached reference letters.

References:

City Of Fargo
402 23rd Street North
Fargo, ND 58102
Phone 701-241-1439

Miner County Highway Department
Ron Krempges
PO Box 246
Howard, SD 57349
Phone 605-772-4721

Turner County Highway Department
Ron Schulte
PO Box 549
Parker, SD 57053
Phone 605-297-3404

Great Plains International
Adam Garner
PO Box 84007
Sioux Falls, SD 57118

Upon request we can provide many additional references

NTEC provides a 1 year warranty on our workmanship and our manufacturers offer one year to five years depending on the manufacturer and the item. See enclosed Monroe, Crysteel, Force America, and Whelen warranty sheets.

Sincerely,
Northern Truck Equipment

John T. Wartenbee
Vice President





Northern Truck Equipment Corp.

P.O. Box 347 • Watertown, SD 57201-0347 • Phone (605) 886-5816 • Fax: (605) 886-5819
P.O. Box 2435 • Sioux Falls, SD 57101-2435 • Phone (605) 543-5206 • Fax: (605) 543-5219
P.O. Box 130 • Rapid City, SD 57709-0130 • Phone (605) 341-8780 • Fax: (605) 341-8786
P.O. Box 9675 • Fargo, ND 58106-9675 • Phone (701) 281-1718 • Fax: (701) 281-1859

www.ntecorp.com

March 28, 2013

North Dakota Department Of Transportation
State Fleet Services Division
Robin Rehborg
608 East Boulevard Ave
Bismarck, ND 58505-0700

RE: RFP065-30-13-030, Snow Plow Truck Turnkey Package

Dear Robin Rehborg

Below are comments for NTEC bid by line items that NTEC didn't have enough room on the specifications to make some notes. These items are showing areas how we meet and/or exceed your specifications

Page 11 Item 9 I vi- 10" wiper seal for good seal between body and cab shield

Page 40 Item 2 a - 3/4" plates

Page 40 Item 2 c i & ii - Formed Hanger board/exceeds specifications for strength, 1/2" formed plated, reinforced by 1/2" x 7-1/2" flat plate and 2-piece 3/4" x 2" bar on edge. Heavy duty hinge line of 3.250" OD Mechanical tube with a .344" wall thickness

Page 40 Item 2 c iii - 96" length hinge line/3 anchor points, 2.5" OD cold rolled 1018 steel with 2 outer hinges, 3-1/4" x 6" and 1 center hinge of 3-1/4" x 10-1/4" Mechanical tubing with .344 wall thickness

Sincerely

John T. Wartenbee
Vice President



SPECIFIC TERMS & CONDITIONS

General Information. The State of North Dakota truck fleet is a very large investment, and maximizing that investment is imperative. State Fleet Services operates using revenues generated from the rental of its vehicles to state agencies and institutions, and State Fleet Services incurs costs of **\$539** per truck each month over a seventeen-year amortization schedule/lifecycle. When new trucks are purchased, they cannot be rented by using agencies until truck boxes and accessories have been installed, and these costs can be substantial. For example, if twenty new trucks are purchased and the installer takes six months to install the box and accessories, the state incurs cost of **\$64,680** without receiving any revenues from those trucks. Additional costs may be incurred if a delay in receiving the new trucks results in major repairs being made to an old truck or prevents old trucks from being sold at auction. These expenses increase the rental rates of all state fleet vehicles, and ultimate increases to cost of state government. **Therefore, reducing the time required to approximately 120 days or less to integrate 20 new trucks into the fleet system is in the best interest of the state and North Dakota taxpayers.** In order to expedite the equipment installation process, the successful bidder may have the trucks drop shipped from the OEM to a plow/body manufacturer for some or all of the assembly; however the bidder must correct any deficiencies to the installations found by the inspection team within the borders of ND, a bordering city, or a location agreed to with NDDOT. If any installation of equipment is performed at a plow/body manufacturer, the bidder must provide round trip transportation and per diem for 2 NDDOT employees from Bismarck ND to inspect and approve the prototype.

Award. Award will be made to the offeror whose proposal best meets the specifications and other requirements of the request for proposal (RFP) and is the best proposal based on selection committee's review and scoring of all proposals using the guidelines outlined in the RFP. Minor deficiencies or technical variances, which by their nature, are restrictive to a given manufacturer, may be waived if, in the judgment of the RFP committee it would be in the best interest of the state of North Dakota and would not prejudice the rights of other offerors. The state reserves the right to reject any and all proposals in whole or in part. The state reserves the right to award by item, groups of items, or total proposal cost for all items.

Required Delivery Schedule, Acceptance, and Payment. Upon award, a staggered delivery schedule will be created based on number and type of trucks awarded to the contractor(s). The timetable will begin when at least three chassis are delivered to the contractor. Time will be allowed for prior contractor projects to be completed. Two additional working days will be allowed per package type for prototype time. State Fleet Services will arrange to have the chassis delivered to the successful contractor(s). **All trucks must pass a final inspection and be accepted by NDDOT at the contractor(s) location within ND, a bordering city, or other location as agreed to with NDDOT. Any deficiencies identified by the inspection team must be made at the inspection site or otherwise agreed upon location to bring the truck into compliance before delivery can be made.** Final inspections will be made as trucks are completed and delivery must be made within one week of each final inspection. Payment will not be made until trucks have been delivered and accepted by the delivery location. Payment will be withheld on final unit until calibration and training requirements have been met. Vendor is to contact named NDDOT representative to schedule inspections at least 5 days in advance.

Performance incentive. It is of the best interest of the state to complete the trucks in a timely manner; therefore, the following incentive has been created: If the contractor(s) delivers all trucks to

- the respective shipping location before the required delivery date an additional award of 3% of the total award will be paid to the vendor. No performance incentive will be awarded for delivery after the required delivery date or if trucks fail to pass the final inspection and do not meet the acceptance requirements of NDDOT. No sacrifices in quality of product or workmanship will be accepted to meet this incentive.

Progress Reports. The successful bidder(s) shall provide monthly progress reports addressing the status of accessories received; work completed, and report any problems affecting the completion schedules. Such reports will be provided to State Fleet Services on the first of every month, beginning the first full month after delivery of the chassis. Periodic inspections will be made by the state to answer questions and insure quality.

Force Majeure. If execution of this contract shall be delayed or suspended, and if such failure arises out of causes beyond the control of and without fault or negligence of the contractor, the contractor shall notify State Fleet Services, in writing, within twenty-four (24) hours after the deal. Such causes may include but are not limited to acts of nature, war, acts of public enemy, acts of any government entity in its sovereign or contractual capacity, fires, floods, epidemics, strikes, and unusually severe weather. The state reserves the right to adjust the timetable in such an event.

Liquidated Damages. Time is of the essence in this contract. Failure to start and complete all work specified within the time allowed shall constitute material breach of contract. The "time allowed" will be based upon the timetable developed at the time of award and calculated when the first chassis is delivered to vendor, following the guidelines stated above. Failure of the successful offeror/contractor to deliver the completed trucks within the time allowed will result in damages, and for each consecutive day in excess, a sum of \$50 per truck per day shall be withheld from payment due the contractor. Such amount shall not be construed as a penalty but as a minimum value of liquidated damages that may be deducted from payment due to the contractor if such delay occurs.

Supplemental Purchases. Additional turnkey packages may be ordered from this proposal up to or exceeding the quantities of the initial order until **December 31, 2014**. The total proposal price is to include all discounts and deductions, and is to be less federal and state taxes, for which exemption certifications will be furnished upon request. Pricing shall be firm for the first 60 days of the contract period, after which time the contractor may submit a request for a price increase to the Procurement Officer. Request for a price increase or decrease must include a copy of the manufacturer's official notice or other evidence that the increase or decrease is applicable to all customers. Price increases will become effective 30 days after the receipt of the request, except the state reserves the right to accept or reject within 30 days or cancel the contract. All shipments are to be billed at prices in effect at the time of order, not the date the shipment is made.

Fleet Services Specifications in This Section

SSP-01 Warning Light System

SSP-22-2AUBW 58,000 GVW Tandem with Dump Box, for Underbody Scraper
and Snow Wing

SSP-22-2ADSUBW 58,000 GVW Tandem with Dump & Spreader Box, for
Underbody Scraper and Snow Wing

Fleet Services Informational Data & Photos

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
SPECIFICATIONS
FOR
SIX LIGHT HEAD 12 VOLT SYNCHRONIZED LED WARNING LIGHT SYSTEM
WHELEN DOT-LED™, NDDOT03 OR PRE-APPROVED EQUAL**

Bidders Instructions: Indicate compliance to the specifications on the "COMPLY YES/NO" line by each specification. Indicate any deviations from the specifications whether the minimum specifications are met or not on the "SPECIFICATION DEVIATIONS" line. Failure to comply with bid specifications may result in rejection of the bid. The state reserves the right to waive minor deficiencies or technical variances.

(All new products must be provided to NDDOT for testing purposes. Only products approved as a result of this request will be accepted.)

	COMPLY YES	NO	SPECIFICATION DEVIATIONS
1) Two Whelen LED Micro Edge® 180° Light heads, or pre-approved equal.	<input checked="" type="checkbox"/>	—	_____
a) Aluminum I-beam structured housing.	<input checked="" type="checkbox"/>	—	_____
b) Shatter-resistant amber polycarbonate lenses with smooth exterior.	<input checked="" type="checkbox"/>	—	_____
c) Each Micro Freedom shall contain super-LED lamps with each having eighteen lamps that are mounted in two straight rows of nine amber LED's over nine clear LED's that will mounted behind a highly polished dual reflector per head.	<input checked="" type="checkbox"/>	—	_____
d) The combination of the two light heads must produce a 360° pattern output pattern.	<input checked="" type="checkbox"/>	—	_____
e) Micro Edges to alternate with the rear LED light heads of the system.	<input checked="" type="checkbox"/>	—	_____
f) Rectangular dimensions approximately 12.3"L x 4.67"H x 9.3"W.	<input checked="" type="checkbox"/>	—	_____
2) Four rear Whelen 400 super-LED directional light heads with aluminum housings, or pre-approved equal.	<input checked="" type="checkbox"/>	—	_____
a) Rectangular approximately 3 1/2" W x 7 3/4"H x 3 1/2"D housings.	<input checked="" type="checkbox"/>	—	_____
b) Shatter-resistant polycarbonate lenses with smooth exterior.	<input checked="" type="checkbox"/>	—	_____
i) Attached with stainless steel screws into a nylon mounting bracket.	<input checked="" type="checkbox"/>	—	_____
c) Two pair, one pair amber and one pair clear.	<input checked="" type="checkbox"/>	—	_____
i) Pairs independently controlled both from each other and from front.	<input checked="" type="checkbox"/>	—	_____
d) Wide angle linear LED's capable of emitting 180° of light.	<input checked="" type="checkbox"/>	—	_____
e) Heavy duty DOT solid state flasher with diagnostics.	<input checked="" type="checkbox"/>	—	_____
3) No less than 240 lineal feet TPE 3 conductor 600V 14 AWG stranded, pretinned copper flexible to -40° with no less than 30 feet of same type cable for each micro edge.	<input checked="" type="checkbox"/>	—	_____
4) Accessories			
a) Waterproof connectors, W441D/W442D/W441D/W446D, or pre-approved equal. Vendor to provide ample connector quantities for system installation to allow for disconnect of amber and clear light heads at LB box.	<input checked="" type="checkbox"/>	—	_____
b) Two one-inch PVC LB conduit fittings.	<input checked="" type="checkbox"/>	—	_____
c) The bid price shall include any miscellaneous items and special tools necessary to provide a complete installation.	<input checked="" type="checkbox"/>	—	_____
5) NOTE: Panel switches and indicator lamps provided by others.			
6) Vendor is to provide hands-on technical assistance to the installers.	<input checked="" type="checkbox"/>	—	_____
7) Manufacturer's written warranty of 2 years for complete system with 5 years on LED panels and LED ballasts.	<input checked="" type="checkbox"/>	—	_____

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
SPECIFICATIONS
FOR
HYDRAULICS AND DUMP BOX FOR UNDERBODY & WING
(FOR TANDEM AXLE TRUCK – APPROXIMATELY 58,000 LBS G.V.W.)**

Bidders Instructions: Indicate compliance to the specifications on the "COMPLY YES/NO" line by each specification. Indicate any deviations from the specifications whether the minimum specifications are met or not on the "SPECIFICATION DEVIATIONS" line. Failure to comply with bid specifications may result in rejection of the bid. The state reserves the right to waive minor deficiencies or technical variances.

General Information:

The hydraulics, box, and installation by the successful bidder must be complete in every aspect of the following specifications. All stainless steel components to be made of 201 or 304 grade. The painting of all installed accessories shall be complete and absolute, including primer. All minor items including, but not limited to, conduit, connectors, tape, paint, fittings, fuses, etc., are the responsibility of the bidder. When specifications do not clearly identify the proper installation or it is obvious there is an error, Tim Paul at State Fleet Services (701-328-1465) must be contacted for direction. A plan for mounting locations of the tool box, hydraulic reservoir, valve enclosure, ladder, etc. must be submitted to State Fleet and a prototype will be approved. It shall be the responsibility of the installer to relocate OEM and non-OEM components to accommodate the accessories if required by NDDOT. Frame modifications to accommodate pump, or other equipment installation are not acceptable. Complete hydraulic system provided to be from one common supplier or source. No additional monetary amount will be allowed.

	COMPLY YES	NO	SPECIFICATION DEVIATIONS
8) Hydraulics – Rear engine power take off (Repto).	<u>X</u>	—	
a) Hydraulic pump: Force America FASD45R or Rexroth A10V100.	<u>X</u>	—	<u>FORCE AMERICA FASD45R</u>
i) 6.0 CID.	<u>X</u>	—	
ii) 46 GPM at 1800 RPM.	<u>X</u>	—	
iii) Load sensing with adjustable compensator with system pressure set for optimum performance of installed components.	<u>X</u>	—	
iv) 1 1/4" keyed shaft.	<u>X</u>	—	
v) Side ported.	<u>X</u>	—	
vi) Automatic electric pump outlet shut off if oil level drops to an insufficient level, with override switch.	<u>X</u>	—	
b) Balanced drive line: Spicer 1310/1350/1380 series or equal.	<u>X</u>	—	
i) Splined to allow for movement.	<u>X</u>	—	
ii) Non Greaseable U-joints.	<u>X</u>	—	
iii) Tube to be filled with material to prevent driveline moan.	<u>X</u>	—	
iv) Installer responsible for Repto adaptor if needed.	<u>X</u>	—	
c) Mounting: Shaft centerline at least one degree to the repto centerline not to create more than a three-degree angle. Shaft to have enough movement to allow removal of driveshaft without loosening or removing hydraulic pump.	<u>X</u>	—	
i) Body vendor provided bracket fabricated on frame rails.	<u>X</u>	—	
d) Reservoir: mounted between cab guard uprights, 10 gauge steel, 40-gallon capacity with baffle. Tank dimensions and height to be determined on prototype. Tank to be secured down by steel straps.(see drawing)	<u>X</u>	—	

Specifications for Hydraulics & Dump Box, Approximately 58,000 lbs G.V.W.

SSP-22-2AUBW

	COMPLY		SPECIFICATION
	YES	NO	DEVIATIONS
i) Basket type filler breather cap.	X	—	
ii) Magnetic drain plug, easily accessible.	X	—	
iii) 3" OD with 2" ID NPT suction strainer with 100-mesh screen type filter.	X	—	
iv) Separate return port for control drain line.	X	—	
v) Sight temperature gauge externally mounted.	X	—	
vi) 2" full flow brass ball valve for suction line shutoff.	X	—	
vii) Electric level and temperature sending unit, wired to control panel and back lit for "low oil" and "oil temp" warning.	X	—	
viii) In-tank return filter to handle flow requirements and have porting of at least 1 1/4". Filter to have both visual and electrical indicators. Filter element shall be 10 micron "absolute" rated for no less than 80 GPM. Filter assembly shall be Filtration Products No. FFPR25-20N, Zinga TS-1200-25-1-0/ZSRE-409-10 or approved equal.	X	—	
ix) Hydraulic system shall be filled with the hydraulic oil under current contract with NDDOT. The contract vendor is to provide oil to the installer at contract price. Pricing available from State Fleet or https://secure.apps.state.nd.us/csd/spo/services/bidder/listCurrentContracts.htm . Oil to be Cenex, Quicklift® HTB Low Viscosity winter fluid.	X	—	
e) Electro/Hydraulic Valves: Shall be Force America add-a-fold, Rex Roth MP 18 or approved equal. The control valves shall be pulse-width modulated and where indicated proportionally controlled. All segments shall have heavy-duty continuous coils and connections shall be Hirshman or ITT Cannon type connectors. Each segment shall be equipped with a manual override. Each segment shall have adjustable flow control. Valve sections to be arranged as follows:	X	—	FORCE AMERICA ADD-A-FOLD
i) Hoist, 4-way double acting with down side 500 psi relief, proportional control.	X	—	
ii) Plow lift, 3-way.	X	—	
iii) Plow angle, 4-way.	X	—	
iv) Scraper lift, 4-way, adjustable to maintain a constant psi of 300-500 hydraulic pressure down on road.	X	—	
v) Scraper angle, adjustable cross-port relief set @ 1200 psi. or at scraper manufacturers recommendation.	X	—	
vi) Wing toe (post), 4-way, adjustable work port relief up and down.	X	—	
vii) Wing heel, 4-way, proportional control, adjustable work port relief up and down.	X	—	
viii) Auger, proportional, 2-way with minimum flow rate of 21 GPM, adjustable work port relief.	X	—	
ix) Anti-ice, proportional, 2-way with minimum flow rate of 14 GPM.	X	—	
x) Spinner, proportional, 2-way with minimum flow rate of 7 GPM.	X	—	
(1) Note: The last two functions, Anti-ice and Spinner will be supplied with a two-function manifold using Hirschman or ITT cannon type connectors. This manifold would also include an integral end cover function.	X	—	

Specifications for Hydraulics & Dump Box, Approximately 58,000 lbs G.V.W.

SSP-22-2AUBW

	COMPLY YES	NO	SPECIFICATION DEVIATIONS
xi) Valve Enclosure to have the capability of housing 10 to 11 valve sections: Designed to be weatherproof and protect the valves and valve operators from road contaminants. Located vertically on cab guard on drivers side (see attached photo). Must provide rubber bumper to protect cab from valve enclosure door.	X	—	_____
(1) Easy serviceability with unobstructed access to all valves under cover.	X	—	_____
(2) Valve Enclosure to have removable weather-tight access panel on inboard side to permit field removal of spool valves without removing valve manifold assembly from enclosure.	X	—	_____
f) Spreader Control			
i) Force America 6100 or pre-approved equal. The electronic spreader control shall be designed for precise, closed loop control of granular material and direct liquid application. The unit must be protected from reverse polarity, as well as over-voltage protected.	X	—	_____
ii) The unit must be supplied with easy to service speedometer connection, valve control connection, and main power connection.	X	—	_____
iii) The unit must have full featured micro-processor control and provide operational modes for manual, open loop, or closed loop. In addition, the unit must be compatible with information management systems (GPS), provide rotary auger speed adjustment, rotary spinner speed adjustment, and ground based blast mode momentary, timed, or distance. Must have standby mode.	X	—	_____
iv) Temperature sensor, which shall be capable of displaying ambient air and pavement temperature simultaneously. Force America kit "6100MACC-ROAD TEMP-SENSOR" unit shall include, Sprague RoadWatch® temperature sensor part #94056A001 and adapter cable part #11480A001 or equal and must be compatible with the specified sander controller. Temperature sensor shall be mounted to the mirror bracket of the truck and wire routed into the cab and connected through the use of the interface to the sander control.	X	—	_____
v) Features			
(1) Remote mounted, 7" color LCD to display all spreader functions.	X	—	_____
(2) Five current compensated valve drive outputs.	X	—	_____
(3) Three types of material and ten programmable spread rates.	X	—	_____
(4) Bi-directional RS232 for data collection.	X	—	_____
(5) The electronic spreader firmware shall be upgradeable by downloading files from the supplier's web site at no charge to NDDOT for the life of the unit.	X	—	_____
(6) Closed loop granular feedback sensor and cabling.	X	—	_____
(7) Programming shall provide for automatic default to open loop in the event of a feedback failure.	X	—	_____
(8) Unit must have the ability to cross calibrate from closed loop to open loop operation.	X	—	_____
(9) Multi-lane dual boom direct liquid.	X	—	_____
(10) Enabled Event logging for AVL/GPS.	X	—	_____
(11) Supervisor access security key for each district.	X	—	_____

Specifications for Hydraulics & Dump Box, Approximately 58,000 lbs G.V.W.

SSP-22-2AUBW

	COMPLY YES	NO	SPECIFICATION DEVIATIONS
(12) Unit shall have a stationary unload feature for granular, prewet, and anti-ice functions.	<u>X</u>	—	_____
(13) Application rate limit adjustable from 20-3000 lb/mile. Hydraulic vendor to assist with final calibration upon delivery.	<u>X</u>	—	_____
g) Control Center			
i) Force America Patrol Commander Ultra Series or pre-approved equal. The control center must be an integral unit used for controlling the work functions of the electro/hydraulic control valves. The control center is to have the capabilities to install the spreader control box as a separate item to the control panel. The control panel is to have the capabilities to joystick control the miniature proportional joysticks for valve control of the dump box, front plow, underbody scraper, wing toe, and wing heel along with underbody scraper and wing disabling switches. Two-step select and operate systems are not acceptable.	<u>X</u>	—	_____
ii) Single miniature joystick shall control the hoist with center interlock or dead-man switch, and also contain integral dual axis miniature proportional joystick controls for plow, underbody scraper and wing along with three push button switches for spreader blast, standby, and box vibrator. The scraper control must be held in the down position for 3 seconds to activate automatic scraper down pressure mode. The controller must activate pre-wet ball valve in conjunction with the sander.	<u>X</u>	—	_____
iii) There shall be a pressure transducer installed in the scraper circuit to monitor the down pressure on the scraper. The transducer shall be wired into the valve module and the scraper pressure shall be read on the 7" color LCD spreader display.	<u>X</u>	—	_____
h) Wiring			
i) All wiring shall have color-coding with amp style connectors to connect the control panel and to valve enclosure. All connector pins shall be gold style to ensure good connections between the connecting halves. All wiring inside the valve enclosure shall have LED lights to indicate which valves are operating when function is required. All wiring inside of the enclosure shall be connected to the amp style connector to facilitate proper connection between the inside of the box and the outside of the box.	<u>X</u>	—	_____
ii) The wire ends are to be ITT or Cannon type connectors to connect the wire harness to the valves. The wire harness shall be wrapped to provide protection of the wires and used as a way to bundle the wires in a neat package.	<u>X</u>	—	_____
iii) The main control panel shall have its own power source with on/off to be controlled by ignition key switch via relay.	<u>X</u>	—	_____
iv) Parts manuals, service literature, driver, and 6 hours service training per location must be supplied at no extra charge. Payment contingent on performance.	<u>X</u>	—	_____
v) Each truck style box shall be wired identically and have the same color/size wiring to each circuit.	<u>X</u>	—	_____

Specifications for Hydraulics & Dump Box, Approximately 58,000 lbs G.V.W.

SSP-22-2AUBW

	COMPLY		SPECIFICATION
	YES	NO	DEVIATIONS
i) Seat mounted hydraulic and sander controls to move with the seat suspension. The length and height not to obstruct the view of the operator dashboard. The position to be determined by the vendor and NDDOT. Bracket to be made of aluminum.	<u>X</u>	—	_____
i) The design and location must be approved on prototype (see attached photo). All openings shall be grommetted and sealed with an appropriate caulking. Final mount to be approved.	<u>X</u>	—	_____
j) Switches and Indicator Lights			
i) The switch panel will be included, installed, pre-wired and circuit breaker protected by OEM of truck.	<u>X</u>	—	_____
ii) Panel Switches:	<u>X</u>	—	_____
(1) Front, rear and wing amber warning.	<u>X</u>	—	_____
(2) Rear clear warning.	<u>X</u>	—	_____
(3) Work light.	<u>X</u>	—	_____
(4) Momentary switch for box vibrator.	<u>X</u>	—	_____
(5) Momentary switch for hydraulic pump override.	<u>X</u>	—	_____
(6) Air tailgate.	<u>X</u>	—	_____
iii) Body vendor to provide the following:			
(1) Switches and indicators to be mounted in control panel. All switches, functions & names shall be backlit/illuminated.	<u>X</u>	—	_____
(a) Auto recall switch(ability to lift all plows)	<u>X</u>	—	_____
(b) Wing disable switch.	<u>X</u>	—	_____
(c) Underbody disable switch.	<u>X</u>	—	_____
(d) Liquid switch.	<u>X</u>	—	_____
(e) Spreader switch.	<u>X</u>	—	_____
(f) All switch labeling to include OEM switches if not provided by truck manufacturer. Any additional labels provided by the truck manufacturer to be left in truck cab for future labeling of any unused switches.	<u>X</u>	—	_____
(2) Indicator lights for body up/down (red), low hydraulic oil, oil temp, located in the panel. The warning lights shall flash when activated, audible alarms to be disabled.	<u>X</u>	—	_____
(3) An 80-amp thermal breaker with manual reset shall be provided in the wire between the power source and the switch panel.	<u>X</u>	—	_____
(4) One wire shall be run from the switch accessory and one wire form the battery to the switch panel.	<u>X</u>	—	_____
k) Special Accessory Wiring			
i) Requirements – a 75 amp constant duty relay shall be provided to remove specified accessory circuits from the ignition key switch to prevent switch overloads, yet retaining key switch on/off control. Circuits controlled through relay shall include all console switches and functions, except plow lights and FM radio power source. Accessible terminals shall also be available for controlling additional department-installed equipment. This relay may be part of the hydraulic control counsel circuitry.	<u>X</u>	—	_____
ii) Headlight switching control will be part of the OEM truck bid.	<u>X</u>	—	_____

Specifications for Hydraulics & Dump Box, Approximately 58,000 lbs G.V.W.

SSP-22-2AUBW

COMPLY
YES NO

SPECIFICATION
DEVIATIONS

- | | | | |
|--|---|---|--|
| l) Hydraulic hoses to be U.S. made Weatherhead, Parker or approved equal as follows: | | | |
| i) 2" suction line – SAE 100 R4 | X | — | _____ |
| ii) 1" pressure (pump to valves) – SAE 100 R2 | X | — | _____ |
| iii) Hoist (not smaller than port size) – SAE 100 R2 | X | — | _____ |
| iv) Return line 1 1/4" – SAE 100 R1 | X | — | _____ |
| v) Plow lift, reversing 1/2" – SAE 100 R2 | X | — | _____ |
| (1) Reversing hoses terminated with Pioneer 9500 series 1/2" female lever quick coupler breakaway kit No. 9500-4 mounted to driver's side of quick hitch at height of the top of truck frame. (See photo) | X | — | _____ |
| m) Hydraulic lines for the sander shall be routed through the rear corner running board with through fittings, Parker brass anchor connectors 207ACBH or equal into running board and quick couplers with tethered dust caps at that point. They should be routed to the side, which is most efficient for the type of sander to be installed. A protective shield shall be installed to protect hoses from wheel spray. The return shall be split outside of box and have one 1" and one 1/2" coupler to allow for two return hoses from tailgate sander. | X | — | _____ |
| i) Two main supply sander lines shall be 3/4" schedule 80 high-pressure pipe. Return line pipe to be 1" no less than SAE R1. Black pipe acceptable, to be spaced for material to fall through. Design to be approved on prototype. | X | — | NTEC USES HYDRAULIC CLAMPS FOR TUBING. SEE ENCLOSED BUYERS PRODUCT SHEET |
| ii) Hose from valve body and from sander connection, high-pressure line shall be two wire SAE 100 R2 rated. | X | — | _____ |
| iii) Hose from reservoir and from sander connection to the return line shall be no less than one wire 1250 psi and must be plumbed in ahead of the return line filter. | X | — | _____ |
| iv) Sander lines are to be fastened with hold-downs, which are removable for maintenance and shall keep the lines free from interference of hoist functions. | X | — | _____ |
| n) All pressure line fittings shall use high-pressure steel adapter fittings with swivel couplings to allow easy hose or component removal. (JIC 37° flare fittings wherever possible and practical) Return lines must use appropriate fittings for pressure present. All hoses from the back of the black pipe to the anchor connectors in the box must have 37° flare swivel fittings throughout. | X | — | _____ |
| o) All test ports for testing shall be accessible for connecting test gauge. | X | — | _____ |
| p) All hydraulic hosing to be routed, secured, and protected from pinching or abrasion. Securing of hoses to be designed to withstand severe ice and snow buildup. Use heavy J-hook style hose hangers as necessary. Routing and support to be approved. | X | — | _____ |
| 9) Dump Box | | | |
| a) 8 cubic yard capacity with 10 yard ends. | X | — | _____ |
| b) Approximate inside dimensions: 14' x 7' x 2'-4". Width of box to extend over rear duals. | X | — | _____ |
| c) Front and rear ends to be minimum 6" higher than sides and equipped with pockets for 2" wide sideboards. | X | — | _____ |

Specifications for Hydraulics & Dump Box, Approximately 58,000 lbs G.V.W.

SSP-22-2AUBW

	COMPLY YES	NO	SPECIFICATION DEVIATIONS
d) 1/4" stainless steel floor, 7-gauge stainless steel sides and tailgate, with steel certification.	X	—	
e) 30-degree minimum slope on side running boards.	X	—	
f) Boxed top rail at sides and front.	X	—	
g) Sides to have a boxed type 8 gauge full length horizontal side brace with a minimum 30-degree top slope. The bottom sill shall have an additional 3" x 1/2" x 6' loader strike plate. Both sides.	X	—	7 GAUGE 201 SS SIDE MATERIAL WITH SINGLE PANEL PRESSED HORIZONTAL SIDE BRACE
h) Front head to have a centered V-type brace.	X	—	
i) Free standing/stationary cab guard shall be approximately 24" with width to widest point of cab and adequate height to provide proper cab clearance. Cab guard shall allow for the chassis exhaust system to pass through or along side to give the best cab protection without modification of the exhaust system. If the exhaust system must be modified it must be approved. All modifications are at the box vendor's expense. (See drawing)	X	—	
ii) Cab shield panel to be minimum 10 gauge stainless steel.	X	—	
iii) Uprights shall be standard 6" channel to top part of cab and for cross member.	X	—	
(1) Upright flanges shall face away from center of chassis.	X	—	
(2) Each upright shall be bolted with a minimum of 4 each of 5/8" grade 8 bolts to chassis rails.	X	—	
(3) 6" channel to be placed between the uprights (flanges down) on the top of the frame rails and properly welded to uprights. This channel shall not be welded to frame rails. Hydraulic tank brackets to be welded to topside of channel.	X	—	
iv) Top cross member shall be welded to uprights and gusseted with two 1/4" plates of 6" x 6" x 8 1/2" dimensions at rear part of assembly.	X	—	
v) Cab shield shall be continuously welded or bolted with grade 8 bolts to uprights and top cross member.	X	—	NTEC WILL BOLT CAB SHIELD TO UPRIGHTS/TOP CROSSMEMBER
(1) Reinforced and welded to cross member with two 3" - 4.1# channel irons, which are extended the full length of the cab shield and align with the 6" channel uprights.	X	—	
(2) Adequately gusseted from 3" channel iron to 6" channel iron.	X	—	
(3) Welded to 3" channel irons with flanges downward.	X	—	
(4) Have provisions that do not allow ponding of water.	X	—	
vi) 1/4" x 2" x 2" angle iron shall be welded at bottom of cab shield between uprights to support cab shield.	X	—	
vii) Rubber seal/wiper between shield and dump body. Shall not allow accumulation of material between body and cab guard.	X	—	
viii) Shovel holder for long handle square spade attached to upright.	X	—	
ix) Must have prototype approved.	X	—	
j) Crossmemberless subframe	X	—	
k) Body longitudinals to be minimum of 8" steel I beam or deep flared fully boxed 1/4" stainless steel.	X	—	8" I-BEAM MILD STEEL
l) Double acting tailgate with formed boxed outer edge and boxed horizontal center braces having 30 degree slope top edge.	X	—	
m) D-ring attached to inside top center for lifting purposes.	X	—	

Specifications for Hydraulics & Dump Box, Approximately 58,000 lbs G.V.W.

SSP-22-2AUBW

	COMPLY YES	NO	SPECIFICATION DEVIATIONS
n) Solenoid operated tailgate lock Velvac Kit No. 10037 or Springville part No. 405317 with accessory valve Velvac part No. 032086 or Williams Controls part No. WM778A or approved equal. Installation shall allow operation of the tailgate should the air operated device fail.	X	—	_____
i) Valve location to be determined on prototype.	X	—	_____
ii) Shaft to be retracted in closed or off position.	X	—	_____
iii) The manual tailgate control lever shall have a detachable bolt connection or "corn pin" device.	X	—	_____
iv) Stainless steel tailgate linkage with exception to threaded rods, blocks and clevises.	X	—	_____
o) Top and bottom tailgate hinge pins to be 1" diameter.	X	—	_____
i) Tailgate hinge pins and latching mechanisms to be greaseable.	X	—	_____
p) 5/16" spreader chains attached to upper sides of tailgate with upper and lower anchors that permit hinging tailgate to top or bottom. Chain to be encased in hydraulic hose sheathing.	X	—	_____
q) Continuous welds throughout.	X	—	_____
r) Stainless steel ladder – mounted curbside. Must fold up for transport.	X	—	_____
i) Fabricated with approximately 5 rungs with access from about a 2' grade. Ladder design must be approved by NDDOT.	X	—	_____
ii) Mounted on front side of box ahead of dual tires.	X	—	_____
iii) When in transport position, must not extend beyond main edge of body more than 3". Adequate latch system to keep in place while traveling.	X	—	_____
iv) Fixed slip resistant grip strut rungs with no sharp corners welded to inside of box allowing a person to climb into box.	X	—	_____
v) Skid resistant/epoxy-bonded coating on top of each rung. Bustin Industrial Products Firm-grip™ grating, formed channel tread grip, or equal may be substituted for skid resistant coating on the rungs.	X	—	_____
s) All additional electrical wiring must be circuit breaker protected.	X	—	_____
t) Back-up alarm, self-adjusting sound level, 87 thru 107 decibels, and lifetime warranty ECCO SA901, Target Tech 210505, or approved equal. To be mounted to the bottom of the right taillight guard.	X	—	ECCO SA901
10) Lights – NOTE: All wiring for the tail and clearance lights shall be protected from wear and tear and shielded from mud and ice buildup. All holes for wiring must be grommited.	X	—	_____
a) Dump Box			
i) Lights to meet ICC regulations.	X	—	_____
ii) Clearance lights and reflectors - Minimum two amber clearance lights in front and two red clearance lights in rear of box.	X	—	_____
(1) Minimum 9 diode high count LED lamps, Grote G3002 red, Grote G3003 yellow or equal.	X	—	_____
iii) LED Stop/Turn/Tail & Backup lights to have a 4" x 1/4" stainless steel bolted on rectangular shield around them. Taillights mounted on the outer edge of the box with bolt on brackets leaving a 1" air gap between housing and box side. Backup light to be below S/T/T light. Height 68" – 72" from ground level to center of S/T/T light. Exact location to be approved.	X	—	_____

Specifications for Hydraulics & Dump Box, Approximately 58,000 lbs G.V.W.

SSP-22-2AUBW

	COMPLY YES	NO	SPECIFICATION DEVIATIONS
(1) Stop/Turn/Tail and Backup lights to be Whelen 700 series, (7" x 3") or pre-approved equal mounted in double-light head 700 series rectangular stainless steel housing.	<u>X</u>	—	<u>WHELEN 700 Series</u>
b) Front Plow Lights – NOTE: All wiring to have protective covering and routed so as not to be pinched or worn prematurely from rubbing or chafing. Truck will be factory wired for plow lights to the hood hinge area with switch installed on instrument panel.	<u>X</u>	—	_____
i) Truck Lite #80880 snowplow lights or equal.	<u>X</u>	—	_____
ii) Housings to be corrosion and impact resistant.	<u>X</u>	—	_____
iii) LED lamps.	<u>X</u>	—	_____
(1) High/low beam, 12 volt.	<u>X</u>	—	_____
(2) Turn signal/parking lamp.	<u>X</u>	—	_____
iv) Light support – 1 ¼" steel angle to be fastened with existing grill bolts. Angle to be approximately 2' long, not to exceed hood height. Light mounted to 1" square tubing with adjustment holes capable of adjusting to an additional height of 24". 1 ¼" angle welded to top of square tubing and angle braced to extend light to position directly above OEM headlights. Design to be approved.	<u>X</u>	—	_____
v) Wiring to be connected to OEM wiring at hood hinge area and can be disconnected using a GM weatherpack connector or approved equal.	<u>X</u>	—	_____
vi) All wire splices shall be soldered and protected with heat shrink covering.	<u>X</u>	—	_____
vii) Wires to be properly grounded.	<u>X</u>	—	_____
c) Top/Rear plow light system. SIX LIGHT HEAD SYNCHRONIZED LED WARNING LIGHT SYSTEM (Must meet specification SSP-01) NOTE: All wiring for strobe lights shall be protected from abrasion and shielded from mud and ice buildup. All holes for wiring must be grommited.	<u>X</u>	—	_____
i) Four rear mounted remote LED Warning light head assemblies, two amber and two clear. Continuous individual wiring from each light to the rear electrical housing and then to the control panel.	<u>X</u>	—	_____
ii) Two cab guard mounted 180 degree LED warning light head assemblies. Continuous individual wiring from each light to the control panel.	<u>X</u>	—	_____
(1) Mount level to front corners of cab guard, extendable from width of cab guard to outside width of mirrors through use of tube-in-tube design. Design must be approved. (See photo example)	<u>X</u>	—	_____
(2) Wiring for light heads from chassis frame to top of cab guard to be routed through metal conduit attached to the cab guard upright or split loom and tube clamps may be used as long as the clamps have maximum spacing of 12 inches.	<u>X</u>	—	_____
iii) LED warning light system with heavy duty DOT solid state flasher with diagnostics.	<u>X</u>	—	_____
iv) Rear light electrical connectors housed in PVC access fitting connectors and PVC fittings provided by the strobe system supplier.	<u>X</u>	—	_____

Specifications for Hydraulics & Dump Box, Approximately 58,000 lbs G.V.W.

SSP-22-2AUBW

	COMPLY YES	NO	SPECIFICATION DEVIATIONS
v) Rear light support – 1 ½" square telspar steel tubing mounted approximately 60 degrees on rear of box and roughly adjustable from 9' – 12'. Tubing to be angled to the rear but not extending more than 18" behind box. Square tube support bracket not acceptable. Mounting brackets to be as high on the side of box as possible without interfering with tailgate operation or hinge pin removal.	X	—	_____
(1) See pictures of DOT support bracket to allow telspar tubing to pivot from vertical to horizontal. DOT will supply prototype bracket to awarded vendor.	X	—	_____
(2) Amber LED lights to be mounted to top of support. Clear LED lights to be mounted ½ the distance from top of support to top of box. Stainless steel fasteners to be used for the mounting of the aluminum light heads to the telspar along with nylon isolating washers placed between telspar and aluminum light head to prevent corrosion caused by dissimilar metals.	X	—	_____
e) One wing and one underbody scraper 12V LED work light, located at the rear corners of the cab. One sander work light located under left taillight housing. Final location to be determined upon award. All three lights to be wired to one work light switch. Truck Lite #8160 or equal	X	—	_____
i) Housings to be corrosion and impact resistant.	X	—	_____
(1) Weatherproof.	X	—	_____
ii) Universal mounting stud and adjustable bracket.	X	—	_____
11) Hoist			
a) NTEA rated and classified.	X	—	CRYSTEEL M63138DA
b) Class 80, telescopic.	X	—	NTEA CLASS 120
i) Cylinder to have full power up and full power down.	X	—	_____
c) Minimum hinge pin diameter – 1 15/16" hardened steel.	X	—	_____
d) Minimum dumping angle – 50 degrees at 12" overhang.	X	—	_____
e) Minimum of 1 ½" chassis frame extending beyond wing cross tube to allow for pintle plate mounting.	X	—	_____
f) In cab, box up indicator light (see panel switches), to be coil spring wobble lever, sealed, snap action switch, frame mounted, Grainger stock no. 3A096 or equal.	X	—	_____
g) Safety prop(s) to support body at 20-degree angle, frame mounted, self-aligning for one person operation, easily accessible. Prototype to be approved.	X	—	_____
12) General			
a) Paint – All non-stainless steel to be primed and painted black.	X	—	_____
b) Spot painting must include hardener and be applied with spray gun.	X	—	_____
c) Mud flaps front and rear of rear tires, 24" wide by 30" long, made of 5/16" quality rubber. Stainless steel brackets. The rear flaps (box mounted) must be quick to remove through the use of a ½" round rod and spring clip and free swinging. The front flaps (frame mounted) fastened permanently with anti-sail devices mounted to prevent tire contact.	X	—	_____

Specifications for Hydraulics & Dump Box, Approximately 58,000 lbs G.V.W.

SSP-22-2AUBW

	COMPLY		SPECIFICATION
	YES	NO	DEVIATIONS
d) Tool box 18" x 18" x 24". All aluminum construction, .125 Treadbrite. Bottom hinged door. Full-length corrosion resistant hinge. Key lockable paddle latch with adjustable striker plate. Full neoprene door seal. Two chain or cable door retainers. Drip rail or door recess. Five year product warranty. Acceptable brand: Alum-Line or RKL. Other brands must be pre-approved.	X	—	
i) Mounted with 2" mild steel channel, two cross supports under floor of box and gusseted.	X	—	
e) Must use stainless steel fasteners when mounting to stainless steel. Except where strength is needed.	X	—	
f) Appropriate steps must be taken to keep mild steel and stainless steel cross contamination from occurring.	X	—	
13) Snow Plow Quick Hitch, Falls 26B, Monroe FLS26BND, or equal.	X	—	<u>MONROE FLS26BND</u>
a) Snowplow connecting mechanism shall be the Rapid Push Bar Quick Coupler as manufactured by Little Falls Machine, Inc., Monroe or equal.	X	—	
b) Quick coupler system shall incorporate push arm receptor sockets with spring loaded tapered pins for proper pin alignment. Grease zerks installed for pin lubrication. Pin retractor mechanism shall be conveniently located for ease of operation.	X	—	
c) Mounting system shall adapt to frame rails of truck chassis and shall be adequately braced with grade 8 frame bolts meeting SAE J-429 specification to the truck chassis frame by minimum ¾" x 4" A-36 steel bars which will be additionally reinforced. Stabilizer arms shall be attached to the frame by means of ½" thick steel Z brackets. Vertical risers and plow lifting yoke shall be low profile to allow clearance for tilting hood without tilting or disconnecting plow hitch.	X	—	
d) Universal lift arm to be adjustable inward/outward using heavy-duty square tube within square tube with pin adjustment. Shall be capable of lifting reversible or V-plows weighing as much as 3000 lbs.	X	—	
e) Hydraulic plow lift cylinder shall be minimum 4" x 10" single acting type with chrome-plated rod. Hydraulic cylinder shall be certified to a minimum of twice (2X) the working pressure (2250PSI) of the hydraulic system.	X	—	
f) Hydraulic ball valve at lift cylinder to shut off oil flow when plow is not in use.	X	—	
g) Mounting height shall be 15" to center of connecting pin. Hitch to be cushioned where tilting hood may strike when opened.	X	—	
h) Complete hitch shall be primed and painted to match the truck frame.	X	—	
14) Trailers pull plate, pintle hitch, D-rings, electrical connector, and glad hands installed on the truck. See enclosed drawing. Note: disregard the location of the light plug-ins on the drawing. The successful vendor must approve the entire hitch design with NDDOT and build a prototype for approval on the first truck.			
a) Must be made using ¾" material for the plate and gussets.	X	—	
b) Must provide a Holland PH410 pintle hitch rated at 20,000lb vertical load and 100,000lb gross trailer weight installed with grade eight bolts and lock nuts.	X	—	
c) Two D-rings on each side of the pintle hitch rated for 100,000lb of gross trailer weight between the two. Tandemloc® 9202-DS79 or equal	X	—	

Specifications for Hydraulics & Dump Box, Approximately 58,000 lbs G.V.W.

SSP-22-2AUBW

	COMPLY YES	NO	SPECIFICATION DEVIATIONS
d) 2.5" receiver welded into the plate below the pintle hitch. To be used for towing as well as spinner mounting.	X	—	_____
e) Pull plate must be properly braced and welded to be rated for 100,000lb gross trailer weight.	X	—	_____
f) The round seven pin trailer light connector and two glad hands are to be mounted on right side fender on RDS bodies and on the right side of the body on dump bodies using all stainless steel hardware. Location and process must be approved by NDDOT.	X	—	_____
15) Warranty			
a) One-year full unconditional warranty, manufacturer's warranty shall apply if for longer period.	X	—	_____
16) Delivery			
a) Truck must be test driven and all hydraulic, brine, plow, sander, and electrical functions must be tested to make sure they work properly, and that there are no fluid leaks. All vendor installed attachments to be greased/lubricated. Truck must pass a final inspection performed by NDDOT employees before delivery can be made.	X	—	_____

BODY MAKE: CRYSTEEL MODEL: SELECT SS

HOIST MAKE: CRYSTEEL MODEL: M631380A

PUMP MAKE: FORCE AMERICA MODEL: FAS045R

QUICK HITCH MAKE: MONROE MODEL: FLS26BND

LED WARNING LIGHT SYSTEM MANUFACTURER: WHELEN

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
SPECIFICATIONS
FOR
HYDRAULICS AND DUMP & SPREADER BOX FOR UNDERBODY & WING
(FOR TANDEM AXLE TRUCK – APPROXIMATELY 58,000 LBS G.V.W.)**

Bidders Instructions: Indicate compliance to the specifications on the "COMPLY YES/NO" line by each specification. Indicate any deviations from the specifications whether the minimum specifications are met or not on the "SPECIFICATION DEVIATIONS" line. Failure to comply with bid specifications may result in rejection of the bid. The state reserves the right to waive minor deficiencies or technical variances.

General Information:

The hydraulics, box, and installation by the successful bidder must be complete in every aspect of the following specifications. All stainless steel components to be made of 201 or 304 grade. The painting of all installed accessories shall be complete and absolute, including primer. All minor items including, but not limited to, conduit, connectors, tape, paint, fittings, fuses, etc., are the responsibility of the bidder. When specifications do not clearly identify the proper installation or it is obvious there is an error, Tim Paul at State Fleet Services (701-328-1465) must be contacted for direction. A plan for mounting locations of the tool box, hydraulic reservoir, valve enclosure, ladder, etc. must be submitted to State Fleet and a prototype will be approved. It shall be the responsibility of the installer to relocate OEM and non-OEM components to accommodate the accessories if required by NDDOT. Frame modifications to accommodate pump, or other equipment installation are not acceptable. Complete hydraulic system provided to be from one common supplier or source. No additional monetary amount will be allowed.

	COMPLY YES	NO	SPECIFICATION DEVIATIONS
17) Hydraulics – Rear engine power take off (Repto).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
a) Hydraulic pump: Force America FASD45R or Rexroth A10V100.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FORCE AMERICA FASD45R
i) 6.0 CID.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
ii) 46 GPM at 1800 RPM.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
iii) Load sensing with adjustable compensator with system pressure set for optimum performance of installed components.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
iv) 1 ¼" keyed shaft.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
v) Side ported.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
vi) Automatic electric pump outlet shut off if oil level drops to an insufficient level, with override switch.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b) Balanced driveline: Spicer 1310/1350/1380 series or equal.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
i) Splined to allow for movement.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
ii) Non greaseable U-joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
iii) Tube to be filled with material to prevent driveline moan.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
vi) Installer responsible for Repto adaptor if needed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c) Mounting: Shaft centerline at least one degree to the repto centerline not to create more than a three-degree angle. Shaft to have enough movement to allow removal of driveshaft without loosening or removing hydraulic pump.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
i) Body vendor provided bracket fabricated to mount in the extended frame rails.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d) Reservoir: mounted between cab guard uprights, 10 gauge steel, 40-gallon capacity with baffle. Tank dimensions and height to be determined on prototype. Tank to be secured down by steel straps.(see drawing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
i) Basket type filler breather cap.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Specifications for Hydraulics & Dump/Spreader Box, Approximately 58,000 lbs G.V.W.

SSP-22-2ADSUBW

	COMPLY		SPECIFICATION
	YES	NO	DEVIATIONS
ii) Magnetic drain plug, easily accessible.	X	—	
iii) 3" OD with 2" ID NPT suction strainer with 100 mesh screen type filter.	X	—	
iv) Separate return port for control drain line.	X	—	
v) Sight temperature gauge externally mounted.	X	—	
vi) 2" full flow brass ball valve for suction line shutoff.	X	—	
vii) Electric level and temperature sending unit, wired to control panel and back lit for "low oil" and "oil temp" warning.	X	—	
viii) In-tank return filter to handle flow requirements and have porting of at least 1 1/4". Filter to have both visual and electrical indicators. Filter element shall be 10 micron "absolute" rated for no less than 80 GPM. Filter assembly shall be Filtration Products No. FFPR25-20N, Zinga TS-1200-25-1-0/ZSRE-409-10 or approved equal.	X	—	
ix) Hydraulic system shall be filled with the hydraulic oil under current contract with NDDOT. The contract vendor is to provide oil to the installer at contract price. Pricing available from State Fleet or https://secure.apps.state.nd.us/csd/spo/services/bidder/listCurrentContracts.htm . Oil to be Cenex, Quicklift® HTB Low Viscosity winter fluid.	X	—	
e) Electro/Hydraulic Valves: Shall be Force America add-a-fold, Rex Roth MP 18 or approved equal. The control valves shall be pulse-width modulated and where indicated proportionally controlled. All segments shall have heavy-duty continuous coils and connections shall be Hirshman or ITT Cannon type connectors. Each segment shall be equipped with a manual override. Each segment shall have adjustable flow control. Valve sections to be arranged as follows:	X	—	FORCE AMERICA ADD-A-FOLD
i) Hoist, 4-way double acting with down side 500 psi relief, proportional control.	X	—	
ii) Plow lift, 3-way.	X	—	
iii) Plow angle, 4-way.	X	—	
iv) Scraper lift, 4-way, adjustable to maintain a constant psi of 300-500 hydraulic pressure down on road.	X	—	
v) Scraper angle, adjustable cross-port relief set @ 1200 psi or at scraper manufacturer's recommendation.	X	—	
vi) Wing toe (post), 4-way, adjustable work port relief up and down.	X	—	
vii) Wing heel, 4-way, proportional control, adjustable work port relief up and down.	X	—	
viii) Auger, proportional, 2-way with minimum flow rate of 21 GPM, adjustable work port relief.	X	—	
ix) Anti-ice, proportional, 2-way with minimum flow rate of 14 GPM.	X	—	
x) Spinner, proportional, 2-way with minimum flow rate of 7 GPM.	X	—	
(1) Note: The last two functions, Anti-ice and Spinner will be supplied with a two-function manifold using Hirschman or ITT cannon type connectors. This manifold would also include an integral end cover function.	X	—	

Specifications for Hydraulics & Dump/Spreader Box, Approximately 58,000 lbs G.V.W.

SSP-22-2ADSUBW

		COMPLY		SPECIFICATION
		YES	NO	DEVIATIONS
xi)	Valve Enclosure to have the capability of housing 10 to 11 valve sections: Designed to be weatherproof and protect the valves and valve operators from road contaminants. Located vertically on cab guard on drivers side (see attached photo). Must provide rubber bumper to protect cab from valve enclosure door.	<u>X</u>	—	_____
	(1) Easy serviceability with unobstructed access to all valves under cover.	<u>X</u>	—	_____
	(2) Valve Enclosure to have removable weather-tight access panel on inboard side to permit field removal of spool valves without removing valve manifold assembly from enclosure.	<u>X</u>	—	_____
f) Spreader Control				
i)	Force America 6100 or pre-approved equal. The electronic spreader control shall be designed for precise, closed loop control of granular material and direct liquid application. The unit must be protected from reverse polarity, as well as over-voltage protected.	<u>X</u>	—	_____
ii)	The unit must be supplied with easy to service speedometer connection, valve control connection, and main power connection.	<u>X</u>	—	_____
iii)	The unit must have full featured micro-processor control and provide operational modes for manual, open loop, or closed loop. In addition, the unit must be compatible with information management systems (GPS), provide rotary auger speed adjustment, rotary spinner speed adjustment, and ground based blast mode momentary, timed, or distance. Must have standby mode.	<u>X</u>	—	_____
iv)	Temperature sensor, which shall be capable of displaying ambient air and pavement temperature simultaneously. Force America kit "6100MACC-ROAD TEMP-SENSOR" unit shall include, Sprague RoadWatch® temperature sensor part #94056A001 and adapter cable part #11480A001 or equal and must be compatible with the specified sander controller. Temperature sensor shall be mounted to the mirror bracket of the truck and wire routed into the cab and connected through the use of the interface to the sander control.	<u>X</u>	—	_____
v) Features				
(1)	Remote mounted, 7" color LCD to display all spreader functions.	<u>X</u>	—	_____
(2)	Five current compensated valve drive outputs.	<u>X</u>	—	_____
(3)	Three types of material and ten programmable spread rates.	<u>X</u>	—	_____
(4)	Bi-directional RS232 for data collection.	<u>X</u>	—	_____
(5)	The electronic spreader firmware shall be upgradeable by downloading files from the supplier's web site at no charge to NDDOT for the life of the unit.	<u>X</u>	—	_____
(6)	Closed loop granular feedback sensor and cabling.	<u>X</u>	—	_____
(7)	Programming shall provide for automatic default to open loop in the event of a feedback failure.	<u>X</u>	—	_____
(8)	Unit must have the ability to cross calibrate from closed loop to open loop operation.	<u>X</u>	—	_____
(9)	Multi-lane dual boom direct liquid.	<u>X</u>	—	_____
(10)	Enabled Event logging for AVL/GPS.	<u>X</u>	—	_____
(11)	Supervisor access security key for each district.	<u>X</u>	—	_____

Specifications for Hydraulics & Dump/Spreader Box, Approximately 58,000 lbs G.V.W.

SSP-22-2ADSUBW

	COMPLY YES	NO	SPECIFICATION DEVIATIONS
(12) Unit shall have a stationary unload feature for granular, prewet, and anti-ice functions.	<u>X</u>	—	_____
(13) Application rate limit adjustable from 20-3000 lb/mile. Hydraulic vendor to assist with final calibration upon delivery.	<u>X</u>	—	_____
g) Control Center			
i) Force America Patrol Commander Ultra Series or pre-approved equal. The control center must be an integral unit used for controlling the work functions of the electro/hydraulic control valves. The control center is to have the capabilities to install the spreader control box as a separate item to the control panel. The control panel is to have the capabilities to joystick control the miniature proportional joysticks for valve control of the dump box, front plow, underbody scraper, wing toe, and wing heel along with underbody scraper and wing disabling switches. Two-step select and operate systems are not acceptable.	<u>X</u>	—	_____
ii) Single miniature joystick shall control the hoist with center interlock or dead-man switch, and also contain integral dual axis miniature proportional joystick controls for plow, underbody scraper and wing along with three push button switches for spreader blast, standby, and auxiliary function. The scraper control must be held in the down position for 3 seconds to activate automatic scraper down pressure mode. The controller must activate pre-wet ball valve in conjunction with the sander.	<u>X</u>	—	_____
iii) There shall be a pressure transducer installed in the scraper circuit to monitor the down pressure on the scraper. The transducer shall be wired into the valve module and the scraper pressure shall be read on the 7" color LCD spreader display.	<u>X</u>	—	_____
h) Wiring			
i) All wiring shall have color-coding with amp style connectors to connect the control panel and to valve enclosure. All connector pins shall be gold style to ensure good connections between the connecting halves. All wiring inside the valve enclosure shall have LED lights to indicate which valves are operating when function is required. All wiring inside of the enclosure shall be connected to the amp style connector to facilitate proper connection between the inside of the box and the outside of the box.	<u>X</u>	—	_____
ii) The wire ends are to be ITT or Cannon type connectors to connect the wire harness to the valves. The wire harness shall be wrapped to provide protection of the wires and used as a way to bundle the wires in a neat package.	<u>X</u>	—	_____
iii) The main control panel shall have its own power source with on/off to be controlled by ignition key switch via relay.	<u>X</u>	—	_____
iv) Parts manuals, service literature, driver, and 6 hours service training per location must be supplied at no extra charge. Payment contingent on performance.	<u>X</u>	—	_____
v) Each truck style box shall be wired identically and have the same color/size wiring to each circuit.	<u>X</u>	—	_____

Specifications for Hydraulics & Dump/Spreader Box, Approximately 58,000 lbs G.V.W.

SSP-22-2ADSUBW

	COMPLY		SPECIFICATION
	YES	NO	DEVIATIONS
i) Seat mounted hydraulic and sander controls to move with the seat suspension. The length and height not to obstruct the view of the operator dashboard. The position to be determined by the vendor and NDDOT. Bracket to be made of aluminum.	<u>X</u>	—	_____
i) The design and location must be approved on prototype (see attached photo). All openings shall be grommetted and sealed with an appropriate caulking. Final mount to be approved.	<u>X</u>	—	_____
j) Switches and Indicator Lights			
i) The switch panel will be included, installed, pre-wired and circuit breaker protected by OEM of truck.	<u>X</u>	—	_____
ii) Panel Switches:			
(1) Front, rear and wing amber warning.	<u>X</u>	—	_____
(2) Rear clear warning.	<u>X</u>	—	_____
(3) Work light.	<u>X</u>	—	_____
(4) Momentary switch for box vibrator.	<u>X</u>	—	_____
(5) Momentary switch for hydraulic pump override.	<u>X</u>	—	_____
(6) Air tailgate.	<u>X</u>	—	_____
iii) Body vendor to provide the following:			
(1) Switches and indicators to be mounted in control panel. All switches, functions & names shall be backlit or illuminated.	<u>X</u>	—	_____
(a) Auto recall switch (give you the ability to lift all plows).	<u>X</u>	—	_____
(b) Wing disable switch.	<u>X</u>	—	_____
(c) Underbody disable switch.	<u>X</u>	—	_____
(d) Liquid switch.	<u>X</u>	—	_____
(e) Spreader switch.	<u>X</u>	—	_____
(a) All switch labeling to include OEM switches if not provided by truck manufacturer. Any additional labels provided by the truck manufacturer to be left in truck cab for future labeling of any unused switches.	<u>X</u>	—	_____
(2) Indicator lights for body up/down (red), low hydraulic oil, oil temp, located in the panel. The warning lights shall flash when activated, audible alarms to be disabled.	<u>X</u>	—	_____
(3) An 80-amp thermal breaker with manual reset shall be provided in the wire between the power source and the control center.	<u>X</u>	—	_____
(4) One wire shall be run from the switch accessory and one wire form the battery to the switch panel.	<u>X</u>	—	_____
k) Special Accessory Wiring			
i) Requirements – a 75 amp constant duty relay shall be provided to remove specified accessory circuits from the ignition key switch to prevent switch overloads, yet retaining key switch on/off control. Circuits controlled through relay shall include all console switches and functions, except plow lights and FM radio power source. Accessible terminals shall also be available for controlling additional department-installed equipment. This relay may be part of the hydraulic control counsel circuitry.	<u>X</u>	—	_____
ii) Headlight switching control will be part of the OEM truck package.	<u>X</u>	—	_____

Specifications for Hydraulics & Dump/Spreader Box, Approximately 58,000 lbs G.V.W.

SSP-22-2ADSUBW

	COMPLY		SPECIFICATION
	YES	NO	DEVIATIONS
l) Hydraulic hoses to be U.S. made Weatherhead, Parker or approved equal as follows:			
i) 2" suction line – SAE 100 R4	X	—	
ii) 1" pressure (pump to valves) – SAE 100 R2	X	—	
iii) Hoist (not smaller than port size) – SAE 100 R2	X	—	
iv) Return line 1 1/4" – SAE 100 R1	X	—	
v) Plow lift, reversing 1/2" – SAE 100 R2	X	—	
(1) Reversing hoses terminated with Pioneer 9500 series 1/2" female lever quick coupler breakaway kit No. 9500-4 mounted to driver's side of quick hitch at height of the top of truck frame. (See photo)	X	—	
vi) Hose from valve body to sander connection high-pressure line shall be sized according to body manufacturer recommendation and be two wire SAE 100 R2 rated.	X	—	
(1) Any piping must be schedule 80 high-pressure pipe to be spaced for material to fall through. Design to be approved on prototype.	X	—	NTEC USES HYDRAULIC CLAMPS FOR TUBING SEE ENCLOSED BUYERS PRODUCT SHEET
vii) Hose from reservoir and from sander connection to the return line shall be no less than one wire 1250 psi and must be plumbed in ahead of the return line filter.	X	—	
m) All pressure line fittings shall use high-pressure steel adapter fittings with swivel couplings to allow easy hose or component removal. (JIC 37° flare fittings wherever possible and practical) Return lines must use appropriate fittings for pressure present. All hoses from the back of the black pipe to the sander connection must have 37° flare swivel fittings throughout.	X	—	
n) All test ports for testing shall be accessible for connecting test gauge.	X	—	
o) All hydraulic hosing to be routed, secured, and protected from pinching or abrasion. Securing of hoses to be designed to withstand severe ice and snow buildup. Use heavy J-hook style hose hangers as necessary. Routing and support to be approved.	X	—	
18) Dump & Spreader Box	X	—	
a) Body shall be of standard production, versatile, with the ability to be used as a dump body or as a spreader to allow material to discharge through the tailgate onto a spinner assembly.	X	—	
b) The body shall be 14' in length and top outside width shall be 96", with a minimum of 8 cubic yard capacity. Continuous welds throughout.	X	—	10.43 CUBIC YARDS
c) Minimum 7 gauge stainless steel, one piece sides of a radius design or of not less than a 35° slope if non radius. Understructure and floor to be minimum of 3/16" 304 stainless steel.	X	—	
d) Front and rear ends to be minimum 6" higher than sides and equipped with pockets for 2" wide sideboards.	X	—	
e) Body longitudinals should be of height to provide sufficient clearance between body-mount fenders and top of wing post	X	—	
f) Integral box mounted rear fenders to cover wheels of truck chassis. Designed with no raised edges and the strength to carry and support a minimum of 200 gal pre-wet tanks filled to capacity with fluid chemicals weighing up to 14 lbs per gallon. (One each side).	X	—	
i) Brine tanks not to protrude beyond fender width.	X	—	

Specifications for Hydraulics & Dump/Spreader Box, Approximately 58,000 lbs G.V.W.

SSP-22-2ADSUBW

	COMPLY		SPECIFICATION
	YES	NO	DEVIATIONS
g) Boxed top rail at sides and front.	X	—	
h) Free standing/stationary cab guard shall be approximately 24" with width to widest point of cab and adequate height to provide proper cab clearance. Cab guard shall incorporate square tubing into the front corners to allow for adjustable warning light supports. Cab guard shall allow for the chassis exhaust system to pass through or alongside to give the best cab protection without modification of the exhaust system. If the exhaust system must be modified it must be approved. All modifications are at the box vendor's expense. (See drawing)	X	—	
i) Cab shield panel to be minimum 10 gauge stainless steel.	X	—	
ii) Uprights shall be standard 6" channel to top part of cab and for cross member.	X	—	
(1) Upright flanges shall face away from center of chassis.	X	—	
(2) Each upright shall be bolted with a minimum of 4 each of 5/8" grade 8 bolts to chassis rails.	X	—	
(3) 6" channel to be placed between the uprights (flanges down) on the top of the frame rails and properly welded to uprights. This channel shall not be welded to frame rails. Hydraulic tank brackets to be welded to topside of channel.	X	—	
iii) Top cross member shall be welded to uprights and gusseted with two ¼" plates of 6" x 6" x 8 ½" dimensions at rear part of assembly.	X	—	
iv) Cab shield shall be continuously welded or bolted with grade 8 bolts to uprights and top cross member.	X	—	BOLT-ON STYLE
(1) Reinforced and welded to cross member with two 3" – 4.1# channel irons, which are extended the full length of the cab shield and align with the 6" channel uprights.	X	—	
(2) Adequately gusseted from 3" channel iron to 6" channel iron.	X	—	
(3) Welded to 3" channel irons with flanges downward.	X	—	
(4) Have provisions that do not allow ponding of water.	X	—	
v) ¼" x 2" x 2" angle iron shall be welded at bottom of cab shield between uprights to support cab shield.	X	—	
vi) Rubber seal/wiper between shield and dump body. Shall not allow accumulation of material between body and cab guard.	X	—	
vii) Shovel holder for long handle square spade attached to upright.	X	—	
viii) Must have prototype approved.	X	—	
i) Tailgate with formed boxed outer edge and boxed horizontal center braces having 30 degree slope top edge. Outer vertical channels of boxed perimeter to be ¼" thick for additional strength.	X	—	
j) D-ring attached to inside or outside top center for lifting purposes.	X	—	
k) Air operated tailgate latch system. Installation shall allow operation of the tailgate should the air operated device fail.	X	—	
l) Top and bottom tailgate hinge pins to be 1" diameter.	X	—	
i) Tailgate hinge pins and latching mechanisms to be greaseable.	X	—	
m) 5/16" spreader chains attached to upper sides of tailgate with upper and lower anchors that permit hinging tailgate to top or bottom. Chain to be encased in hydraulic hose sheathing.	X	—	

Specifications for Hydraulics & Dump/Spreader Box, Approximately 58,000 lbs G.V.W.

SSP-22-2ADSUBW

	COMPLY		SPECIFICATION
	YES	NO	DEVIATIONS
n) Material door in bottom center of tailgate with self-locking adjustable screw jack opening to control material volume accessible from ground level.	X	—	_____
o) The body conveyor shall be a minimum of 28" width and shall have 26,000 pound tensile strength per strand pintle chain AL667XH or better with 1 ½" x ½" bar flights welded top and bottom to every other link.	X	—	_____
i) Conveyor shall be driven by a minimum single 25:1 planetary or two 6:1 spur gear boxes and high torque/low speed hydraulic motor(s), eight tooth sprockets keyed to 2" drive shafts. Single planetary must be double keyed using a minimum of two ½" x 2" keys. Heavy duty, dust sealed, self-aligning four bolt flange bearings. At least one of the conveyor drive motors must have an integral speed sensor with 100 pulses per revolution to operate in conjunction with the closed loop ground speed controller. NO EXCEPTIONS.	X	—	_____
ii) Front idler shaft shall be 2" with eight tooth sprockets keyed to shaft, mounted supported by heavy duty, dust sealed bearings.	X	—	_____
iii) Chain tension adjustment shall use stainless steel threaded rod and lock nut with slide rail system. NO EXCEPTIONS.	X	—	_____
iv) Grease banks as necessary for easy access to lubrication points.	X	—	_____
v) Conveyor to have removable cover made of stainless steel to prevent debris from dropping on the truck frame.	X	—	_____
p) Spinner assembly, complete, with all mounting hardware and instructions, is to be supplied with the truck for mounting at NDDOT district locations. Spinner shall be an open disc with a deflector to guide sand away from truck. Spinner shall also be designed for quick removal by one man during non-sanding applications. Quick couplers with tethered dust caps for spinner to be mounted rear side of box. Design must be approved. (See photo example)	X	—	_____
i) The spinner motor shall be high torque/low speed mounted directly to the spinner disc with a hub. Bolt on spinner disc shall be minimum 18" diameter and manufactured of ½" thick polyurethane or 10 gauge stainless steel.	X	—	_____
q) Stainless steel ladder – mounted curbside. Must fold up for transport	X	—	_____
i) Fabricated with approximately 5 rungs with access from about a 2' grade. Ladder design must be approved by NDDOT.	X	—	_____
ii) Mounted on front side of box ahead of dual tires.	X	—	_____
iii) When in transport position, must not extend beyond main edge of body more than 3". Adequate latch system to keep in place while traveling.	X	—	_____
iv) Fixed slip resistant grip strut rungs with no sharp corners welded to inside of box allowing a person to climb into box.	X	—	_____
v) Skid resistant/epoxy-bonded coating on top of each rung. Bustin Industrial Products Firm-grip™ grating, formed channel tread grip, or equal may be substituted for skid resistant coating on the rungs.	X	—	_____
r) All additional electrical wiring must be circuit breaker protected.	X	—	_____
s) Back-up alarm, self-adjusting sound level, 87 thru 107 decibels, and lifetime warranty ECCO SA901, Target Tech 210505, or approved equal. To be mounted to the bottom of the right taillight guard.	X	—	ECCO SA901

Specifications for Hydraulics & Dump/Spread Box, Approximately 58,000 lbs G.V.W.

SSP-22-2ADSUBW

	COMPLY		SPECIFICATION
	YES	NO	DEVIATIONS
19) Lights – NOTE: All wiring for the tail and clearance lights shall be protected from wear and tear and shielded from mud and ice buildup. All holes for wiring must be grommited.	<input checked="" type="checkbox"/>	—	_____
a) Dump Box & Spread Box			
i) Lights to meet ICC regulations.	<input checked="" type="checkbox"/>	—	_____
ii) Clearance lights and reflectors - Minimum two amber clearance lights in front and two red clearance lights in rear of box.	<input checked="" type="checkbox"/>	—	_____
(1) Minimum 9 diode high count LED lamps, Grote G3002 red, Grote G3003 yellow or equal.	<input checked="" type="checkbox"/>	—	_____
iii) LED Stop/Turn/Tail & Backup lights to have a 4" x 1/4" 304 stainless steel bolt on rectangular shield around them. Taillights mounted on the outer edge of the box with bolt on brackets leaving a 1" air gap between housing and box side. Backup light to be below S/T/T light. Height 68" – 72" from ground level to center of S/T/T light. Exact location to be approved.	<input checked="" type="checkbox"/>	—	_____
(1) Stop/Turn/Tail and Backup lights to be Whelen 700 series, (7" x 3") or pre-approved equal mounted in double-light head 700 series rectangular stainless steel housing primed and painted to match box.	<input checked="" type="checkbox"/>	—	WHELEN 700 SERIES
b) Front Plow Lights – NOTE: All wiring to have protective covering and routed so as not to be pinched or worn prematurely from rubbing or chafing. Truck will be factory wired for plow lights to the hood hinge area with switch installed on instrument panel.	<input checked="" type="checkbox"/>	—	_____
i) Truck Lite #80880 snowplow light or equal.	<input checked="" type="checkbox"/>	—	_____
ii) Housings to be corrosion and impact resistant.	<input checked="" type="checkbox"/>	—	_____
iii) LED light.	<input checked="" type="checkbox"/>	—	_____
(1) High/low beam, 12 volt.	<input checked="" type="checkbox"/>	—	_____
(2) Turn signal/parking lamp.	<input checked="" type="checkbox"/>	—	_____
iv) Light support – 1 1/4" steel angle to be fastened with existing grill bolts. Angle to be approximately 2' long, not to exceed hood height. Light mounted to 1" square tubing with adjustment holes capable of adjusting to an additional height of 24". 1 1/4" angle welded to top of square tubing and angle braced to extend light to position directly above OEM headlights. Design to be approved on prototype.	<input checked="" type="checkbox"/>	—	_____
v) Wiring to be connected to OEM wiring at hood hinge area and can be disconnected using a GM weatherpack connector or approved equal.	<input checked="" type="checkbox"/>	—	_____
vi) All wire splices shall be soldered and protected with heat shrink covering.	<input checked="" type="checkbox"/>	—	_____
vii) Wires to be properly grounded.	<input checked="" type="checkbox"/>	—	_____
c) Top/Rear plow light system. SIX LIGHT HEAD SYNCHRONIZED LED WARNING LIGHT SYSTEM (Must meet specification SSP-01) NOTE: All wiring for strobe lights shall be protected from abrasion and shielded from mud and ice buildup. All holes for wiring must be grommited.	<input checked="" type="checkbox"/>	—	_____
i) Four rear mounted remote LED light head assemblies, two amber and two clear. Continuous individual wiring from each light to the rear electrical housing and then to the control panel.	<input checked="" type="checkbox"/>	—	_____

Specifications for Hydraulics & Dump/Spreader Box, Approximately 58,000 lbs G.V.W.

SSP-22-2ADSUBW

	COMPLY		SPECIFICATION DEVIATIONS
	YES	NO	
ii) Two cab guard mounted 180 degree LED strobe light head assemblies. Continuous individual wiring from each light to the control panel.	<u>X</u>	—	_____
(1) Mount level to front corners of cab guard, extendable from width of cab guard to outside (102" width) of mirrors through use of tube-in-tube design. Design must be approved. (See Photo example)	<u>X</u>	—	_____
(2) Wiring for light heads from chassis frame to top of cab guard to be routed through metal conduit attached to the cab guard upright or split loom and tube clamps may be used as long as the clamps have maximum spacing of 12 inches.	<u>X</u>	—	_____
iii) One inside cab mounted four-outlet LED ballast/junction box.	<u>X</u>	—	_____
iv) LED warning light system with heavy duty DOT solid state flasher with diagnostics.	<u>X</u>	—	_____
v) Rear light support – 1 ½" square telspar steel tubing mounted approximately 60 degrees on rear of box and roughly adjustable from 9' – 12'. Tubing to be angled to the rear but not extending more than 18" behind box. Square tube support bracket not acceptable. Mounting brackets to be as high on the side of box as possible without interfering with tailgate operation or hinge pin removal.	<u>X</u>	—	_____
(1) See pictures of DOT support bracket to allow telspar tubing to pivot from vertical to horizontal. DOT will supply prototype bracket to awarded vendor.	<u>X</u>	—	_____
(2) Amber LED lights to be mounted to top of support. Clear LED lights to be mounted ½ the distance from top of support to top of box. Stainless steel fasteners to be used for the mounting of the aluminum light heads to the telspar along with nylon isolating washers placed between telspar and aluminum light head to prevent corrosion caused by dissimilar metals.	<u>X</u>	—	_____
(3) Wiring to be routed through the center of the telspar.	<u>X</u>	—	_____
d) One wing and one underbody scraper 12V LED work light, located at the rear corners of the cab. One sander work light located under left taillight housing. Final location to be determined upon award. All three lights to be wired to one work light switch. Truck Lite #8160 or equal	<u>X</u>	—	_____
i) Housings to be corrosion and impact resistant.	<u>X</u>	—	_____
(1) Weatherproof.	<u>X</u>	—	_____
ii) Universal mounting stud and adjustable bracket.	<u>X</u>	—	_____
20) Hoist			
a) NTEA rated and classified.	<u>X</u>	—	_____
b) Class 80, telescopic.	<u>X</u>	—	_____
i) Cylinder to have full power up and power down top stage.	<u>X</u>	—	_____
ii) Melonized cylinder rod surfaces with a predominance of single-phase epsilon nitride to cover entire surface.	<u>X</u>	—	_____
c) Minimum hinge pin diameter – 1 15/16" hardened steel.	<u>X</u>	—	_____
d) Minimum dumping angle – 50 degrees at 12" overhang.	<u>X</u>	—	_____
e) Minimum of 1 ½" chassis frame extending beyond wing cross tube to allow for pintle plate mounting.	<u>X</u>	—	_____

Specifications for Hydraulics & Dump/Spreader Box, Approximately 58,000 lbs G.V.W.

SSP-22-2ADSUBW

	COMPLY		SPECIFICATION
	YES	NO	DEVIATIONS
f) In cab, box up indicator light (see panel switches), to be coil spring wobble lever, sealed, snap action switch, frame mounted, Grainger stock no. 3A096 or equal.	<u>X</u>	—	_____
g) Safety prop(s) to support body at 20-degree angle, frame mounted, self-aligning for one person operation, easily accessible. Prototype to be approved.	<u>X</u>	—	_____
21) General			
a) Paint – All non-stainless steel to be primed and painted black.	<u>X</u>	—	_____
b) Spot painting must include hardener and be applied with spray gun.	<u>X</u>	—	_____
c) Mud flaps front and rear of rear tires, 24" wide by 30" long, made of 5/16" quality rubber. Stainless steel brackets. The rear flaps (box mounted) must be quick to remove through the use of a ½" round rod and spring clip and free swinging. The front (frame mounted) flaps fastened permanently with anti-sail devices mounted to prevent tire contact.	<u>X</u>	—	_____
d) Tool box 18" x 18" x 24". All aluminum construction, .125 Treadbrite. Bottom hinged door. Full-length corrosion resistant hinge. Key lockable paddle latch with adjustable striker plate. Full neoprene door seal. Two chain or cable door retainers. Drip rail or door recess. Five year product warranty. Acceptable brand: Alum-Line or RKL. Other brands must be pre-approved.	<u>X</u>	—	<u>Alum-LINE</u>
i) Mounted with 2" mild steel channel, two cross supports under floor of box and gusseted.	<u>X</u>	—	_____
e) Must use stainless steel fasteners when mounting stainless steel. Except where strength is needed.	<u>X</u>	—	_____
f) Appropriate steps must be taken to keep mild steel and stainless steel cross contamination from occurring.	<u>X</u>	—	_____
22) Snow Plow Quick Hitch, Falls 26B, Monroe FLS26BND, or equal.	<u>X</u>	—	<u>MONROE FLS26BND</u>
a) Snowplow connecting mechanism shall be the Rapid Push Bar Quick Coupler as manufactured by Little Falls Machine, Inc., Monroe or equal.	<u>X</u>	—	_____
b) Quick coupler system shall incorporate push arm receptor sockets with spring loaded tapered pins for proper pin alignment. Grease zerks installed for pin lubrication. Pin retractor mechanism shall be conveniently located for ease of operation.	<u>X</u>	—	_____
c) Mounting system shall adapt to frame rails of truck chassis and shall be adequately braced with grade 8 frame bolts meeting SAE J-429 specification to the truck chassis frame by minimum ¾" x 4" A-36 steel bars which will be additionally reinforced. Stabilizer arms shall be attached to the frame by means of ½" thick steel Z brackets. Vertical risers and plow lifting yoke shall be low profile to allow clearance for tilting hood without tilting or disconnecting plow hitch.	<u>X</u>	—	_____
d) Universal lift arm to be adjustable inward/outward using heavy-duty square tube within square tube with pin adjustment. Shall be capable of lifting reversible or V-plows weighing as much as 3000 lbs.	<u>X</u>	—	_____
e) Hydraulic plow lift cylinder shall be minimum 4" x 10" single acting type with chrome-plated rod. Hydraulic cylinder shall be certified to a minimum of twice (2X) the pressure (2250PSI) of the hydraulic system.	<u>X</u>	—	_____
f) Hydraulic ball valve at lift cylinder to shut off oil flow when plow is not in use.	<u>X</u>	—	_____

Specifications for Hydraulics & Dump/Spreader Box, Approximately 58,000 lbs G.V.W.

SSP-22-2ADSUBW

	COMPLY YES NO	SPECIFICATION DEVIATIONS
g) Mounting height shall be 15" to center of connecting pin. Hitch to be cushioned where tilting hood may strike when opened.	X —	_____
h) Complete hitch shall be primed and painted to match the truck frame.	X —	_____
23) Trailers pull plate, pintle hitch, D-rings, electrical connector, and glad hands installed on the truck. See enclosed drawing. Note: disregard the location of the light plug-ins on the drawing. The successful vendor must approve the entire hitch design with NDDOT and build a prototype for approval on the first truck.		
a) Must be made using 3/4" material for the plate and gussets.	X —	_____
b) Must provide a Holland PH410 pintle hitch rated at 20,000lb vertical load and 100,000lb gross trailer weight installed with grade eight bolts and lock nuts.	X —	_____
c) Two D-rings on each side of the pintle hitch rated for 100,000lb of gross trailer weight between the two. Tandemloc® 9202-DS79 or equal	X —	_____
d) 2.5" receiver welded into the plate below the pintle hitch.	X —	_____
e) Pull plate must be properly braced and welded to be rated for 100,000lb gross trailer weight.	X —	_____
f) The round seven pin trailer light connector and two glad hands are to be mounted on right side fender on RDS bodies and on the right side of the body on dump bodies using all stainless steel hardware. Location and process must be approved by NDDOT.	X —	_____
24) Warranty		
a) One-year full unconditional warranty, manufacturer's warranty shall apply if for longer period.	X —	_____
25) Delivery		
a) Truck must be test driven and all hydraulic, brine, plow, sander, and electrical functions must be tested to make sure they work properly, and that there are no fluid leaks. All vendor installed attachments to be greased/lubricated. Truck must pass a final inspection performed by NDDOT employees before delivery can be made.	X —	_____

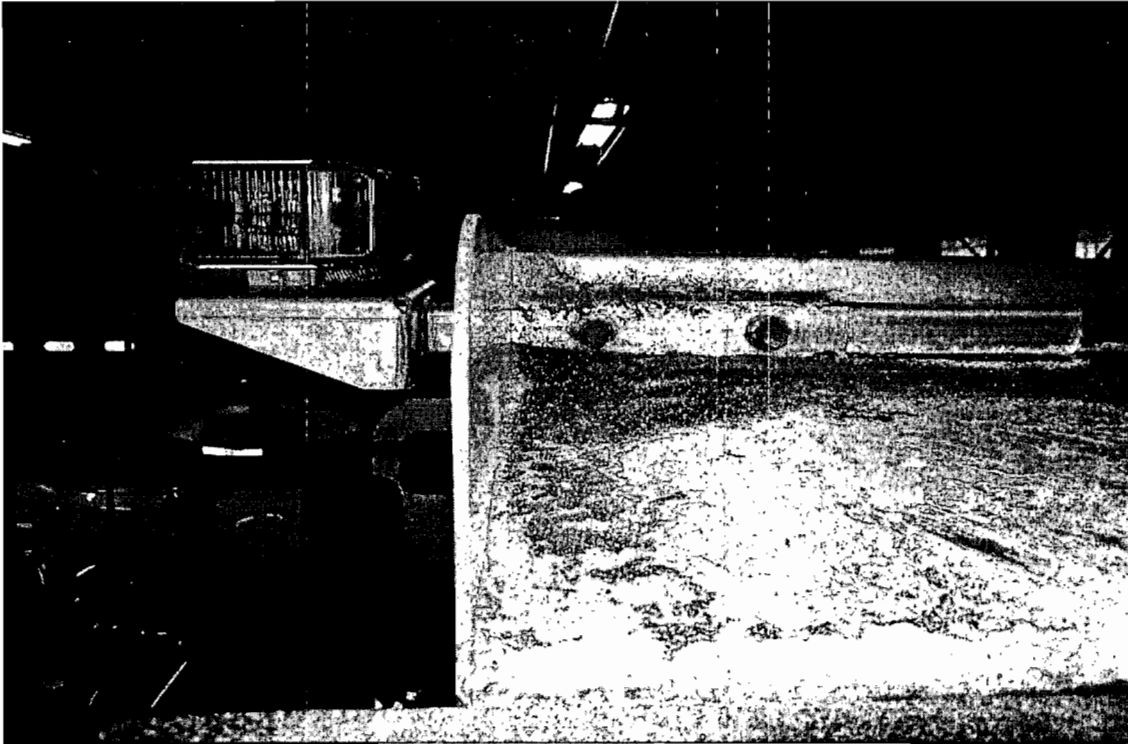
BODY MAKE: MONROE MODEL: RDS-168-96-56, AUSS, RR

HOIST MAKE: MONROE (mail hot) MODEL: CS130-5.5-3 DA

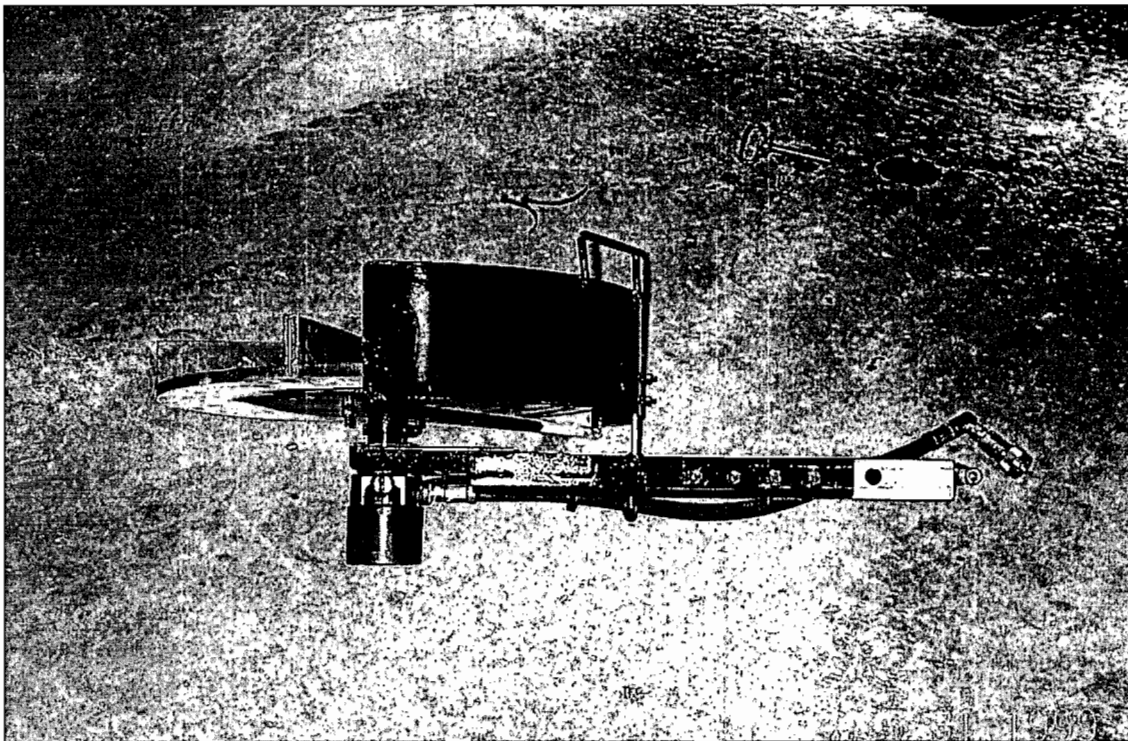
PUMP MAKE: FORCE AMERICA MODEL: FASD 45R

QUICK HITCH MAKE: MONROE MODEL: FLS268ND

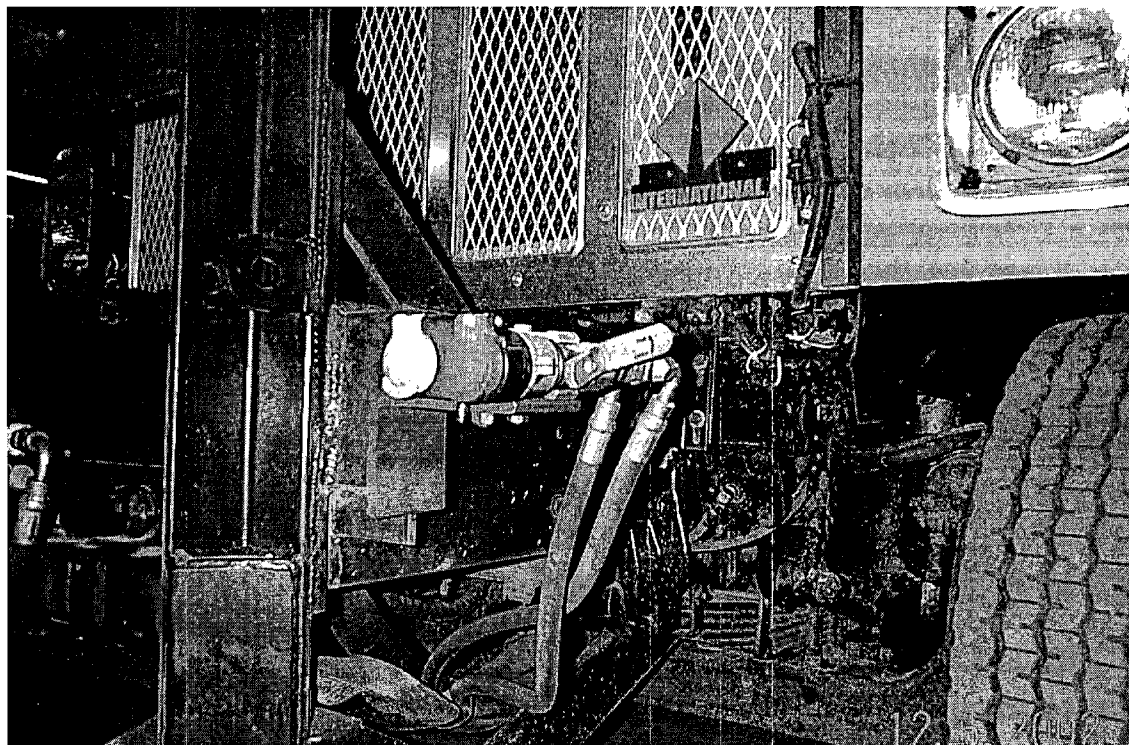
LED WARNING LIGHT SYSTEM MANUFACTURER: WHELEN



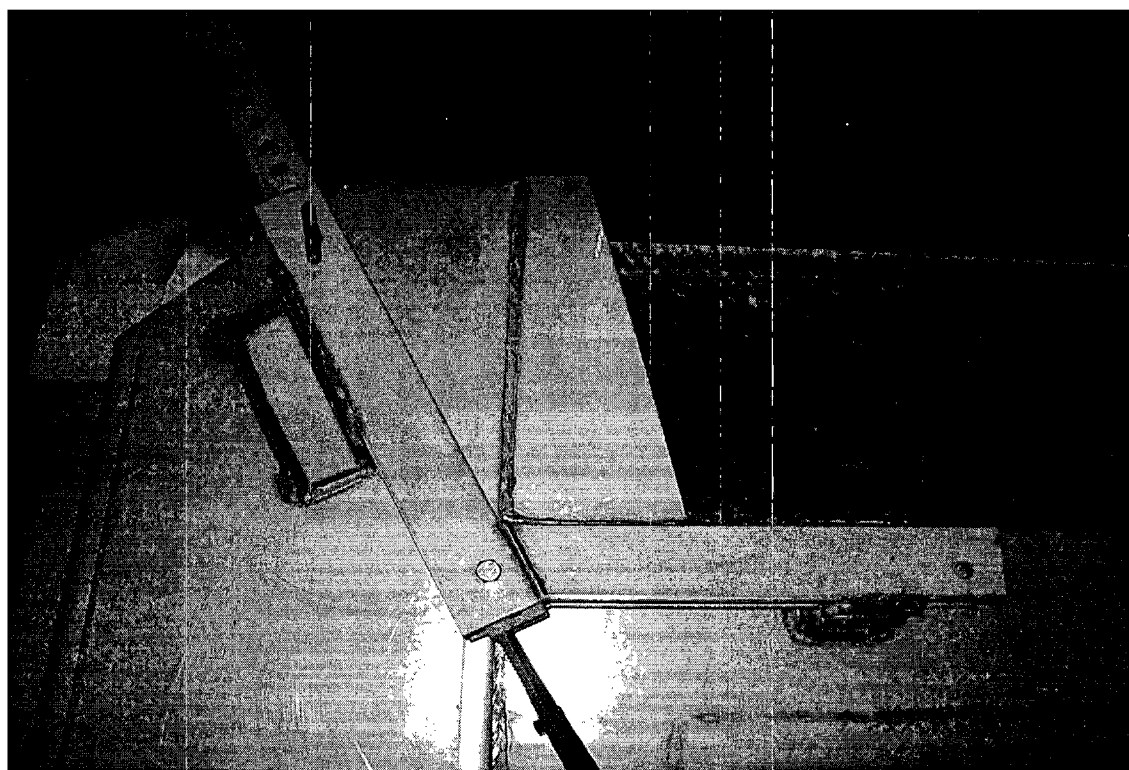
Adjustable mounting brackets for LED light heads



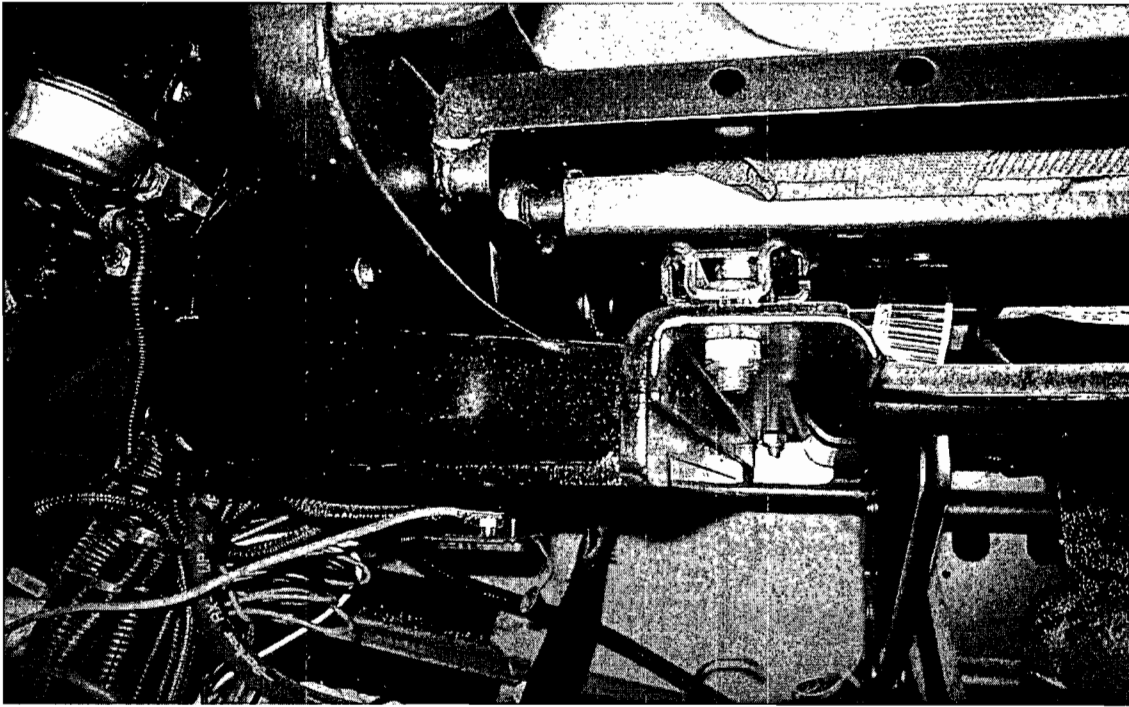
Example of spinner type



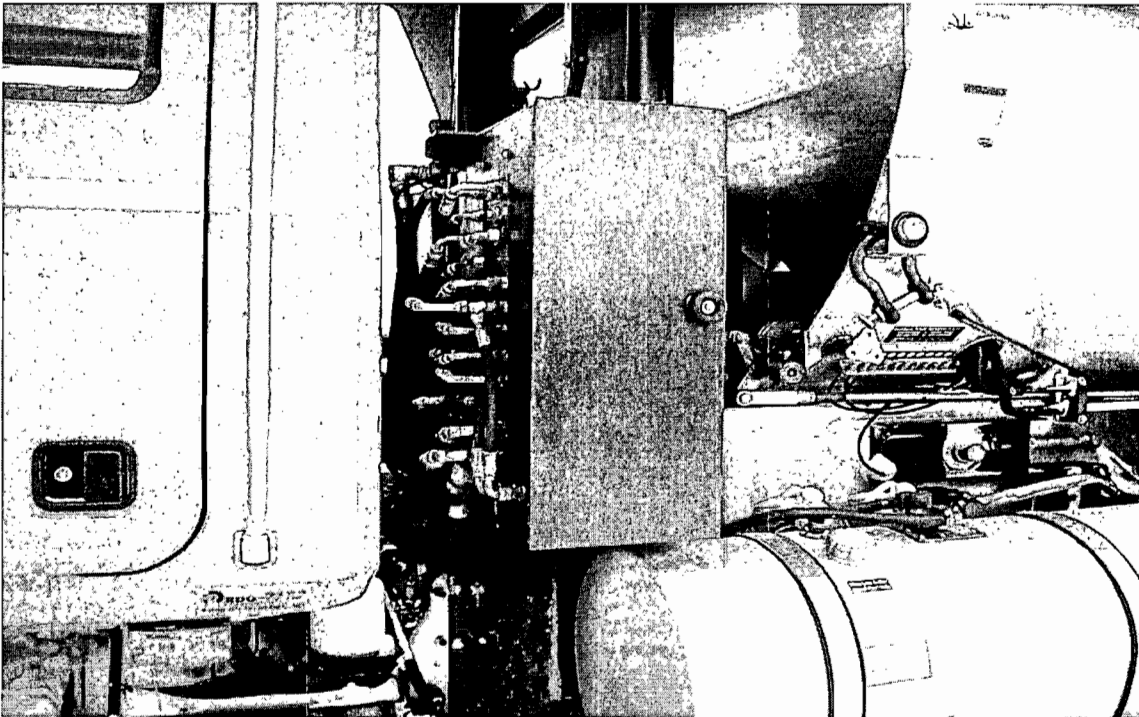
Front plow quick coupler mount



Example of rear LED light bracket

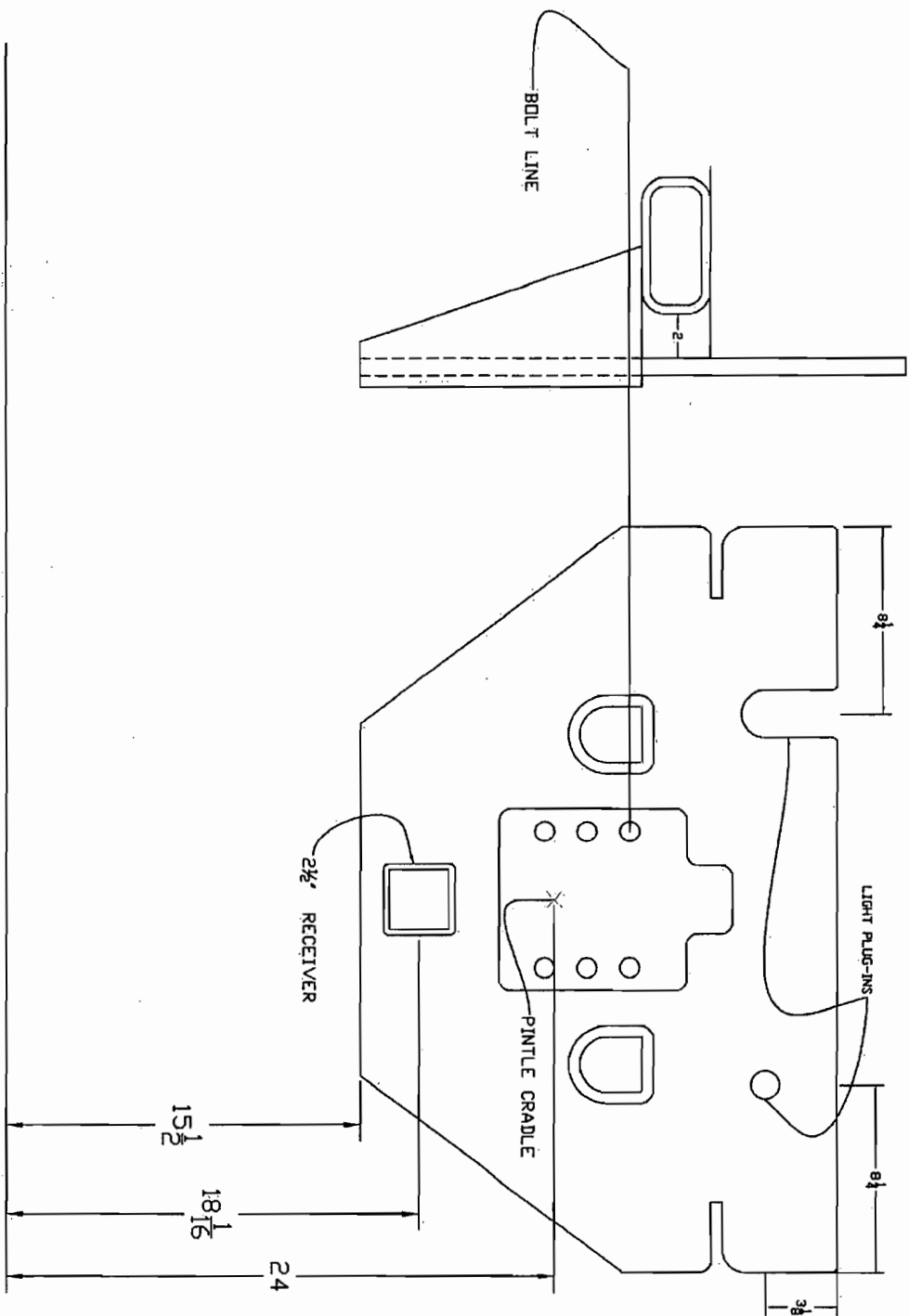


Seat mounted hydraulic and sander controller bracket

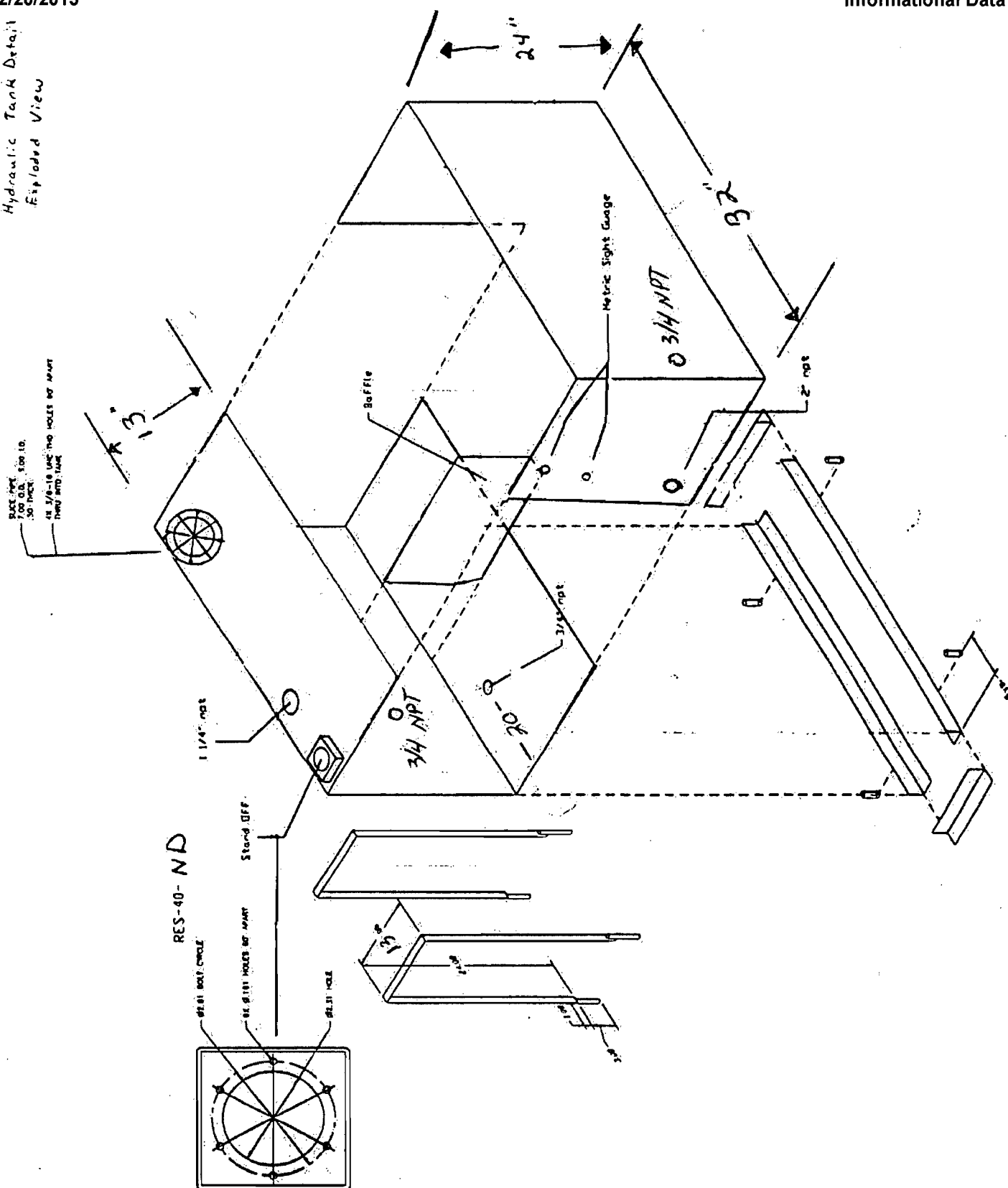


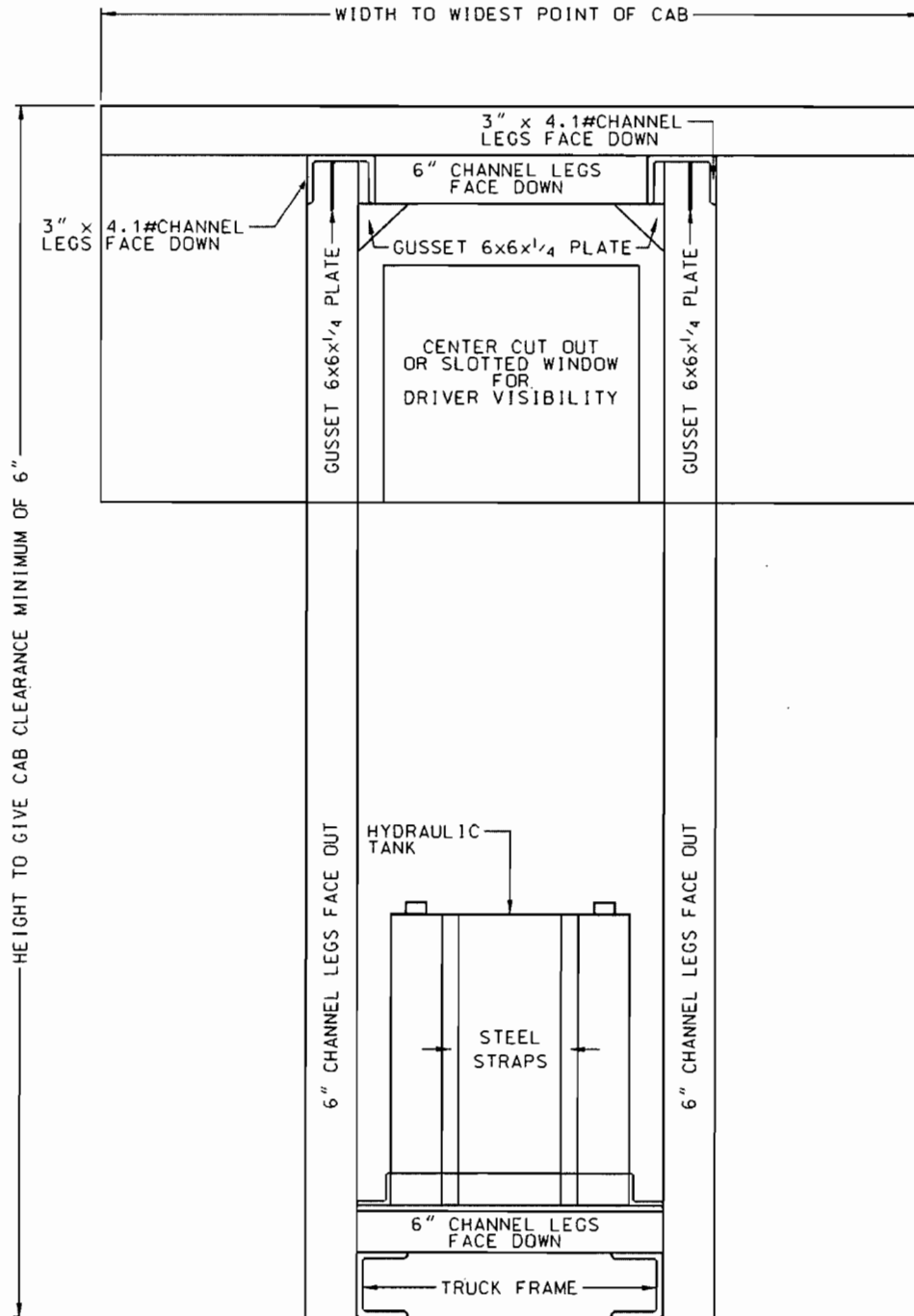
Vertical valve enclosure

PROPOSED HITCH

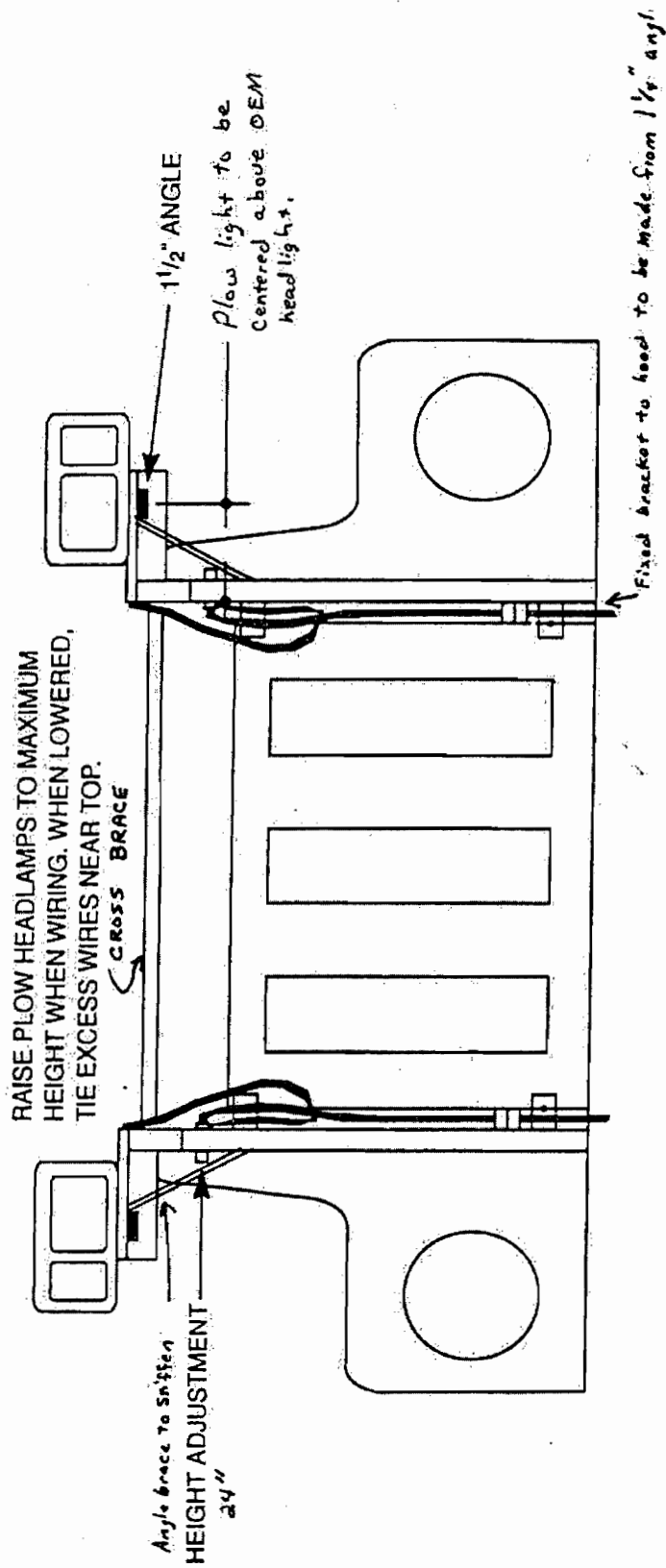


Hydraulic Tank Detail
Exploded View

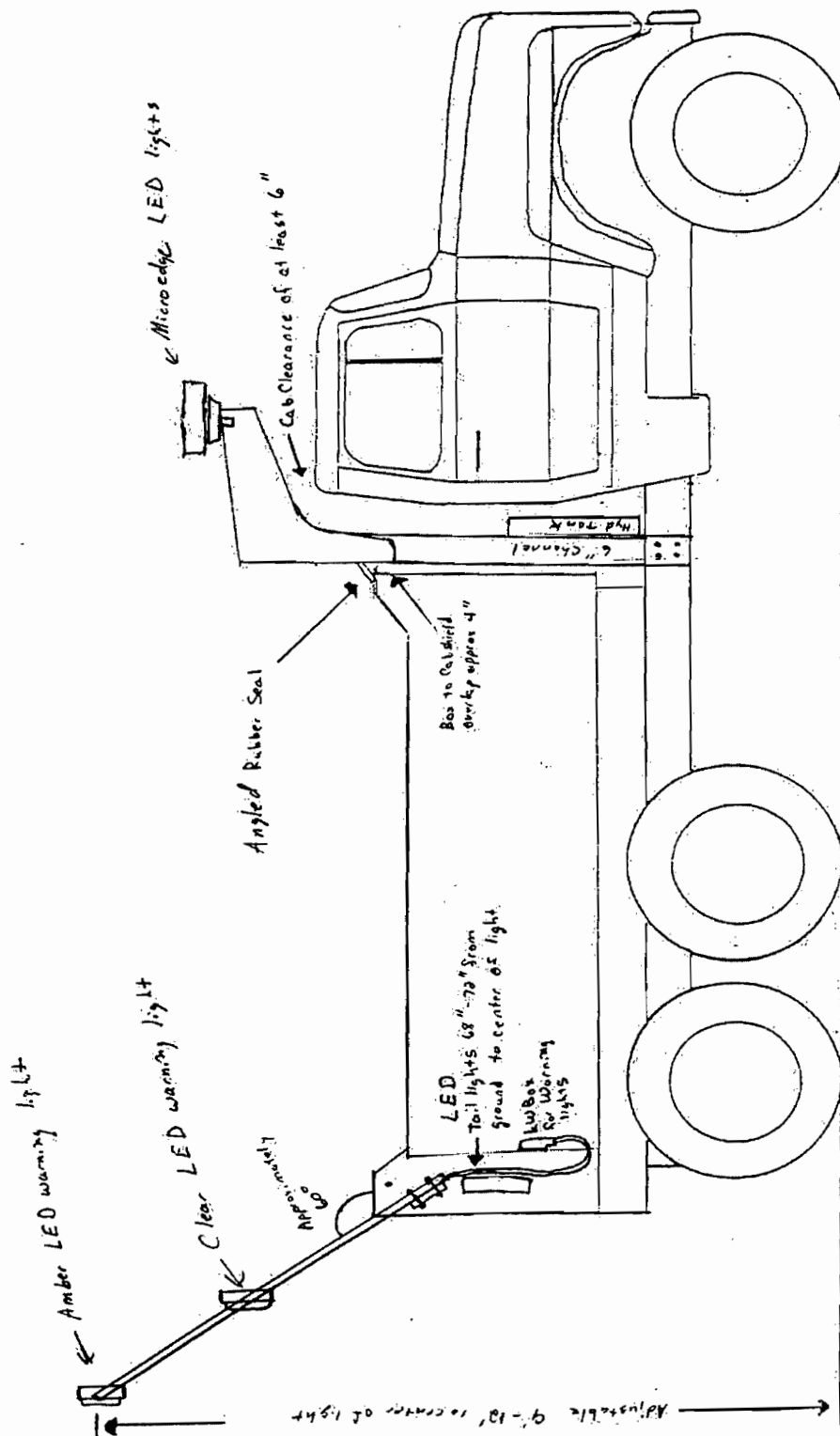




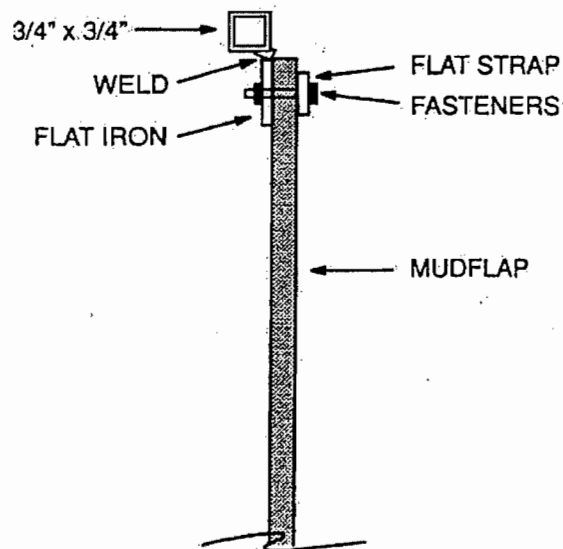
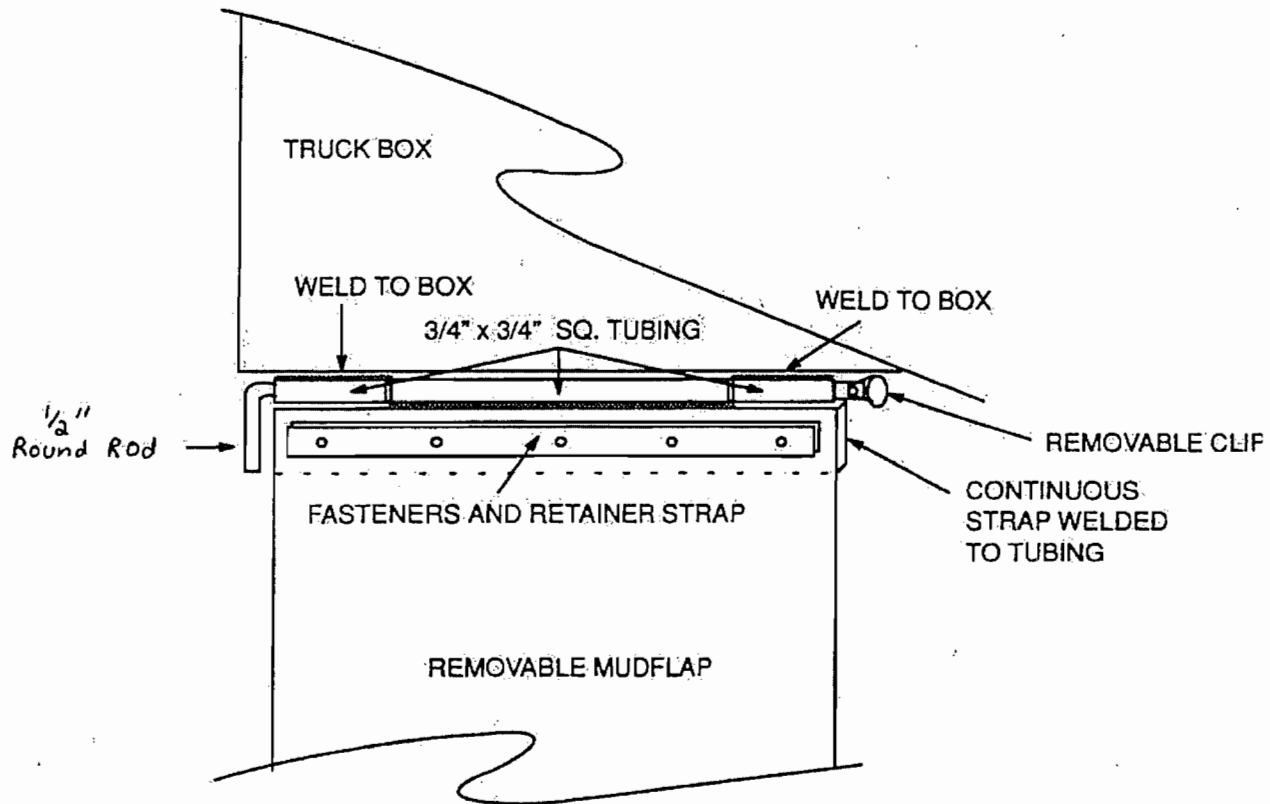
PLOW HEADLAMPS



Mounting of plow headlamps needs to allow for installation of a winter front.



REAR MUDFLAP DETAILS



Maintenance & Engineering Services Specifications This Section

SSP-95-4180-2	11' Underbody Scraper
SSP-95-4200-23	10' Rear Mount Snow Wing
SSP-95-2400-4	Tailgate Spreader
SSP-95-5700-4	200 Gallon Fender Mount Gravity Pre-wet System
SSP-95-5700-10	150 Gallon Tailgate Mount Gravity Pre-wet System

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
SPECIFICATIONS
FOR
UNDERBODY REVERSIBLE SCRAPER, 11'
(MONROE 3500-11, ROOT F-89-11 WITH OPTIONS, FALLS IBR-11 WITH OPTIONS,
HENKE UBS-XH11, HENDERSON UBSX11, OR PRE-APPROVED EQUAL)

Bidder's Instructions: Indicate compliance to the specifications on the "COMPLY YES/NO" line by each specification. Indicate any deviations from the specifications whether the minimum specifications are met or not on the "SPECIFICATION DEVIATIONS" line. Failure to comply with bid specifications may result in rejection of the bid. The state reserves the right to waive minor deficiencies or technical variances.

The intent of this specification is to describe an 11' underbody scraper to be furnished and installed on a 58,000 GVW tandem axle truck. The underbody will be installed on the same chassis with a rear wing. The underbody shall work in combination with the 10' rear wing and discharge material onto the wing without leaving a ridge between the wing and underbody. The underbody shall be designed for high-speed snow plowing, removing hard packed snow, or scraping ice. The underbody shall be of all steel fabrication, of rugged construction, and properly braced and reinforced. The underbody shall be standard production of the latest model with standard accessories and in addition meet or exceed the following minimum specifications.

Installation: The underbody scraper shall be installed according to the manufacturer's instruction and to the acceptance of the NDDOT. The underbody shall be installed at a height of 20", ± 0.5 " as space allows, from the bottom side of the circle to the ground on a bare chassis (**NO EXCEPTIONS**). Two grease banks shall be installed for easy greasing of the hanger rod and the center bushing. Six to Eight grease ports equally spaced shall be plumbed into the hanger board / rod connection. The grease ports on the hanger board shall be split to two separate banks with equal ports per side. The center bushing grease port may be plumbed to either grease bank. The grease banks shall be mounted on the ends of the hanger board for easy access and rotate with the underbody. A metal fitting shall be used at the grease port. Grease hose tubing shall be used to connect the grease port to the grease bank. The grease hose tubing shall be Parker Paraflex Hytron HLB02, 1/8" ID, 3,000 PSI rated or equal. The fittings shall be 1/8" straight and/or 1/8" swivel from Parker or equal. The grease hose tubing shall be secured to the front of the hanger board. The grease tubing shall be properly secured to prevent from being caught or rubbed on hardware or other components. Where the tubing is susceptible to contact with other components, it shall be wrapped or protected. The circle mount stop blocks shall be chamfered and welded on all accessible sides of the block. Any questions and weekly updates should be referred to NDDOT, Maintenance and Engineering Services Division, Shawn Hauck @ (701)328-2565.

	COMPLY YES	NO	SPECIFICATION DEVIATIONS
1. CIRCLE			
a. 1" thick steel	X		
b. One piece, notchless	X		
c. 5" hardened center pin/bushing	X		
i. Relubable by grease bank	X		
d. Cylinders will be mounted with 1.5" hardened pivot pins or grade 8 bolts and lock nuts	X		2" GREASABLE PINS
e. 13" hold down blocks with polyurethane or steel wear pads preferred but not required (Note: manufacturer's standard production model according to sales literature is required)	X		20.5" HOLD DOWN BLOCK WITH POLY WEAR PAD
2. HANGER			

UNDERBODY REVERSIBLE SCRAPER, 11'

SSP-95-4180-2

	COMPLY		SPECIFICATION DEVIATIONS
	YES	NO	
a. 3/4" thick plate steel one piece hanger bracket or equal	<u>X</u>	<u> </u>	<u>SEE ENCLOSED LETTER</u>
b. A 36 or equal steel	<u>X</u>	<u> </u>	<u> </u>
c. 10"--30# structural member or equal	<u>X</u>	<u> </u>	<u> </u>
i. Channel hanger board	<u>X</u>	<u> </u>	<u>SEE ENCLOSED LETTER</u>
ii. 1/2" x 7 1/2" reinforcing	<u>X</u>	<u> </u>	<u>SEE ENCLOSED LETTER</u>
iii. Full hinge length 4" S & C 13.8# channel, 1/2" x 3" x 3" angle, or equal	<u>X</u>	<u> </u>	<u>SEE ENCLOSED LETTER</u>
3. MOLDBOARD			
a. 11' wide x 1" thick x 20" high	<u>X</u>	<u> </u>	<u> </u>
b. Heat treated carbon steel	<u>X</u>	<u> </u>	<u> </u>
c. Offset and punched and spaced according to AASHTO standards to accept 5/8" bolts for tungsten carbide cutting edges (cutting edge furnished by NDDOT)	<u>X</u>	<u> </u>	<u> </u>
d. Clearance height with moldboard in fully raised position from the bottom of the frog to the ground approximately 10"	<u>X</u>	<u> </u>	<u> </u>
e. Two heavy duty shock absorber assemblies or hydraulic accumulator system	<u>X</u>	<u> </u>	<u> </u>
f. 1' square piece of expanded steel or machine punched grip strut on the drivers and passenger side back of the moldboard to be under the side truck step	<u>X</u>	<u> </u>	<u> </u>
4. HINGE			
a. 2 1/2" O.D. solid carbon or 1 3/4" cold rolled steel shaft	<u>X</u>	<u> </u>	<u> </u>
i. 96" long	<u>X</u>	<u> </u>	<u> </u>
b. Minimum three hinges	<u>X</u>	<u> </u>	<u> </u>
c. Greased by grease bank	<u>X</u>	<u> </u>	<u> </u>
5. HYDRAULIC COMPONENTS			
a. Two 3 1/2" double acting reversing cylinders	<u>X</u>	<u> </u>	<u>4" X 12" OA CYLINDERS</u>
i. 2" nitrated cylinder rod	<u>X</u>	<u> </u>	<u> </u>
ii. Crossover relief valve	<u>X</u>	<u> </u>	<u>PROVIDED IN FORCE VALVE</u>
b. Two 3" double acting moldboard actuating cylinders	<u>X</u>	<u> </u>	<u>3 1/2" X 10" OA CYLINDERS</u>

UNDERBODY REVERSIBLE SCRAPER, 11'

SSP-95-4180-2

		COMPLY		SPECIFICATION DEVIATIONS
		YES	NO	
i.	1.5" nitrated cylinder rod	<u>X</u>		<u>2" NITRIDE RODS</u>
ii.	2" O.D. trunion bearings	<u>X</u>		
c.	Externally mounted hydraulic steel tubing or hydraulic hose with wear resistant coating protectant. All hydraulic hose must meet minimum specification as outlined in the truck box specification.	<u>X</u>		
d.	Set to apply and maintain 500 psi moldboard down force	<u>X</u>		
i.	Manufacturer's pressure relief valve shall be omitted from installation and relief controlled through hydraulic valving from hydraulic vendor	<u>X</u>		
6. Manuals, as applicable				
a.	Two operator's manuals	<u>X</u>		
b.	Two lubrication schedules	<u>X</u>		
c.	Two parts books	<u>X</u>		
d.	Two Technical Repair Manual	<u>X</u>		
7. Paint				
	Moldboard, mounting brackets, push tube, and other hardware to be powder coated and painted black	<u>X</u>		<u>PIECE PARTS PAINTED AND THEN ASSEMBLED</u>
8. Warranty				
	One-year full unconditional warranty, manufacturer's warranty shall apply if for a longer period	<u>X</u>		

The underbody scraper shall be delivered mounted on the truck for immediate use. The underbody scraper shall be delivered free of any defects due to shipping or workmanship. Any defects identified shall be remedied immediately at no additional cost to the NDDOT. Product literature shall be submitted with the bid.

MAKE: MONROE MODEL: MS3511-ND

PARTS/SERVICE DEALER/WARRANTY: NORTHERN TRUCK EQUIPMENT CORP. TELEPHONE: 701-281-1718

BIDDER: NORTHERN TRUCK EQUIPMENT CORP.

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
SPECIFICATIONS
FOR**

REAR MOUNT SNOW WING, 10'

(FALLS SDL-10, MONROE 10-DFWMB/ND, HENDERSON HWSXX125343, OR PRE-APPROVED EQUAL)

Bidder's Instructions: Indicate compliance to the specifications on the "COMPLY YES/NO" line by each specification. Indicate any deviations from the specifications whether the minimum specifications are met or not on the "SPECIFICATION DEVIATIONS" line. Failure to comply with bid specifications may result in rejection of the bid. The state reserves the right to waive minor deficiencies or technical variances.

The intent of this specification is to describe a 10' rear mounted patrol snow wing to be furnished and installed on a 58,000 GVW tandem axle truck. The wing will be installed on the same chassis with an underbody scraper. The wing shall work in combination with the 11' underbody scraper and receive material from the underbody and discharge the material without leaving a ridge between the wing and underbody. The wing shall be of all steel fabrication, of rugged construction, and properly braced and reinforced. The wing shall be standard production of the latest model with standard accessories and in addition meet **or exceed** the following minimum specifications.

Installation: The snow wing shall be installed according to the manufacturer's instructions and to the acceptance of the NDDOT. The wing post shall be installed in front of the tandem axles under the truck box and shall not be out beside the box. The rear push tube brace assembly shall be installed behind the rear axles on 6" of after frame behind the spring assembly. The rear push tube brace shall be installed directly under the truck frame using angle iron to attach the assembly to both frame rails. Steel plates that extend down from the truck frame that hold the rear push tube brace are not acceptable. All connections to the truck frame shall be bolted connections using grade 8 frame bolts, meeting SAE J-429 specifications. The wing brace tube shall be capable of being removed without having to disconnect from frame. The disconnect point shall be on the wing side and shall be bolt together plates at this disconnect point, welded to the cross tube and shall be bolted together with a minimum of four ¾" G8 bolts. For sample see photo. The final design shall be approved by the NDDOT Maintenance & Engineering Services Division, Shawn Hauck, (701) 328-2565

The wing shall be installed to allow the moldboard toe to fully float taking account for truck sag due to loading. The moldboard toe shall not apply any down pressure. The hydraulic hoses shall have swivel couplers and 37° JIC fittings where applicable and be quick coupled. The couplers shall be located up as high as possible to limit their contact with road material. A fluorescent orange tubular plow marker shall be attached to the top of the wing moldboard heel to delineate the outside edge of the wing. The tubular marker shall have a weep hole drilled into the base of the marker to allow moisture to seep out. The wing LED warning light mounting location shall be approved by the NDDOT and shall be wired to the same in cab control switch as the amber body warning lights. Any questions and weekly updates shall be referred to NDDOT, Maintenance and Engineering Services Division, Shawn Hauck @ 701-328-2565.

		COMPLY		SPECIFICATION DEVIATIONS
		YES	NO	
1.	Stored/folded-up clearance			
	a. Front 13"	<u>X</u>	_____	_____
	b. Rear 90"	<u>X</u>	_____	_____
2.	Lift			
	a. Cab-controlled hydraulic lift cylinder	<u>X</u>	_____	_____
	i. Cylinder rods to be nitrated rods	<u>X</u>	_____	_____
	b. All hydraulic front post slide mechanism (Note: tube in tube type slide with cable is not acceptable)	<u>X</u>	_____	_____

REAR MOUNT SNOW WING, 10'

SSP-95-4200-23

		COMPLY		SPECIFICATION DEVIATIONS
		YES	NO	
c.	Heel lift	<u>X</u>		
d.	Floatation both heel and toe	<u>X</u>		
e.	Wing Loc or equal outboard lift cylinder hydraulic locking device	<u>X</u>		
3.	Moldboard			
a.	50,000 PSI 10-gauge EX-TEN 50 (MILD STEEL NOT ACCEPTABLE)	<u>X</u>		
b.	Overall moldboard length 10'	<u>X</u>		
c.	100% continuously welded	<u>X</u>		
d.	¾" thick frog	<u>X</u>		
e.	Frog to be square hole punched and spaced according to AASHTO standards to accept two 3' (one on each end) and one 4' (in the center) tungsten carbide cutting edges secured with 5/8" bolts, there shall be sufficient holes in the frog so all of the holes in the cutting edge can be used (cutting edges furnished by NDDOT)	<u>X</u>		
f.	Full length top and bottom supports	<u>X</u>		
g.	Height at front 29"	<u>X</u>		
h.	Height at rear 29"	<u>X</u>		
i.	Spring-cushioned push tube with shear pin	<u>X</u>		
j.	Push tube pin location, pinned 18" from outside end maximum	<u>X</u>		
k.	Weight of moldboard minimum 600 lbs maximum 1550 lbs	<u>X</u>		
l.	28" high fluorescent orange tubular plow marker kit, Buyers or Catco model 1308105 or equal	<u>X</u>		
m.	Wing lift eye/pick point, 2 each mounted so that the wing can be lifted evenly when being removed	<u>X</u>		
4.	Mount			
a.	Right or Left side, rear mount to be flange mounted for easy removal	<u>X</u>		
b.	Front post assembly positioned in front of the rear axles with adequate pipe bracing positioned to stabilize the post from forward-backward and side to side motion, two pipe braces minimum	<u>X</u>		
c.	Front post cross brace to both frame rails shall allow clearance for the drive shaft	<u>X</u>		

• REAR MOUNT SNOW WING, 10'

SSP-95-4200-23

		COMPLY		SPECIFICATION DEVIATIONS
		YES	NO	
d.	If applicable, The pivot shaft top plate(s) shall be 100% welded top and bottom	X		
e.	The ears on the rear push tube brace that the push tube pins to shall be in line with the push tube (Note: ears at 90° to the truck frame are not acceptable)	X		
f.	The rear of the push tube shall be attached to the rear push tube brace with a ½" grade 5 bolt that will act as the shear point for the wing. The rear push tube brace shall allow the push tube to fall away if bolt shears	X		
g.	Heavy duty 3½" O.D. d" wall thickness outer pipe, 2½" O.D. d" wall thickness inner pipe rear push tube with bracing mounted behind rear axles	X		3" SCHEDULE 40 OVER TUBE + 3" X ¼" WALL INNER PIPE SEE PUSH TUBE DRAWING
i.	The push tube shall have a 3/8" weep hole drilled at the top and bottom of both ends of the tube to allow moisture to escape	X		
ii.	The push tube spring shall have a minimum of 4 braces	X		
iii.	Push tube length adjustment to be secured with bolt and lock nut. Hitch pin with hair pin not acceptable.	X		
h.	Adjustable heavy duty push tube as close as possible to 90° angle to the moldboard not to exceed maximum 18" from the outside end of the moldboard	X		
i.	Close-in transport position 24" maximum to outside of wing, push tube shall rest against a T-brace type stop with a rubber cushion bumper when wing is in transport position	X		
j.	T-brace type stop shall be located below the bottom of the box height so not to strike the box or interfere with the box operation	X		
k.	Wing drift safety chain mounted to T-brace stop, fixed at the cab (front) end and loose at the box (back) end	X		
l.	Wing drift chain mounted to front post with a fixed and loose end	X		
5.	Weight of complete assembly, minimum 1,600 lbs maximum 2,200 lbs	X		
6.	Wing plow warning light, Whelen TIR3 Super LED, WPLOW1A			
a.	Shall be wired to the truck rear amber warning light switch	X		
b.	Wiring on the wing shall be routed through conduit or in an acceptable manner to protect wire from being damaged, if the wiring can be routed through existing moldboard supports, it shall be secured in an acceptable manner using Waytek button head ties part no. 21087, or equal. Any holes that the wiring runs through must be grommited	X		
c.	Wing warning light shall have a weatherproof connection and be capable of being unplugged at the front wing post	X		

REAR MOUNT SNOW WING, 10'

SSP-95-4200-23

		COMPLY		SPECIFICATION DEVIATIONS
		YES	NO	
7.	Reflective tape shall be placed on the top of the toe cylinder (Note: see picture for location)	<u>X</u>		
8.	Manuals, as applicable			
a.	Two operator's manuals	<u>X</u>		
b.	Two lubrication schedules	<u>X</u>		
c.	Two parts books	<u>X</u>		
d.	Two Technical Repair Manual	<u>X</u>		
9.	Paint			
	Moldboard to be powder coated and painted orange. Mounting brackets, push tube, and other hardware to be powder coated and painted black	<u>X</u>		
10.	Warranty			
	One-year full unconditional warranty, manufacturer's warranty shall apply if for a longer period	<u>X</u>		

The snow wing shall be delivered mounted on the truck and ready for immediate use. The snow wing shall be delivered free of any defects due to shipping or workmanship. Any defects identified shall be remedied immediately at no additional cost to the NDDOT. Product literature shall be submitted with the bid.

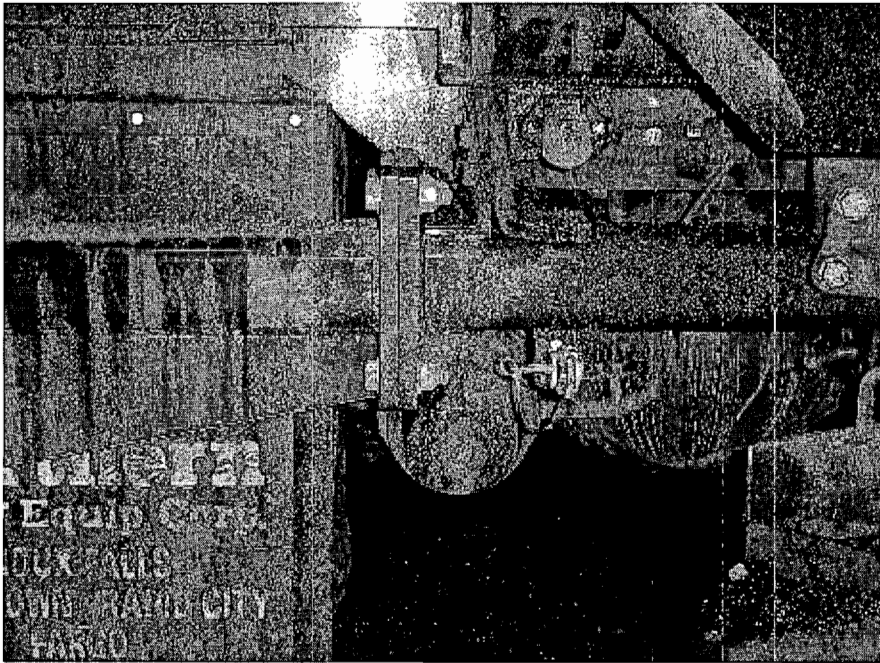
MAKE: MONROE MODEL: 10DFWMB

PARTS/SERVICE DEALER/WARRANTY: NORTHERN TRUCK EQUIPMENT TELEPHONE: 701-281-1718
CORP.

• REAR MOUNT SNOW WING, 10'

SSP-95-4200-23

These are sample images for informational purposes only, actual products are to be approved by the NDDOT, Maintenance & Engineering Division



Example of rear wing brace tube and disconnect flange



Example of reflective tape on wing toe cylinder

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
SPECIFICATIONS
FOR
SAND AND CHEMICAL TAILGATE SPREADER, #304 STAINLESS STEEL
DIRECT DRIVE, SINGLE AUGER, SINGLE SPINNER
(MONROE MS9, SWENSON SB9, HENDERSON TGS9-ND, OR PRE-APPROVED EQUAL)

Bidder's Instructions: Indicate compliance to the specifications on the "COMPLY YES/NO" line by each specification. Indicate any deviations from the specifications whether the minimum specifications are met or not on the "SPECIFICATION DEVIATIONS" line. Failure to comply with bid specifications may result in rejection of the bid. The state reserves the right to waive minor deficiencies or technical variances.

The intent of this specification is to describe a #304 stainless steel tailgate spreader to be furnished and installed. The tailgate spreader shall mount on the rear of a truck dump box below the regular tailgate in a manner to allow use of the dump body with the spreader attached. The tailgate spreader shall be standard production of the latest model with standard accessories and in addition meet or exceed the following minimum specifications:

Installation: The tailgate spreader shall be installed according to the manufacturer's instruction and to the acceptance/approval of the NDDOT, Maintenance & Engineering Office. The hydraulic hoses shall be routed under the tailgate area and down along the spinner hanger bracket and secured allowing full operation of the cover plate, clean out door, and spinner without needing to disconnect hoses. All hydraulic hoses shall be quick coupled, including the return lines. The spinner hoses shall be run independent of the auger hoses up to the truck to allow for easy removal. The spinner return must be quick coupled using a 1/2" coupler. The auger return must be quick coupled using a 3/4" coupler. All hardware mounted to the spreader shall be stainless steel or other non-corrosive material and approved by the NDDOT. The spreader shall be calibrated to apply 0 - 3,000 pounds/mile by use of the in cab ground speed spreader control. Any questions and weekly updates should be referred to NDDOT, Maintenance and Engineering Services Division, Shawn Hauck phone: (701)328-2565.

		COMPLY		SPECIFICATION DEVIATIONS
		YES	NO	
1.	Auger			
a.	Single auger	X		
b.	9" diameter	X		
c.	1 1/2" shaft	X		
d.	3/8" flight thickness	X		
e.	Greaseable, sealed, self-aligning bearings	X		
i.	Four bolt flange	X		
f.	Direct drive	X		
i.	Low speed, high torque hydraulic motor directly coupled to auger	X		
ii.	Non-corrosive bushing for auger attachment	X		

• SAND AND CHEMICAL TAILGATE SPREADER, #304 STAINLESS STEEL

SSP-95-2400-4

		COMPLY YES	NO	SPECIFICATION DEVIATIONS
iii.	Integral feedback sensor/speed sensor capable of 100 pulses per revolution. The sensor shall be mounted internally in the motor housing and have a rigid 4-pin connector mounted externally on the housing. This sensor shall be compatible with the DOT closed loop system Force America 6100 controller	X		
2.	Spreader Trough			
a.	7 gauge #304 stainless steel body	X		201 SS
b.	7 gauge #304 stainless steel cover plate	X		201 SS
c.	1/4" #304 stainless steel end plates	X		201 SS
d.	Full-width, hinged-bottom, clean-out panel	X		
e.	Lock--unlock latches without use of tools	X		
f.	Easy remove anti-flow shields	X		
g.	Hopper to accommodate 84" inside box width	X		
h.	Overall length 102" maximum	X		
i.	Side shields shall be 1/4" stainless steel. The side shields shall serve both as a material spill shield as well as a tailgate prop. The side shield shall be attached and removed without the need for tools or special equipment. The top pin shall be welded to the truck box and the shield shall slide onto the pin and be clipped on. Provisions must be made to keep the side shields rigid to the tailgate without movement. The side shield design shall be approved by the NDDOT. See photo for example.	X		
3.	Spinner Assembly			
a.	All metal components shall be #304 stainless steel, NO EXCEPTIONS	X		201 SS
b.	Mounted independent of clean-out panel	X		
c.	Mounted on opposite side of wing	X		
d.	18" spinner	X		
i.	Molded one-piece polyurethane as manufactured by C.U.E. #P0652, Thombert #1001357, or approved equal	X		
ii.	Bolt on hub	X		
iii.	1/2" thick disc	X		
iv.	1" high vanes	X		1 3/4" VANE HEIGHT

• **SAND AND CHEMICAL TAILGATE SPREADER, #304 STAINLESS STEEL**

SSP-95-2400-4

		COMPLY		SPECIFICATION DEVIATIONS
		YES	NO	
	v. Direct mount to motor	<u>X</u>		
	e. Motor mounted under spinner	<u>X</u>		
	f. Adjustable spread patterns--right, left, and center--one, two, or three lanes	<u>X</u>		
	g. Self-leveling	<u>X</u>		<u>GRAVITY TYPE</u>
	h. 10 gauge #304 stainless steel guards and deflectors	<u>X</u>		<u>201 SS</u>
	i. Spinner shield to keep material off truck undercarriage	<u>X</u>		
	j. Removable assembly	<u>X</u>		
4.	Hydraulic components	<u>X</u>		
	a. All hydraulic hoses, connections, and quick couplers, 1/2" pressure and 3/4" return line for auger and all 1/2" for spinner	<u>X</u>		
	i. Hydraulic hoses routed as stated above in the installation instructions	<u>X</u>		
	ii. All hydraulic hoses shall have a tethered cap or plug to prevent any contamination	<u>X</u>		
	iii. Quick coupled to truck hydraulics	<u>X</u>		
	iv. Spinner pressure and return hydraulic hose must be independently routed and attached to the truck box to allow for easy removal of spinner (location of couplers to be approved on first truck)	<u>X</u>		
	b. Low speed, high torque hydraulic auger motor	<u>X</u>		
	c. Low speed, high torque hydraulic spinner motor	<u>X</u>		
5.	Mounting	<u>X</u>		
	a. Quick disconnect mounting pins. Pins must be supported on inside of body corner and welded on exterior to prevent from pulling off body	<u>X</u>		
	b. Mounting hardware, shall be non-corrosive or stainless steel	<u>X</u>		
	c. Convenient chain lifting slots	<u>X</u>		
6.	Manuals, as applicable			
	a. Two operator's manuals	<u>X</u>		
	b. Two lubrication schedules	<u>X</u>		
	c. Two parts books	<u>X</u>		

SAND AND CHEMICAL TAILGATE SPREADER, #304 STAINLESS STEEL

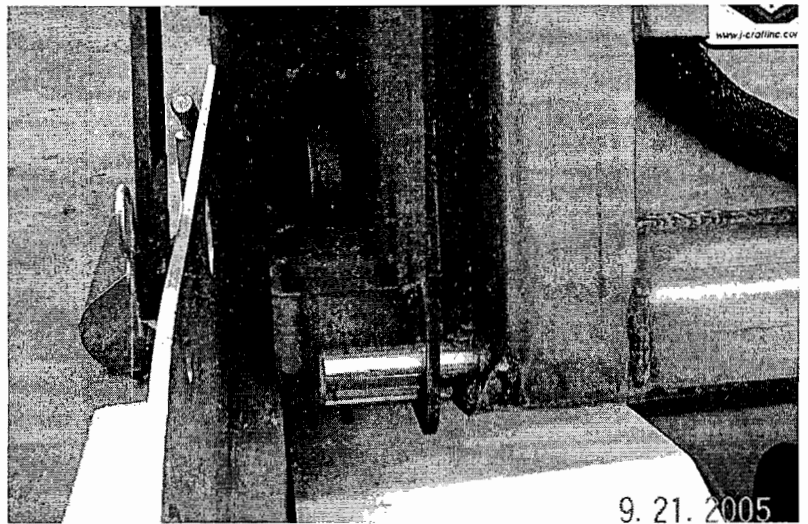
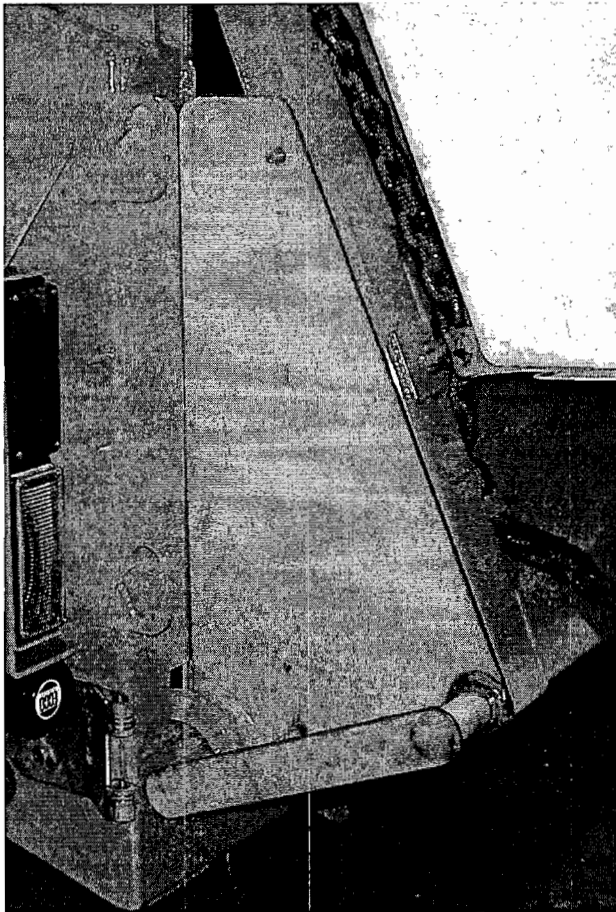
SSP-95-2400-4

	COMPLY		SPECIFICATION DEVIATIONS
	YES	NO	
d. Two Technical Repair Manual	<u>X</u>		
7. Standards			
Unit shall meet OSHA standards	<u>X</u>		
8. Warranty			
One-year full unconditional warranty, manufacturer's warranty shall apply if for a longer period	<u>X</u>		

The tailgate spreader shall be delivered mounted on a truck dump box. The tailgate spreader shall be delivered free of any defects due to shipping or workmanship. Any defects identified shall be remedied immediately at no additional cost to the NDDOT. Product literature shall be submitted with the bid.

MAKE: MONROE MODEL: MS969

PARTS/SERVICE DEALER/WARRANTY: NORTHERN TRUCK EQUIPMENT CORP. TELEPHONE: 701-281-1718



These are sample images for informational purposes only, actual products are to be approved by the NDDOT, Maintenance & Engineering Division



**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
SPECIFICATIONS
FOR
LIQUID PRE-WET SYSTEM, RADIUS DUMP FENDER MOUNT, GRAVITY FLOW
(FORCE VB-150-GF-PFD, MONROE VERSA-COAT, OR PRE-APPROVED EQUAL)**

Bidder's Instructions: Indicate compliance to the specifications on the "COMPLY YES/NO" line by each specification. Indicate any deviations from the specifications whether the minimum specifications are met or not on the "SPECIFICATION DEVIATIONS" line. Failure to comply with bid specifications may result in rejection of the bid. The state reserves the right to waive minor deficiencies or technical variances.

The intent of this specification is to describe a gravity flow liquid pre-wet system for the application of de-icing solution directly onto the material being spread by the spreader. The pre-wet system shall be compatible with a variety of de-icing solutions including sodium chloride, calcium chloride, magnesium chloride, potassium acetate, CMA, and Ice Ban. The pre-wet system shall be capable of being mounted on a single axle or tandem axle truck. The tanks shall fit over a rigid body mounted fender. The fender shall have no raised edges to trap material and openings in the front and rear inboard corners to allow accumulated material to escape. The tanks shall rest on skids that hold the tanks 1" above the fender to clean around the tank and fender (See picture on last page). The pre-wet system shall come complete with all the hardware that is required to apply liquid de-icing solution to granular material at the spreader spinner. The pre-wet system shall be standard production of the latest model with standard accessories and in addition meet the following minimum specifications:

Installation: The pre-wet system shall be installed according to the manufacturer's instruction and to the acceptance/approval of the NDDOT. A 1" schedule 80 stainless steel threaded pipe nipple or equal non-corrosive fitting shall be properly attached to the spreader spinner assembly. A 1" poly 90° elbow shall be threaded into the pipe nipple. A 1" Banjo quick coupler with cover caps shall be plumbed in line to quick disconnect the poly braid hose from the spreader spinner assembly. The tanks shall be positioned for easy access to the fill ports.

The system shall be calibrated to apply 3 gallons per minute by means of in-line ball valve with ½" supply hose with filled tanks for head pressure. All electrical and plumbing connections shall be secured so they will not fail with heavy snow and ice build up on them. There shall be an additional ball valve installed between the two tanks so that they can be filled equally. This ball valve shall be installed on the fill side of the truck between the fill port and tank. See photo. **The vendor must use flanged fittings with SS clamps wherever possible for all plumbing rather than threaded fittings.** Any questions and weekly updates should be referred to NDDOT, Maintenance and Engineering Services Division, Shawn Hauck phone: (701)328-2565.

	COMPLY YES	NO	SPECIFICATION DEVIATIONS
1. Liquid Reservoir			
a. 2 - polyethylene rotationally molded or equal tanks, one for each side of the spreader body	X		
b. Tank capacity drivers side – 200 gallon minimum, or similar approved size	X		270 gallon - SEE DRAWING
c. Tank capacity passenger (wing) side – 200 gallon minimum or similar approved size	X		270 gallon - SEE DRAWING
d. Trapezoidal, triangular type shape that fills the void created by the bottom of the spreader body	X		
e. UV stabilized	X		
f. ⅜" wall thickness or design liquid rating of 14.5 lbs per gallon	X		
g. Anti-slosh baffle built into top of tank at the opening(s)	X		SEE ADDENDUM

• **LIQUID PRE-WET SYSTEM, RADIUS DUMP FENDER MOUNT, GRAVITY FLOW**

SSP-95-5700-4

		COMPLY		SPECIFICATION
		YES	NO	DEVIATIONS
h.	3" fill port with spin on lids and rubber gaskets	<u>X</u>		<u>SEE ADDENDUM</u>
i.	Spin on lids shall be tethered to prevent being separated from tank	<u>X</u>		<u>SEE ADDENDUM</u>
j.	1¼" bottom quick fill port	<u>X</u>		<u>SEE ADDENDUM</u>
k.	1" suction port (Note: if the 1¼" port is used for discharge, the port must be necked down to 1")	<u>X</u>		<u>SEE ADDENDUM</u>
l.	1" vent at top of tank, or largest available from manufacturer	<u>X</u>		<u>SEE ADDENDUM</u>
	i. Tank Vent and lid to be located on forward of LH and RH tanks to prevent spillage when body is raised	<u>X</u>		<u>SEE ADDENDUM</u>
2.	Hardware			
a.	All parts in contact with the de-icing solution shall be of non corrosive material	<u>X</u>		
b.	#304 stainless steel cradle to support the full weight of the tank with three #304 stainless steel mounting brackets per tank without a cradle that are lined with rubber or equal belting material to prevent tank wear due to vibration (preferred) OR two 3" and 15,000 lb web breakage rating UV stabilized nylon straps per tank secured to the cradle with 1,000 lb rated and 3,000 lb breakage triangle eye with bolted connections and lock nuts to the cradle. Both shall use #304 stainless steel skids to insure the tanks are mounted 1" above the fixed stainless steel fender with no raised edges	<u>X</u>		
c.	The tanks shall not stick out beyond the side of the steel fender. The fender shall be sturdy enough to serve as a bump rail from small impacts from a loader tractor or pay loader.	<u>X</u>		
d.	Tanks shall be plumbed to fill and dispense together	<u>X</u>		
e.	1½" plumbing and 2" male cam lock fitting with female cover cap for quick bottom fill plumbed opposite side of the wing. Adequate reinforcement shall be made to support the fill side plumbing from falling when connected to the supply line. Stainless steel or other non-corrosive hardware shall be used	<u>X</u>		
f.	Glass reinforced polyethylene fittings	<u>X</u>		
g.	Clear 1" polyester braid reinforced plastic discharge hose for cold weather use	<u>X</u>		
h.	Remote control electric ball valve, 1" full port flanged fittings with ss clamps	<u>X</u>		
	i. Spray Systems Co. model 344BEC-24-C (NO EXCEPTIONS)	<u>X</u>		
	ii. 1" flanged connections w/ss clamps	<u>X</u>		

• LIQUID PRE-WET SYSTEM, RADIUS DUMP FENDER MOUNT, GRAVITY FLOW

SSP-95-5700-4

		COMPLY		SPECIFICATION DEVIATIONS
		YES	NO	
iii.	Single pole double throw switch (3 wire)	<u>X</u>		
iv.	Wetted parts of nylon, teflon, polypropylene, or viton	<u>X</u>		
v.	Tank low level sensor	<u>X</u>		
vi.	Cab control switch and indicator light provided in spreader control or switch bank	<u>X</u>		
i.	3-1½" standard ball valve with flanged fittings	<u>X</u>		
i.	Polypropylene	<u>X</u>		
j.	1" standard ball valve with flanged fittings	<u>X</u>		
i.	Polypropylene	<u>X</u>		
k.	1" schedule 80 mild steel threaded pipe nipple or equal non-corrosive fitting	<u>X</u>		
l.	1" poly 90° elbow	<u>X</u>		
m.	1" Banjo or equal quick coupler with cover caps	<u>X</u>		
3.	Manuals, as applicable			
a.	Two operator's manuals	<u>X</u>		
b.	Two parts books	<u>X</u>		
4.	Warranty			
	One-year full unconditional warranty, manufacturer's warranty shall apply if for a longer period	<u>X</u>		

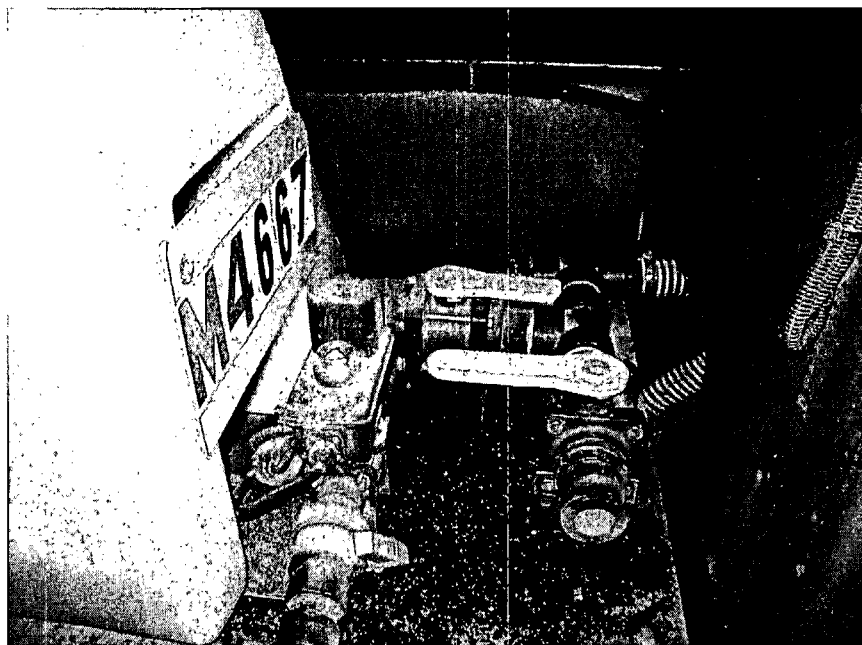
The pre-wet system shall be delivered mounted onto the truck chassis rear fenders. The pre-wet system shall be delivered free of any defects due to shipping or workmanship. Any defects identified shall be remedied immediately at no additional cost to the NDDOT. Product literature shall be submitted with the bid.

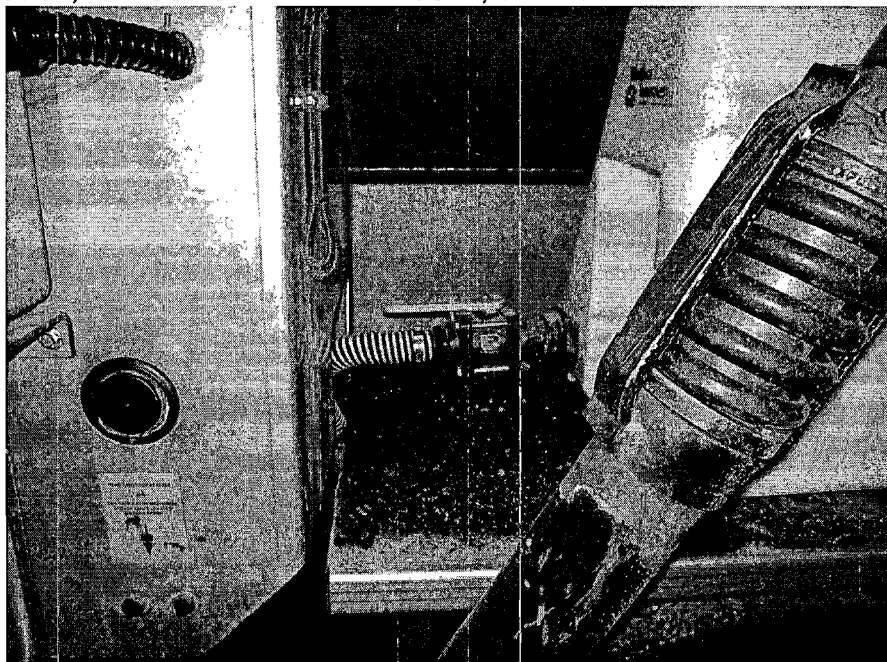
MAKE: MONROE MODEL: DUAL 270 GALLON EOS PREWET TANKS

PARTS/SERVICE/WARRANTY DEALER: NORTHERN TRUCK EQUIPMENT TELEPHONE: 701-281-1718
CORP.

BIDDER: NORTHERN TRUCK EQUIPMENT
CORP.

The following are sample images for informational purposes only, actual products are to be approved by the NDDOT, Maintenance & Engineering Division





**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
SPECIFICATIONS
FOR
LIQUID PRE-WET SYSTEM, TAILGATE MOUNT, GRAVITY FLOW
(FORCE TG-150-EGF, MONROE TAILGATE, SWENSON LSSF-T, OR PRE-APPROVED EQUAL)**

Bidder's Instructions: Indicate compliance to the specifications on the "COMPLY YES/NO" line by each specification. Indicate any deviations from the specifications whether the minimum specifications are met or not on the "SPECIFICATION DEVIATIONS" line. Failure to comply with bid specifications may result in rejection of the bid. The state reserves the right to waive minor deficiencies or technical variances.

The intent of this specification is to describe a gravity flow liquid pre-wet system to be furnished and installed for the application of de-icing solution directly onto the material being spread by the tailgate spreader. The pre-wet system shall be compatible with a variety of de-icing solutions including sodium chloride, calcium chloride, magnesium chloride, potassium acetate, CMA, and Ice Ban. The liquid reservoir tank shall be mounted on the tailgate of a tandem axle truck dump box and be sized as specified. The pre-wet system shall come complete with all the hardware that is required to apply liquid de-icing solution to granular material at the spreader trough at the discharge side. The pre-wet system shall be standard production of the latest model with standard accessories and in addition meet or exceed the following minimum specifications:

Installation: The pre-wet system shall be installed according to the manufacturer's instruction and to the acceptance of the NDDOT. The hose dispensing the liquid shall be routed not to interfere with the spreader operation and supported to maintain liquid application to the spreader trough at the discharge side. A ¾" stainless steel threaded pipe nipple or equal non corrosive fitting shall be properly attached to the spreader discharge end side plate. A ¾" poly 90° elbow shall be threaded into the pipe nipple. A ¾" Banjo quick coupler with cover caps shall be plumbed in line to quick disconnect the poly braid hose from the spreader. The tank shall be mounted to overhang the truck tailgate and positioned for easy access to the fill ports. The tank shall be mounted as low as possible on the tailgate and high enough not to interfere with the operation of the spreader cover plate. The mounting structure shall be a rigid connection to the tailgate, fixed not to fall off, and extend a minimum of 70" wide across the back of the tailgate to distribute the load along the entire tailgate. The tank's mounting structure shall not require the use of tools to remove from the tailgate. The bottom of the mounting structure shall be fastened by a pin type clip and not bolted into the tailgate. The tailgate shall be reinforced where the mounting structure meets the tailgate. The mounting of the tailgate prewet mounting structure shall be approved by the NDDOT, Maintenance and Engineering Office. The system shall be calibrated to apply 3 gallons per minute with a ½ discharge hose with filled tank for head pressure. All electrical and plumbing connections shall be secured so they will not fail with heavy snow and ice build up on them. The wiring for the electric ball valve shall be long enough to extend to the side of the truck box for connection to the power lead. The switch and wiring must allow for the ball valve to be activated by both the individual brine switch and also through the sander standby button on the Force 5100 controller. **The vendor must use flanged fittings with SS clamps wherever possible for all plumbing rather than threaded fittings.** Any questions and weekly updates should be referred to NDDOT, Maintenance and Engineering Services Division, Shawn Hauck phone: (701)328-2565.

	COMPLY		SPECIFICATION DEVIATIONS
	YES	NO	
1. Liquid Reservoir			
a. Polyethylene rotationally molded or fiberglass tank	X		
b. Trapezoidal, rectangular, or "D" shaped (oval or cylindrical is not acceptable)	X		
c. Tank capacity - minimum 135 gallon, maximum 150 gallon	X		140 GALLON
d. UV stabilized	X		
e. 3/8" wall thickness or design liquid rating of 14.5 lbs per gallon	X		17.0 LBS. RATING

LIQUID PRE-WET SYSTEM, TAILGATE MOUNT, 150 GAL, GRAVITY FLOW

SSP-95-5700-10

		COMPLY		SPECIFICATION DEVIATIONS
		YES	NO	
f.	Rectangular or "D" shaped tanks shall be horizontal mount	X		
g.	Anti-slosh baffle built into top of tank at the opening(s)	X		
h.	3" fill port with spin on lid and rubber gaskets	X		
i.	Spin on lids shall be tethered to prevent being separated from tank	X		
j.	1½" bottom quick fill port located on both sides of the tank for right or left side fill, ports should be molded into the tank	X		
k.	1" suction port located on both sides of the tank for right or left side discharge (Note: if the 1½" port is used for discharge, the port must be necked down to 1")	X		
l.	1" vent at top of tank, or largest available from manufacturer	X		
m.	Maximum 84" wide	X		
2.	Hardware			
a.	All parts in contact with the de-icing solution shall be of non corrosive material	X		
b.	#304 stainless steel cradle to support the full weight of the tank with two #304 stainless steel mounting brackets without a cradle that are lined with rubber or equal belting material to prevent tank wear due to vibration (preferred) OR two 3" and 15,000 lb web breakage rating UV stabilized nylon straps secured to the cradle with 1,000 lb rated and 3,000 lb breakage triangle eye bolted connections with lock nuts to the cradle	X		
c.	1½" plumbing and 2" male cam lock fitting with female cover cap for quick bottom fill with flanged fittings and ss clamps	X		
d.	Glass reinforced polypropylene fittings with flanged fittings and ss clamps	X		
e.	Clear 1" polyester braid reinforced plastic discharge hose for cold weather use	X		
f.	Remote control electric ball valve, 1" full port	X		
i.	Spray Systems Co. model 344BEC-24-C (NO EXCEPTIONS)	X		
ii.	1" flanged connections and ss clamps	X		
iii.	Single pole double throw switch (3 wire)	X		
iv.	Wetted parts of nylon, teflon, polypropylene, or viton	X		
v.	Tank low level sensor	X		

LIQUID PRE-WET SYSTEM, TAILGATE MOUNT, 150 GAL, GRAVITY FLOW

SSP-95-5700-10

		COMPLY		SPECIFICATION DEVIATIONS
		YES	NO	
vi.	Cab control switch and indicator light provided in spreader control or switch bank	<u>X</u>		
vii.	Wiring from control valve shall be long enough to reach the side of the truck box for connection	<u>X</u>		
g.	1½" standard ball valve with flanged fittings	<u>X</u>		
i.	Polypropylene	<u>X</u>		
h.	1" standard ball valve with flanged fittings	<u>X</u>		
i.	Polypropylene	<u>X</u>		
i.	1" stainless steel threaded pipe nipple or equal non corrosive fitting	<u>X</u>		
j.	1" poly 90° elbow	<u>X</u>		
k.	1" Banjo or equal quick coupler with cover caps	<u>X</u>		
3.	Manuals, as applicable			
a.	Two operator's manuals	<u>X</u>		
b.	Two parts books	<u>X</u>		
4.	Warranty			
	One-year full unconditional warranty, manufacturer's warranty shall apply if for a longer period	<u>X</u>		

The pre-wet system shall be delivered mounted onto the truck tailgate. The pre-wet system shall be delivered free of any defects due to shipping or workmanship. Any defects identified shall be remedied immediately at no additional cost to the NDDOT. Product literature shall be submitted with the bid.

MAKE: MONROE MODEL: 140 GALLON TG GRAVITY PREWET

PARTS/SERVICE/WARRANTY DEALER: NORTHERN TRUCK EQUIPMENT CORP TELEPHONE: 701-281-1718

BIDDER: NORTHERN TRUCK EQUIPMENT CORP.

Miner County Highway Dept.
PO Box 246
Howard, SD 57349
(605)772-4721

03/21/2013

To Whom It May Concern:

My name is Ron Kremppges, I am the Miner County Highway Superintendent. I am writing this letter in recommendation of Northern Truck Equipment Corp. whom we have had many years of very satisfied sales and service of gravel trailers, boxes, sanders, snowplow equipment, and intend to do business with them for many more years.

Northern Truck Equipment Corp. sales department has been extremely resourceful and helpful when purchasing new equipment, whether it is a bid or non-bid purchase. They handle good quality lines of equipment and accessories that we have been very satisfied with.

We are also very satisfied with the workmanship of the Northern Truck Equipment Corp's shop staff. From setting up new trucks with boxes, snow equipment and sanders, setting up new gravel pup trailers, fabrication of hitches to pull pup trailers, and repair of equipment. They have been very good to work with in making modifications and meeting our specs to setup or repair our equipment and getting it done in a timely manner.

I am pleased to recommend Northern Truck Equipment Corp. for your purchasing and service needs. If you have any further questions, please feel free to contact me.

Sincerely



Ron Kremppges
Miner County Highway Supt.



PUBLIC WORKS/OPERATIONS

Fleet Management, Forestry,
Streets & Sewers, Watermeters,
Watermains & Hydrants
402 23rd STREET NORTH
FARGO, NORTH DAKOTA 58102
PHONE: (701) 241-1453
FAX: (701) 241-8100

February 22, 2011

To Whom It May Concern:

The City of Fargo has conducted business with Northern Truck Equipment on numerous occasions. They have a knowledgeable staff and possess the skills to service the products they sell. Northern Truck Equipment is able to provide a great service due to their attention to detail.

The City of Fargo intends to maintain a relationship with Northern Truck Equipment for future business.

Sincerely,


Allan Erickson
Fleet Management Specialist

Snow Removal
Street Maintenance
Right of Way Maintenance

Sanitary & Storm
Sewer Maintenance
Street Name Sign Maintenance

Fleet Management
Meters Readings,
Installations & Maintenance

Urban Forestry
Water Service/Hydrants
& Watermain Maintenance



TURNER COUNTY HIGHWAY DEPARTMENT
PO BOX 549
PARKER, SD 57053-0549
Ph. 605-297-3404 Fax 605-297-3298

March 21, 2013

To: Whom It May Concern

FROM: Ron Schulte, Highway Supt.

Ron Schulte

We at Turner County have done business with Northern Truck Equipment Corp. for many years. We have dealt with them in sales and service on dump bodies, sanders, snowplow equipment and have been very satisfied with both.

We have been extremely satisfied with their sales department. They are very knowledgeable of the equipment they sell and have been very helpful in the purchase of the equipment. We are very satisfied in the quality of the equipment they handle.

We have also been very satisfied with Northern Truck Equipment's service department. From setting up our new trucks with dump bodies and snow equipment, they get the job done in a very timely matter. Also, if something needs to be modified for equipment to be installed, their workmanship is very good.

Turner County intends to continue to do business with Northern Truck Equipment Corp. and is pleased to recommend them for your purchasing and service needs.



North Central International, Inc.
3 Somsen St.
New Ulm, MN 56073
P: (800)448-5951
(507)359-9600
F: (507)359-9655

North Central International, Inc.
2825 11th St. E.
Glencoe, MN 55336
P: (800)282-3031
(320)864-8288
F: (320)864-7659

North Central International, Inc.
1955 Howard Drive W.
North Mankato, MN 56003
P: (888)825-2030
(507)625-2030
F: (507)625-7076

North Central International of
Sioux Falls, Inc.
4511 North Cliff Ave
PO Box 84007
Sioux Falls, SD 57118
P: (605)338-3820
F: (605)336-0229

Fox Brothers of Sanborn
13067 US Hwy 71
Sanborn, MN 56083
P: (800)658-2511
(507)848-3811
F: (507)848-3642

Fox International
2808 4th Ave. W.
Spencer, IA 51301
P: (800)798-7644
(712)262-7644
F: (712)262-7655

Olson & Johnson Int'l, Inc.
503 Hwy. 59 N.
Marshall, MN 56258
P: (800)858-2303
(507)532-5718
F: (507)532-3126

3/25/13

To Whom It May Concern:

North Central International and Northern Truck Equipment have worked numerous deals together over the years and currently are working on several projects together. They are very knowledgeable and pay great attention to detail and have been a pleasure to work with.

Please contact me with any questions.

Sincerely,

Adam Garner
North Central International of Sioux Falls

Specifications
Radius Dump and Spread Body

Page 1 of 7

Make and model bid: _____	Comply to Specs		Deviations from Specifications
	Yes	No	
Body shall be versatile with the ability to be used as a dumpbody or as a spreader to allow material to discharge through the tailgate onto a spinner assembly by way of an integral center conveyor assembly.			
The body shall be ____ feet in length, top inside width shall be 87 inches, and with the total outside width being 96 inches.			
The side height of the body shall be 44 inches, with the tailgate height 50 inches.			
The body capacity shall be _____ cubic yards, water level full.			
The unit shall be continuously welded 100% throughout.			
The sides, front and tailgate shall be manufactured of 3/16" A569 steel.			
The longsills shall be fabricated from 1/4" A569 steel, 14" deep.			
The longsills shall be joined as follows: <ul style="list-style-type: none"> Sections of 4" x 5.4# channel are welded every two feet the length of the spreader at the base of the longsills, where the longsills are then boxed in with 1/4" A569 steel. Then there shall be 3/16" x 3" x 3" structural angle welded every 12" the full length of the conveyor at the top of the longsills. 			
The unit shall have a 1/4" A569 steel replaceable floor with 3/16" removable chain guards.			
The sides shall be brake formed from a minimum 3/16" steel to a radius of 43 inches.			
The boxed top rail shall be a minimum of 3/16" formed channel.			
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.			

NORTHERN TRUCK EQUIPMENT CORP.

PH. (605) 886-5816 WATERTOWN, SD

PH. (605) 543-5206 SIOUX FALLS, SD

PH. (605) 341-8780 RAPID CITY, SD

PH. (701) 281-1718 FARGO, ND

THIS LITERATURE MAY NOT MEET EXACT
SPECIFICATIONS REQUESTED. THE PRODUCT
WILL BE BUILT TO SPECIFICATIONS
UNLESS VARIATIONS ARE NOTED.

RDS Specification in A569I
Revised 12/01/2000

Specifications
Radius Dump and Spread Body

Page 2 of 7

Make and model bid: _____	Comply to Specs		Deviations from Specifications
	Yes	No	
The rear of the body shall be supported by two pieces of 3/16" A569 steel plate contoured to the radius of the body and welded 100% on both sides.			
Additional reinforcement will be provided by a 3/16" formed box section, placed at the rear of the spreader body and tied to two rear posts formed from 3/16" A569 steel. Together, they shall provide support at the rear of the body.			
Side supports shall be added for body's 13' and longer in length. The side supports shall have 3/16" x 4" x 4" tube extending thru long members with a 3/16" boxed section welded 100% from top rail of the body to cross tube.			
The tailgate shall be a minimum of 6" higher than the sides of the body.			
The tailgate shall be manufactured from 3/16" A569 steel with a boxed perimeter of 10 gauge formed channels.			
The tailgate shall be double acting with a squared perimeter, having two horizontal braces of 10 gauge material full width of the tailgate.			
The material door shall extend 16" into the interior of the body to prevent material from escaping through the partially opened door over the conveyor.			
The door opening shall be 21" in width by 8-1/2" in height and shall be manufactured of 3/16" material.			
The tailgate shall have 1" x 4" bar stock tailgate hardware with 1-1/4" hardened pins.			
The tailgate latches shall be 1" flame cut, with each latch being adjustable with threaded 3/4" clevis and keeper pins.			
The latch shall be an over center type.			

Specifications
Radius Dump and Spread Body

Page 3 of 7

Make and model bid: _____	Comply to Specs Yes No		Deviations from Specifications
The body conveyor shall be 34" in width and shall have 28,000 pound tensile strength per strand pintle chain, with 1-1/2" x 1/2" bar flights on 4-1/2" centers.			
On rear discharge bodies from 10' thru 13' in length, the conveyor shall be driven by one 6:1 spur gearbox and high torque/low speed hydraulic motor. On body's 14' in length and greater, the conveyor shall be driven by two 6:1 spur gearboxes and high torque/low speed hydraulic motors.			
Front and rear discharge bodies, all sizes shall be driven by two 6:1 spur gearboxes and high torque/low speed hydraulic motors.			
There shall be 8 tooth sprockets keyed to the 2" drive and idler shafts.			
Conveyor drive shaft shall have heavy duty, dust sealed self-aligning four bolt flange bearings.			
There shall be a heavy-duty idler assembly that will provide adjustment for proper conveyor chain tension by use of slide rail style adjusters.			
The spinner assembly shall be manufactured from 3/16" A569 steel.			
<ul style="list-style-type: none"> • Swing-under style: Spinner shall be frame mounted with a hinge assembly that mounts to the chassis frame – and allows the spinner to swing under and out of the way, when spinner is not in use. This spinner assembly shall be manufactured from 1/4" mild steel structural material, with mild steel tubing and bar bracing. There shall be a two-position spring mounted handle. Supplied with assembly shall be a stationary front guard. 			

Specifications
Radius Dump and Spread Body

Page 4 of 7

Make and model bid: <hr/>	Comply to Specs Yes No		Deviations from Specifications
<ul style="list-style-type: none"> Stationary receiver mount spinner style: Spinner shall be mounted via means of two 2" receiver tubes, with one tube located on each side of the spinner assembly. Spinner body is manufactured from 12-gauge material. There shall be three adjustable spinner deflectors, for directing material from the spinner disc. The material spread pattern shall be controlled by means of a center diverter located above the spinner disc, and with adjustment of the spinner body that is directed by holes drilled into the receiver mounts that can move the spinner assembly either forward or back of the conveyor. 			
<ul style="list-style-type: none"> Tip-up chute style: Spinner shall be of the fully enclosed type, manufactured from 10-gauge material. There shall be four adjustable spinner deflectors and two adjustable internal material diverters. There shall be a cover located at the top of the spinner assembly to keep material directed towards the spinner – and from material being exposed to outside elements. The spinner shall be mounted off of the tailgate with two pins. Spinner can be tipped up with the use of an OPTIONAL hand winch. 			
The spinner motor shall be high torque/low speed mounted directly to the spinner disc with a cast hub.			
The spinner disc shall be 24" in diameter and manufactured of polyurethane with six replaceable fins.			
The hoist shall be of a telescopic design and have a trunion mounting.			
The hoist shall be designed to operate up to 2,500 PSI, and shall be self-bleeding.			
The hoist shall have a ¼" wall construction with bronze glands and pistons to assure a smooth and durable bearing surface.			

Specifications
Radius Dump and Spread Body

Page 5 of 7

Make and model bid: _____	Comply to Specs		Deviations from Specifications
	Yes	No	
The glands shall each be a continuous cast bearing, SAE-660 bronze with a tensile strength of 44,000 PSI.			
The cylinder head and piston shall be of a "ductile" continuously cast iron, with a tensile strength of 60,000 PSI.			
Each cylinder shall be internally sealed.			
The inside seals shall be of a u-cup design made of nitril packing.			
The cylinder shall have a Melonized/Q.P.Q® running surface.			
The Melonized surfaces shall have a predominance of single-phase epsilon nitride. The nitride shall cover the entire cylinder surface.			
This shall give the cylinder superior wear and corrosion resistance and also shall have superior wear and fatigue properties.			
The cylinder rod shall be C1045/C1050 steel with a tensile strength of 80,000 to 100,000 pounds.			
The cylinder tubing shall be D.O.M. tubing, drawn over a mandrel, and shall have tensile strength of 70,000 pounds. The tube shall have a surface harness of 80° Rockwell "B".			
The cylinder shall dismantle easily and overlap between stages for greater stability.			
The trunion collar shall be oscillating.			
Each rod or pin eye shall have a grease zerk.			
Provided with the body shall be the following light kit, which is shipped loose: <ul style="list-style-type: none"> • Two oval red stop, turn and tail lights with protective rubber grommets and wire harness' • Two oval clear back-up lights with protective rubber grommets and wire harness' • Four 2" round red markers with rubber grommets and wire harness' • One light bar with three 2" round red markers 			
The welding performed on the body must be in compliance with current AWS procedures and guidelines recognized within the State of Manuf..			

Make and model bid: <hr/>	Comply to Specs Yes No		Deviations from Specifications
Manufacturer shall provide caution labels, decals and any warnings deemed necessary.			
Manufacturer shall attach their standard warranty statement. All components described herein shall carry a minimum one-year warranty.			
Optional Front Cross Conveyor: Conveyor is designed to mount directly to truck frame for convenience of servicing. Main longmembers are made from ¼" A569 Steel. Motor and coupling bolt to longmembers and coupling is a double roller chain type with grease filled cover. <ul style="list-style-type: none"> • The conveyor shall be 18" in width, and shall utilize a two-ply high temperature endless rubber belt. • The belt shall be heavy duty, two-ply, with the top cover measuring 3/16" and the bottom ply measuring 1/16", with the total thickness being 3/8". • The belt shall have a working tension of 150 pounds per inch of width. • The cover compound shall be ORSHMB, with a fabric compound of polyester. • The compound durometer of the belt shall be 60 and shall be able to work in temperatures ranging to 212 degrees Fahrenheit. • The conveyor shall have a 10 gauge steel floor and sub floor. 			

Specifications
Radius Dump and Spread Body

Page 7 of 7

Make and model bid: <hr/>	Comply to Specs Yes No		Deviations from Specifications
Optional Front Cross Conveyor Continued: <ul style="list-style-type: none"> • The conveyor shall be direct driven by a 5" roller on one end of the conveyor, a main idler roller which shall also be 5" in diameter, both with 1-1/4" bearings, two 3" idler rollers for belt return, with 1-1/4" four bolt flange bearings. • All rollers are fabricated to make a caged design to allow material to work away from surface and be self-cleaning. 			
Other Available Options: <ul style="list-style-type: none"> • Custom cabshield which can be installed or shipped loose (Specific dimension required) • Conveyor chain cover in A569 steel or polyurethane • Inverted V • Stationary ladder or swing-up ladder assembly • Air-close tailgate with a 3-1/2" air cylinder kit • Set of top grate screens • Curved fenders for single and tandem axle chassis' • Dual rear spinner assembly in lieu of standard single spinner 			

**Specification
Heavy Duty Underbody Scraper**

Page 1 of 4

Make and model bid: _____	Comply to spec.		Deviations to Specifications
	Yes	No	
Scraper shall be extra heavy duty for year round use, capable of handling snow pack, ice, and a higher volume of snow at various speeds in the winter season, and be able to do gravel road maintenance and shoulder maintenance throughout the year.			
The moldboard shall be 1" thick x 20" in height, heat treated carbon steel, _____' in length. (10', 11' or 12')			
The cutting edge shall be ½" x 6" AASHO, top punch, double beveled.			
The reversing table shall be a 1" solid one-piece circle with infinite plowing positions, available to 45°.			
Reversing will be accomplished with two 4" double acting cylinders.			
The cylinders will provide a hydraulic lock for holding the moldboard in place while in use. A cross over relief valve shall be furnished.			
The cylinder rods shall be 2" in diameter with a hard nitrided finish.			
The cylinders will be mounted with 2" pivot pins.			
The reversing circle shall pivot around a 5" center pin and be attached with three ¾" mounting bolts to prevent hole elongation and shall be lubricated with a grease zerk.			
The circle hold down blocks shall be 20.5" in length by 7" in depth and bolted to the hanger board as close to the circle as possible for maximum strength.			
The shape of the hold down blocks shall follow the contour of the circle.			
Located underneath the hold down blocks shall be a piece of 3/8" UHMW to work as a wearplate for ease of movement of the circle.			
The hanger brackets shall be one piece, solid, ¾" x 18" x 26", A36 mild steel plate for maximum strength.			
The hanger board shall be designed and engineered for optimum strength and durability.			
The hanger board shall be manufactured from ½" formed plate, reinforced by ½" x 7-1/2" flat plate and 2-piece ¾" x 2" bar on edge. (Center of moldboard does not)			
The hinge line shall be a solid shaft, 96" in length and have three moldboard anchor points.			

NORTHERN TRUCK EQUIPMENT CORP.

PH. (605) 886-5816 WATERTOWN, SD
PH. (605) 543-5206 SIOUX FALLS, SD
PH. (605) 341-8780 RAPID CITY, SD
PH. (701) 281-1718 FARGO, ND

THIS LITERATURE MAY NOT MEET EXACT SPECIFICATIONS REQUESTED. THE PRODUCT WILL BE BUILT TO SPECIFICATIONS UNLESS VARIATIONS ARE NOTED.

3500 Underbody Scraper
Revised 02/16/2001

**Specification
Heavy Duty Underbody Scraper**

Page 2 of 4

Make and model bid: _____	Comply to spec.		Deviations to Specifications
	Yes	No	
Cold rolled, 1018 steel, with the two outer hinges being 3-1/4" O.D. by 6" length, with the center hinge being 3-1/4" O.D. by 10-3/4" in length, with a .344 wall thickness mechanical tubing.			
The hinges shall be reinforced with one wrap around 1/2" gusset on the outer two hinges and two gussets on the inner hinge.			
The three heavy duty hinges shall be located to minimize stress along the hanger board for maximum strength.			
There shall be four grease zerks on the hinge shaft on hinge tube.			
The inner hinge shall have two wear plates to prevent side to side shifting of the moldboard.			
The moldboard actuation will be accomplished by two 3-1/2" double acting cylinders with 2" hard chrome plated piston rods.			
The canister cylinder assembly shall be retained by a 4-bolt flange assembly.			
The cylinders shall be mounted in shock housings that are trunion mounted with 3/4" thick reinforced steel trunion brackets.			
The trunion bearings will be 2-3/4" by .344 wall thickness carbon steel and shall be lubricated with two grease zerks per cylinder at the trunion mounts.			
There shall be a grease zerk located at the cylinder head.			
Cushioning of the moldboard will be with two heavy duty shock assemblies with two internally mounted 586#/inch, .8125" wire, AISI 5161 steel springs.			
The pressure relief valve shall be preset at 400 PSI and shall be provided with the scraper.			
Hydraulic steel tubing shall be externally mounted for ease of maintenance in poly mounting block assemblies..			
All hardware and fasteners shall be electronically plated and corrosion resistant.			

**Specification
Heavy Duty Underbody Scraper**

Page 3 of 4

Make and model bid: <hr/>	Comply to spec. Yes No		Deviations to Specifications
Painting process of unit: In view of environmental safety, environmental sensitivity and a corrosion resistant finished product, the paint process for all steel components shall be powder coat paint, incorporating the encasement type process. The material used shall be environmentally friendly and shall consist of 95% recycle residue that emits "0" VOC's into the environment.			
ALL COMPONENTS PAINTED PRIOR TO ASSEMBLY. In preparation of the curing and baking process, all steel components shall be G-25 grade shot blast to prepare the steel surface for strong adhesion by removing any scale, rust and foreign materials that may be present. (All components painted prior to assembly)			
Following the shot blast process, all steel components shall pass through an alkaline wash with a clear water rinse immediately following.			
Following the alkaline wash, all steel components shall pass through a phosphate wash with a clear water rinse immediately following.			
In further preparation of the powder coat paint process, all components shall be oven dried following the wash and sealing process.			
Immediately prior to the powder coat paint being applied, all steel components shall be preheated to a minimum of 100-degree Fahrenheit for uniform powder paint coating.			
Instantly following the preheat stage, the powder coat paint shall be electro-statically applied in excess of three mils thick.			
In view of metal thickness and steel mass present and for consistent adhesion of the powder coat paint, the minimum oven curing time shall be 25 minutes at a cure temperature of no less than 400 degrees.			
The powder paint used shall be TGIC Polyester coated black in color.			

**Specification
Heavy Duty Underbody Scraper**

Page 4 of 4

Make and model bid: _____	Comply to spec.		Deviations to Specifications
	Yes	No	
All welding performed on the scraper must be in compliance with current AWS procedures and guidelines recognized within the State of manufacture.			
Unit must be manufactured within the United States of America. Burden of proof shall be upon the manufacturer for this section. Units manufactured outside the United States are cause for rejection.			
Manufacturer shall provide caution labels, decals and any warnings deemed necessary.			
Manufacturer shall attach their standard warranty statement. All components described herein shall carry minimum one-year warranty.			
A parts and service /operators manual must be furnished at time of delivery of unit.			
Note: 24" of ground clearance is required for entire unit. The power reverse, requires two 4-way valve sections; manual reverse will require one-way valve section.			

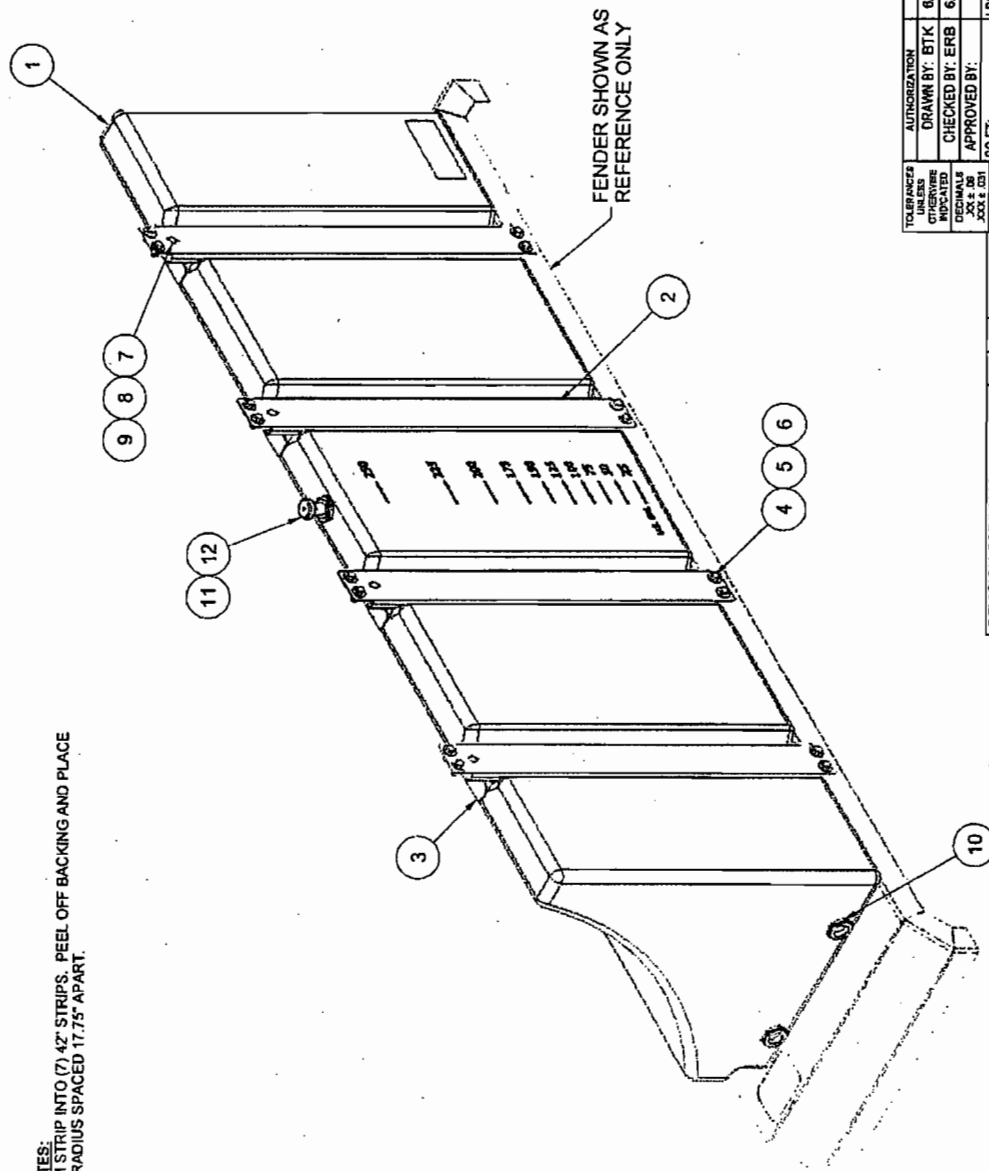
NORTHERN TRUCK EQUIPMENT CORP.

PH. (605) 886-5816 WATERTOWN, SD
 PH. (605) 543-5206 SIOUX FALLS, SD
 PH. (605) 341-8780 RAPID CITY, SD
 PH. (701) 281-1718 FARGO, ND

SPECIAL NOTES:

- CUT FOAM STRIP INTO (7) 42" STRIPS. PEEL OFF BACKING AND PLACE ON TANK RADIUS SPACED 17.75" APART.

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	00130900	TANK 270 GAL RDS POLY .375
2	4	00130904-A	MOUNTING CHANNEL TANK 270 GAL
3	4	00130904-B	TOP BRACKET TANK 270 GAL RDS
4	16	00130904-C	BOLT 500-13 X 1.25 CHG S&T
5	32	00200906	WASHER 500 FLAT S&T
6	16	00200907	NUT 500-13 CHG TOP LOCK CAW
7	4	00201307	WASHER 375 FLAT S&T
8	4	00201307	NUT 375-16 CHG TOP LOCK CAW
9	4	00200908	FITTING BUSHING ROD CR 3/8PTX
10	2	00201798	FITTING BUSHING ROD CR 3/8PTX
11	1	00203260	BREATHER 1" NPT BAFFLE VENT TOP
12	1	00202748	FOAM STRIP .375 THK X 1" W X 25' ROLL
13	1	00203114	TANK 270 GAL RDS POLY .375
14	1	00130900	MOUNTING CHANNEL TANK 270 GAL
15	4	00130904-B	TOP BRACKET TANK 270 GAL RDS
16	16	00130904-C	BOLT 500-13 X 1.25 CHG S&T
17	32	00200906	WASHER 500 FLAT S&T
18	16	00200907	NUT 500-13 CHG TOP LOCK CAW
19	4	00201307	WASHER 375 FLAT S&T
20	4	00201307	NUT 375-16 CHG TOP LOCK CAW
21	4	00200908	FITTING BUSHING ROD CR 3/8PTX
22	2	00201798	FITTING BUSHING ROD CR 3/8PTX
23	1	00203260	BREATHER 1" NPT BAFFLE VENT TOP
24	1	00202748	FOAM STRIP .375 THK X 1" W X 25' ROLL
25	1	00203114	TANK 270 GAL RDS POLY .375
26	1	00130900	MOUNTING CHANNEL TANK 270 GAL
27	4	00130904-B	TOP BRACKET TANK 270 GAL RDS
28	16	00130904-C	BOLT 500-13 X 1.25 CHG S&T
29	32	00200906	WASHER 500 FLAT S&T
30	16	00200907	NUT 500-13 CHG TOP LOCK CAW
31	4	00201307	WASHER 375 FLAT S&T
32	4	00201307	NUT 375-16 CHG TOP LOCK CAW
33	4	00200908	FITTING BUSHING ROD CR 3/8PTX
34	2	00201798	FITTING BUSHING ROD CR 3/8PTX
35	1	00203260	BREATHER 1" NPT BAFFLE VENT TOP
36	1	00202748	FOAM STRIP .375 THK X 1" W X 25' ROLL
37	1	00203114	TANK 270 GAL RDS POLY .375



TOLERANCES UNLESS OTHERWISE INDICATED FRACTIONS DECIMALS X .063 & .063 X .063 & .063		AUTHORIZATION DRAWN BY: BTK CHECKED BY: ERB APPROVED BY:		DATE 6/5/2011 6/5/2011
REVISION ECR# 10359 CR-10381 REVISION ECR# 10245 RELEASED PRO# 7947		THIRD ANGLE PROJECTION ISO 1:248 A		DATE 10/6/2011 10/05/2011 6/10/2011 6/6/2011
ERB AMH SOB JTC BTK AMH BTK X		DATE 10/6/2011 10/05/2011 6/10/2011 6/6/2011		DATE 10/6/2011 10/05/2011 6/10/2011 6/6/2011
REVISION		INITIALS		DATE
1		00100811		1 of 1

1051 West 7th Street
 Montrose, WI 53566-9100
 608-328-6127

TANK KIT, RDS, 270 GAL, POLY, 1TK
 BODY MOUNT

SCALE .09" = 1"

SIZE B

PART NUMBER 00100811

1 of 1

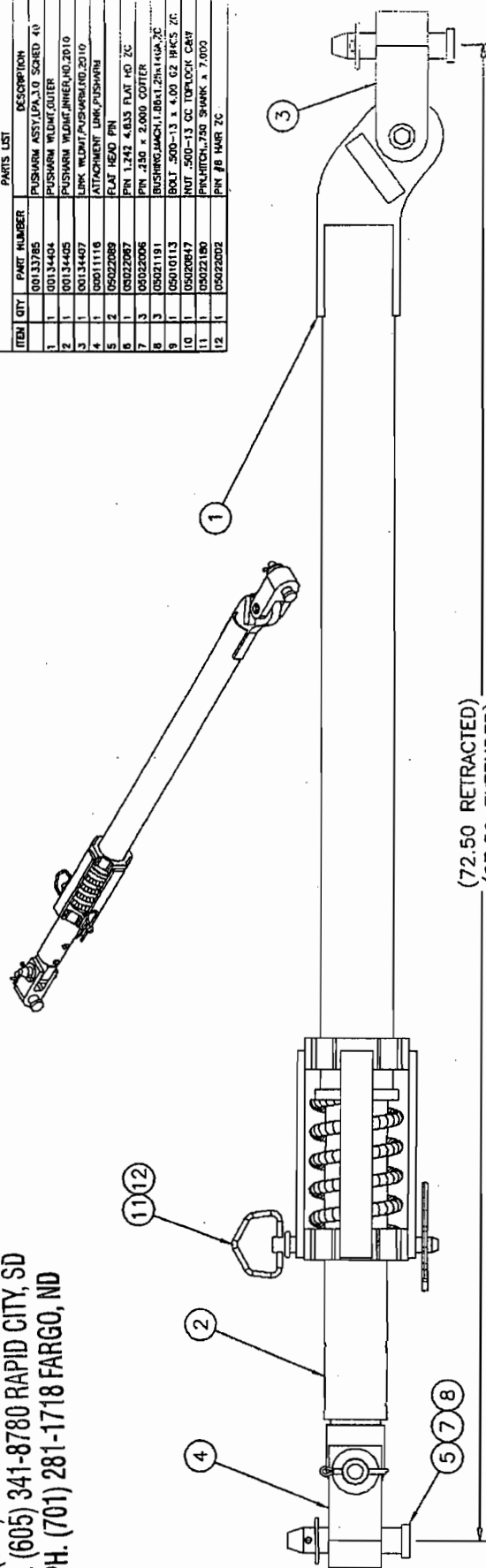
THIS LITERATURE MAY NOT MEET EXACT SPECIFICATIONS REQUESTED. THE PRODUCT WILL BE BUILT TO SPECIFICATIONS UNLESS VARIATIONS ARE NOTED.

NORTHERN TRUCK EQUIPMENT CORP.
 PH. (605) 886-5816 WATERTOWN, SD
 PH. (605) 543-5206 FALLS, SD
 PH. (605) 341-8780 RAPID CITY, SD
 PH. (701) 281-1718 FARGO, ND

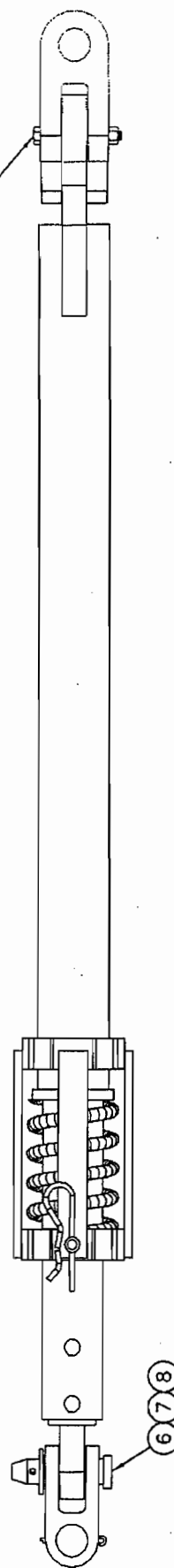
2

1

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	00133785	PUSHARM ASSY, LPA, 3.0 SCHED 40
2	1	00134404	PUSHARM W/DMT, OUTER
3	1	00134405	PUSHARM W/DMT, INNER, ND, 2010
4	1	00134407	LINK W/DMT, PUSHARM, ND, 2010
5	1	00011116	ATTACHMENT LINK, PUSHARM
6	2	05022089	FLAT HEAD PIN
7	1	05022087	FLAT HEAD PIN
8	3	05022086	FLAT HEAD PIN
9	1	05021191	BUSHING, MACH, 1.00, 1.00, 1.00, 1.00
10	1	05021113	BOLT, 500-13, 1.00, 02 INCHES, 20
11	1	05020817	NUT, 500-13, 02 TOP LOCK, 20
12	1	05022180	PUSHARM, 3.0, 3.0, 3.0, 3.0
13	1	05022002	PIN, 1/8 INCH, 20



DESIRED SHEAR POINT 9 10



• DIMENSIONS SHOWN IN () ARE REFERENCE ONLY.

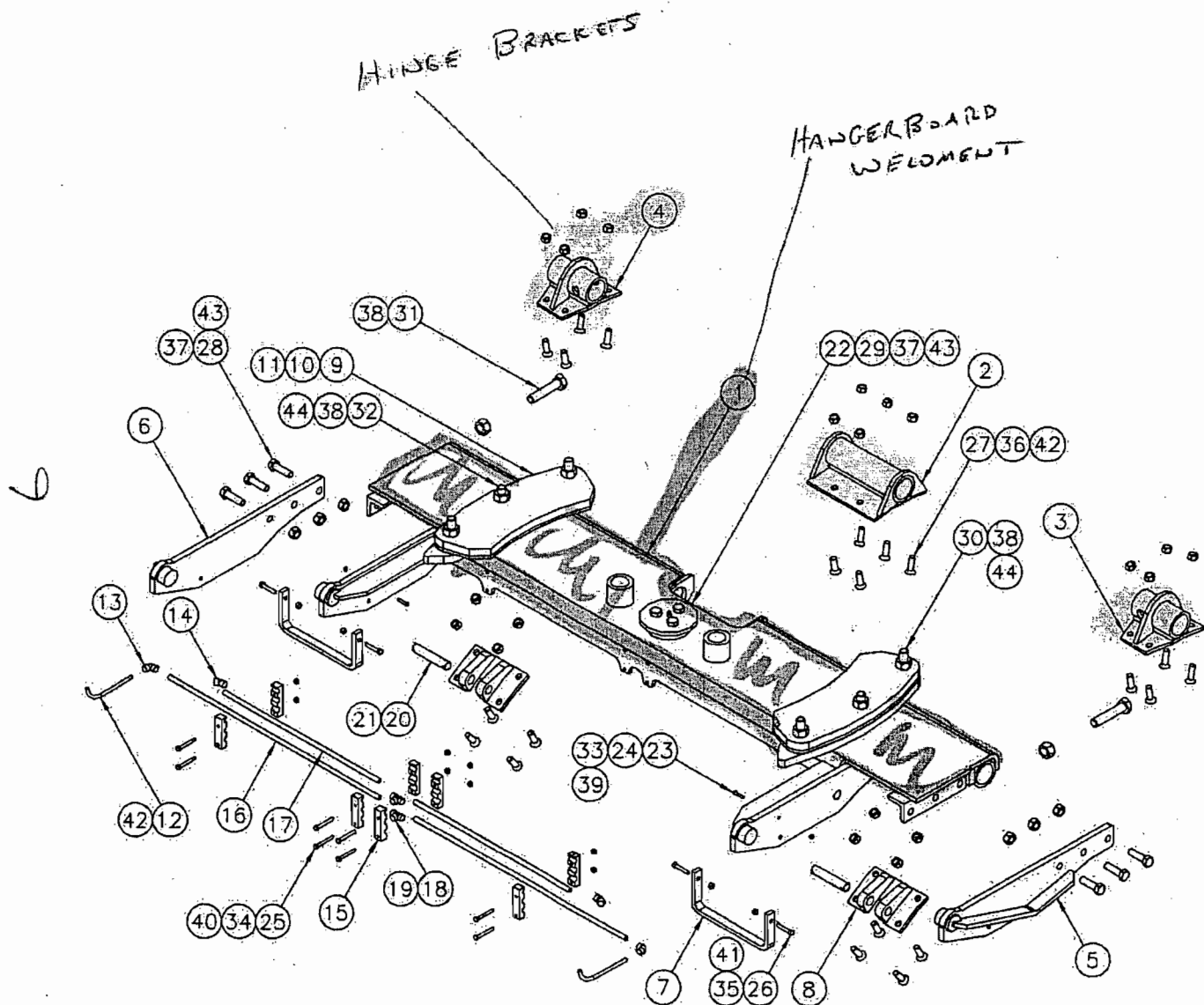
		1051 West 7th Street Monroe, WI 53566-9100 608/328-8127	
		PUSARM ASSY, LPA, 3.0 SCHED 40 W/4 BRACES, ND, 2010, BREAKAWAY	
RELEASED, PR# 7663 REVISION		TOLERANCES UNLESS OTHERWISE SPECIFIED DECIMALS XX ± .05 XXX ± .031	AUTHORIZATION DRAWN BY: T.L.C. CHECKED BY: M.J.O. APPROVED BY: DATE: 8/26/2010 8/29/2010
INITIALS DATE 08/26/2010		THIRD ANGLE PROJECTION FIRST ANGLE A	SCALE 1" = 1'-0"
PART NUMBER 00133785		1 of 1	

THE SHEAR POINT WILL ALLOW PUSHARM TO BREAKAWAY FROM TRUCK CHASSIS. AFTER BACKING UP REMOVE ITEM 11 AND 12, INSTALL GRADE 2 OR GRADE 5 REPLACEMENTS FOR ITEMS 9 AND 10. REINSTALL ITEMS 11 AND 12.

4

2

1



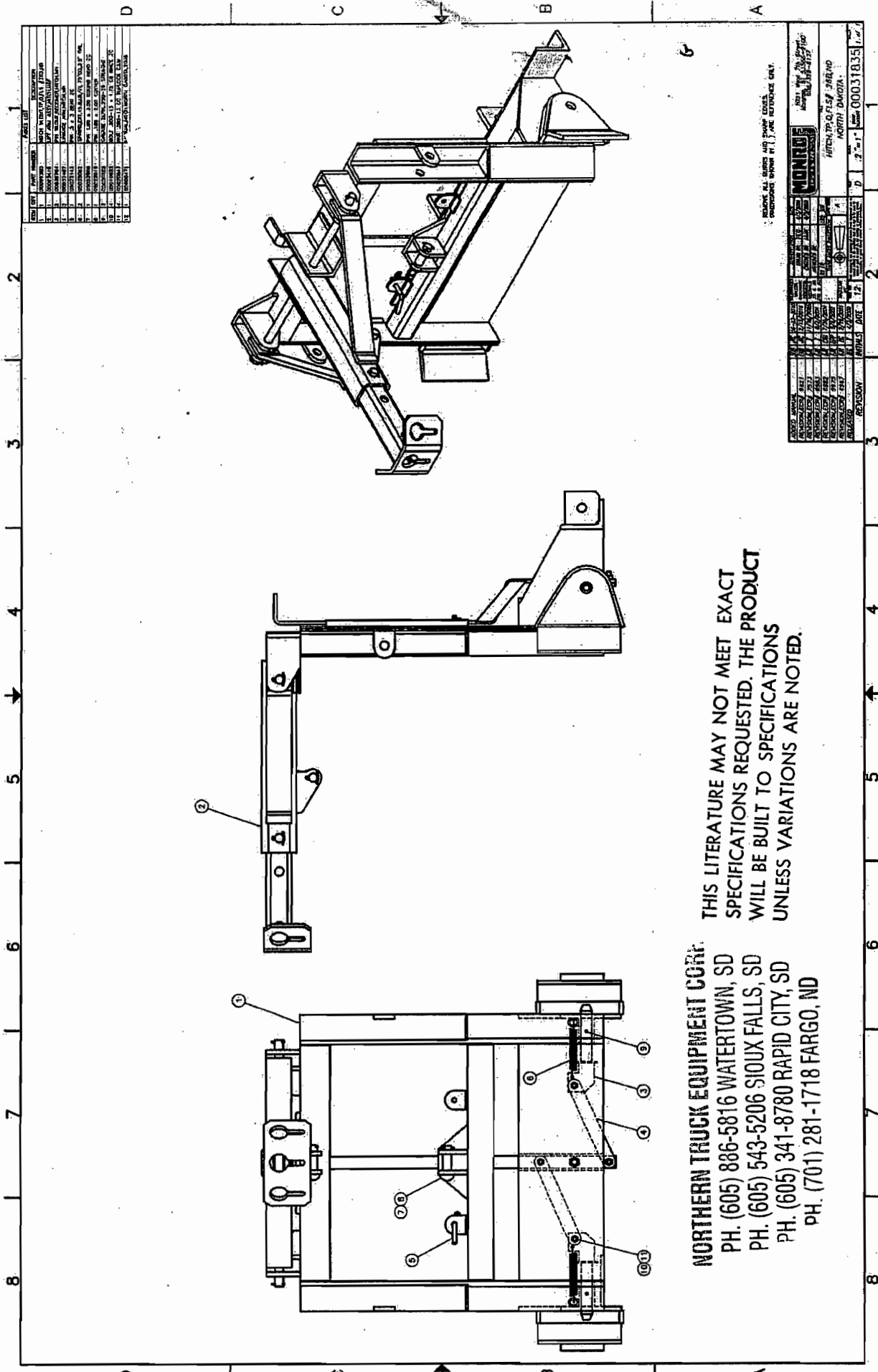
NORTHERN TRUCK EQUIPMENT CORP.
 PH. (605) 886-5816 WATERTOWN, SD
 PH. (605) 543-5206 SIOUX FALLS, SD
 PH. (605) 341-8780 RAPID CITY, SD
 PH. (701) 281-1718 FARGO, ND

THIS LITERATURE MAY NOT MEET EXACT
 SPECIFICATIONS REQUESTED. THE PRODUCT,
 WILL BE BUILT TO SPECIFICATIONS
 UNLESS VARIATIONS ARE NOTED.

1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200
------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

NORTHERN TRUCK EQUIPMENT CORP.
PH. (605) 886-5816 WATERTOWN, SD
PH. (605) 543-5206 SIOUX FALLS, SD
PH. (605) 341-8780 RAPID CITY, SD
PH. (701) 281-1718 FARGO, ND

[illegible]



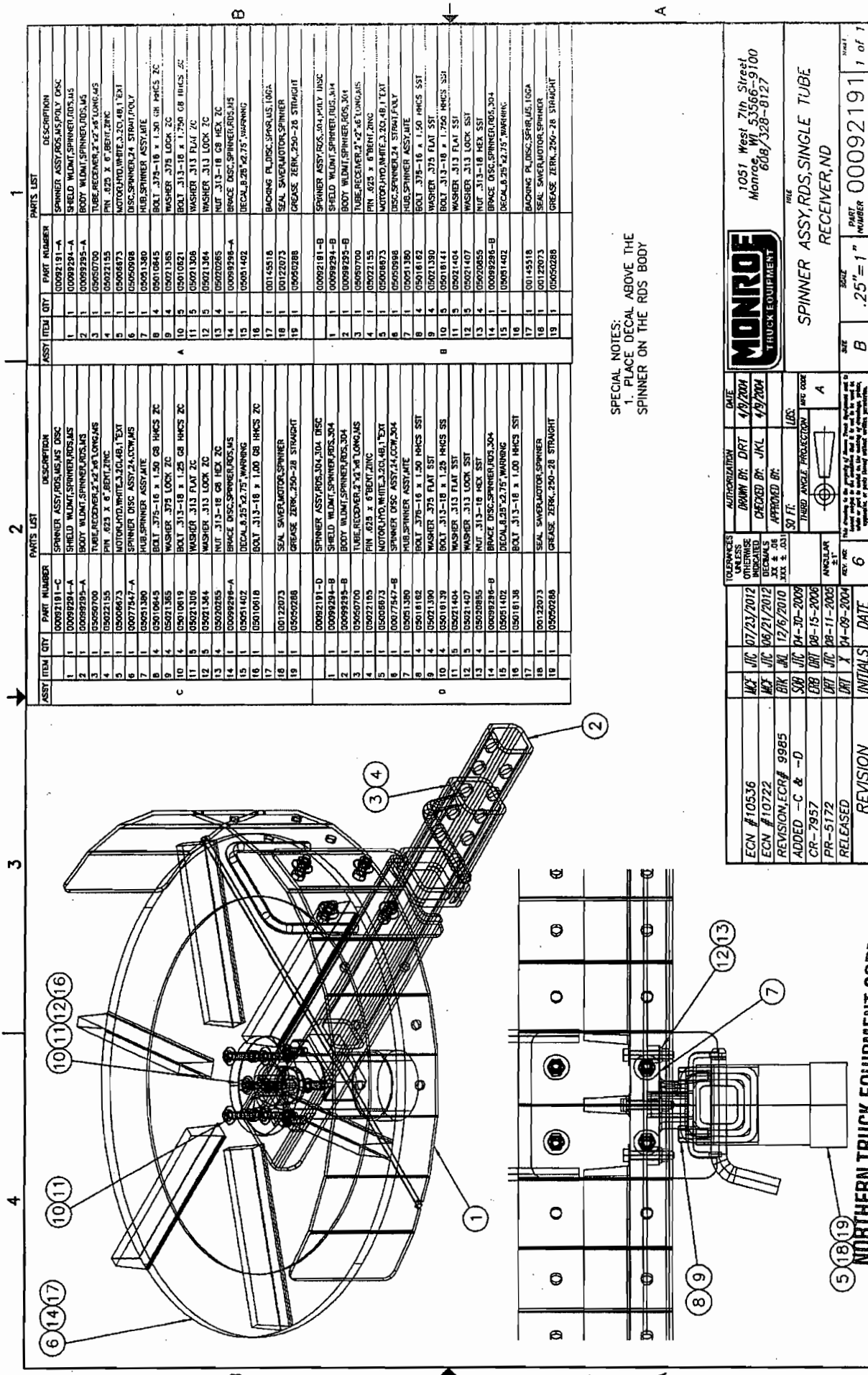
PART LIST	
1	BASE
2	BOOM
3	HYDRAULIC CYLINDER
4	HYDRAULIC CYLINDER
5	HYDRAULIC CYLINDER
6	HYDRAULIC CYLINDER
7	HYDRAULIC CYLINDER
8	HYDRAULIC CYLINDER
9	HYDRAULIC CYLINDER
10	HYDRAULIC CYLINDER
11	HYDRAULIC CYLINDER

THIS LITERATURE MAY NOT MEET EXACT SPECIFICATIONS REQUESTED. THE PRODUCT WILL BE BUILT TO SPECIFICATIONS UNLESS VARIATIONS ARE NOTED.

NORTHERN TRUCK EQUIPMENT CORP.
 PH. (605) 886-5816 WATERTOWN, SD
 PH. (605) 543-5206 SIOUX FALLS, SD
 PH. (605) 341-8780 RAPID CITY, SD
 PH. (701) 281-1718 FARGO, ND

REMARKS: ALL DIMENSIONS AND WEIGHTS ARE APPROXIMATE. DIMENSIONS SHOWN IN 1" ARE REVERSED ONLY.

REVISIONS	
1	ORIGINAL
2	REVISED
3	REVISED
4	REVISED
5	REVISED
6	REVISED
7	REVISED
8	REVISED
9	REVISED
10	REVISED
11	REVISED
12	REVISED
13	REVISED
14	REVISED
15	REVISED
16	REVISED
17	REVISED
18	REVISED
19	REVISED
20	REVISED



PARTS LIST			PARTS LIST		
ASST	ITEM	QTY	ASST	ITEM	QTY
1	0002191-C	1	1	0002191-A	1
2	0009294-A	1	2	0009294-A	1
3	0009295-A	1	3	0009295-A	1
4	0009296-A	1	4	0009296-A	1
5	0009297-A	1	5	0009297-A	1
6	0009298-A	1	6	0009298-A	1
7	0009299-A	1	7	0009299-A	1
8	0009300-A	1	8	0009300-A	1
9	0009301-A	1	9	0009301-A	1
10	0009302-A	1	10	0009302-A	1
11	0009303-A	1	11	0009303-A	1
12	0009304-A	1	12	0009304-A	1
13	0009305-A	1	13	0009305-A	1
14	0009306-A	1	14	0009306-A	1
15	0009307-A	1	15	0009307-A	1
16	0009308-A	1	16	0009308-A	1
17	0009309-A	1	17	0009309-A	1
18	0009310-A	1	18	0009310-A	1
19	0009311-A	1	19	0009311-A	1

SPECIAL NOTES:
1. PLACE DECAL ABOVE THE SPINNER ON THE RDS BODY

		1051 West 7th Street Monroe, WI 53566-9100 608/328-8127	
ECN #10536 ECN #10722 REVISION ECR# 9985 ADDED -C & -D CR-7957 PR-5172 RELEASED		AUTHORIZATION DRAWN BY: DRT CHECKED BY: JKL APPROVED BY: DATE: 4/9/2004 4/9/2004	
TOLERANCES UNLESS OTHERWISE SPECIFIED DECIMALS XX ± .06 XXX ± .031		TOLERANCES UNLESS OTHERWISE SPECIFIED ANGULAR .01 ± .01	
REVISION INITIALS DATE		PART NUMBER 00092191	

NORTHERN TRUCK EQUIPMENT CORP.
 PH. (605) 886-5816 WATERTOWN, SD THIS LITERATURE MAY NOT MEET EXACT
 PH. (605) 543-5206 SIOUX FALLS, SD SPECIFICATIONS REQUESTED. THE PRODUCT
 PH. (605) 341-8780 RAPID CITY, SD WILL BE BUILT TO SPECIFICATIONS
 PH. (701) 281-1718 FARGO, ND UNLESS VARIATIONS ARE NOTED.

MONROE TRUCK EQUIPMENT, INC. WARRANTY SNOW & ICE CONTROL PRODUCTS

Monroe Truck Equipment, Inc. warrants to the original purchaser, that if any part of the product proves to be defective in workmanship or material within **ONE YEAR** of the original installation, and is returned to us within 30 days of the discovered defect, we will (at our option) repair or replace the defective part. This warranty does not apply to damage resulting from misuse, neglect, accident, improper installation, normal wear items or lack of maintenance. This warranty is exclusive and supersedes all other warranties, whether expressed or implied. **Monroe Truck Equipment, Inc.** neither assumes, nor authorizes anyone to assume for it, any other obligation or liability in connection with this warranty and will not be liable for consequential damages.

All engines, pumps, motors, cylinders and valves are warranted by their manufacturer and not by **Monroe Truck Equipment, Inc.** The manufacturer's warranty will apply to these parts. Electrical and hydraulic components are not to be disassembled without the express written permission of Monroe Truck Equipment. Use of replacement parts other than original equipment voids this warranty.

All defective parts returned must be accompanied by the model number, serial number, date installed, date of defect, description of defect, and the name of the distributor from whom it was purchased. All warranty claims must have prior written approval from **Monroe Truck Equipment, Inc.**

Please return the warranty registration card that accompanies this manual to confirm receipt of this parts catalog and acknowledge the information contained within. Failure to return the attached card may result in a voided warranty.

NORTHERN TRUCK EQUIPMENT CORP.

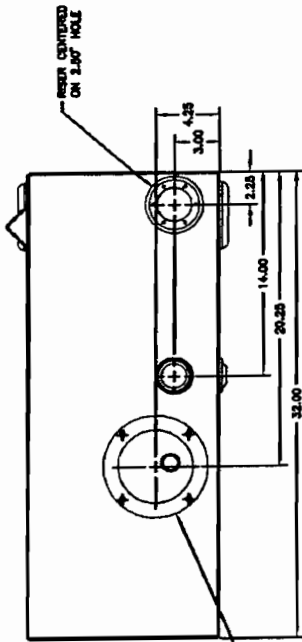
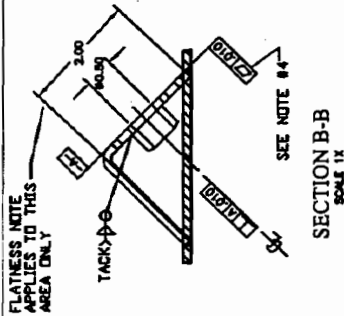
PH. (605) 886-5816 WATERTOWN, SD
PH. (605) 543-5206 SIOUX FALLS, SD
PH. (605) 341-8780 RAPID CITY, SD
PH. (701) 281-1718 FARGO, ND

THIS LITERATURE MAY NOT MEET EXACT
SPECIFICATIONS REQUESTED. THE PRODUCT
WILL BE BUILT TO SPECIFICATIONS
UNLESS VARIATIONS ARE NOTED.

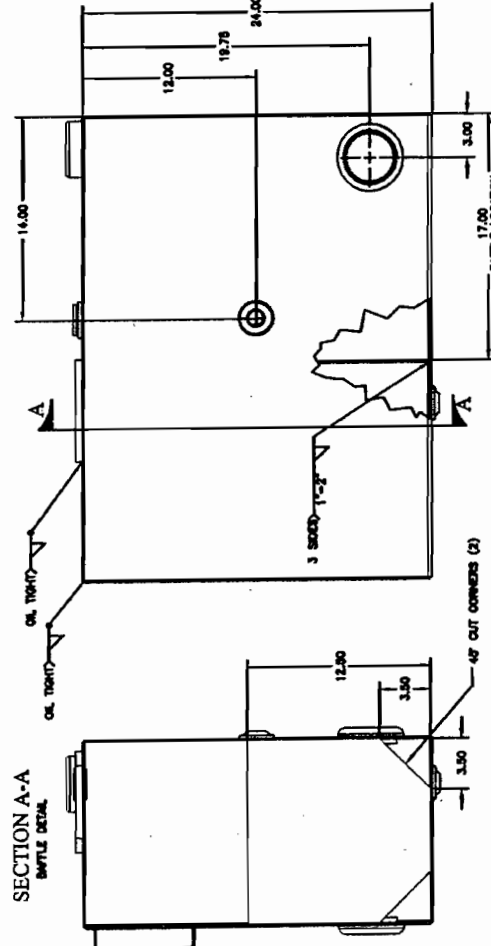
REV	BY	DATE	DESCRIPTION
1	1	03/20/00	DR

REV	BY	DATE	DESCRIPTION
1	1	03/20/00	DR

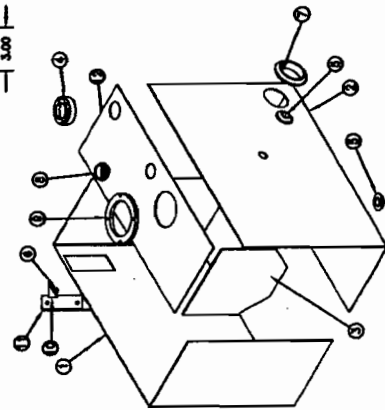
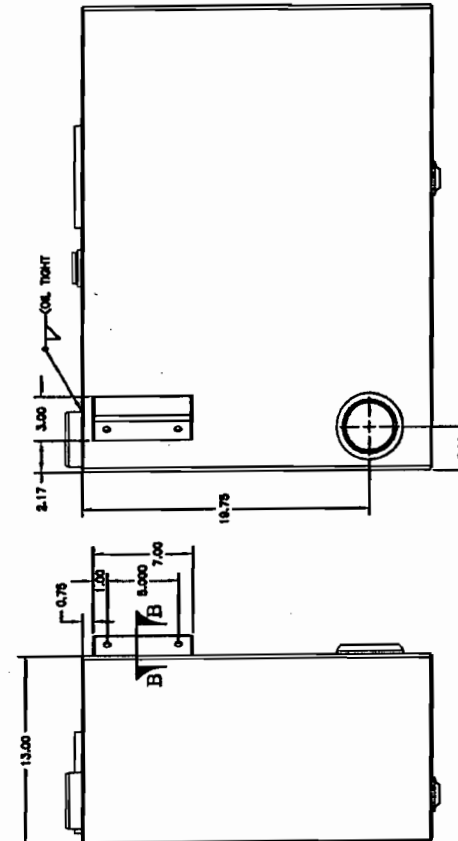
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	10 GA. PICKLED STEEL	57.25 X 27.75 APPROX
2	1	10 GA. PICKLED STEEL	51.75 X 26.18 APPROX
3	1	10 GA. PICKLED STEEL	12.75 X 9.25 APPROX
4	1	10 GA. PICKLED STEEL	12.75 X 9.25 APPROX
5	1	10 GA. PICKLED STEEL	12.75 X 9.25 APPROX
6	2	3/4" MPT WELD PORT	
7	2	M12 X 1.75 METRIC HEX NUT	
8	2	5" MPT WELD PORT	
9	1	1-1/4" MPT WELD PORT	
10	1	10 GA. PICKLED STEEL	2.00 X 2.00 APPROX
11	1	10 GA. PICKLED STEEL	4.50 X 6.75 APPROX
12	1	10 GA. PICKLED STEEL	13.00 X 32.00 APPROX



SECTION A-A
BATTLE DETAIL



SECTION B-B
SCALE 1X



1. SHEET STEEL MUST HAVE 70,000 TENSILE STRENGTH.
2. WELD MUST BE FULL PENETRATION.
3. ALL WELDS MUST BE FULL PENETRATION.
4. SURFACE SURROUNDING HOLE IS A SEALING SURFACE.
5. SURFACE MUST BE SMOOTH AND UNDISTURBED IN THE AREA OF THE HOLE.
6. INSIDE OF TANK MUST BE CLEAN AND FREE OF OIL, GREASE, DIRT, PAINT, AND OTHER CONTAMINANTS.
7. PAINT TANK EXTERIOR WITH POWDER COAT PROCESS.
8. PAINT TANK EXTERIOR WITH POWDER COAT PROCESS.
9. PAINT BUILDUP IN TANKS SHOULD BE LIMITED TO 1/8\"/>

NORTHERN TRUCK EQUIPMENT CORP.

PH. (605) 886-5616 WATERTOWN, SD
PH. (605) 543-5206 SIOUX FALLS, SD
PH. (605) 341-8780 RAPID CITY, SD
PH (701) 281-1718 FARGO, ND

REV	BY	DATE	DESCRIPTION
1	1	03/20/00	DR

10 GAUGE

WELDED HYDRAULIC TANK

40 GALLON NORTH DAKOTA 2000

DWG NO. B1369003

1

THIS LITERATURE MAY NOT MEET EXACT
SPECIFICATIONS REQUESTED. THE PRODUCT
WILL BE BUILT TO SPECIFICATIONS
UNLESS VARIATIONS ARE NOTED.

**FORCE America® Incorporated
STANDARD TERMS AND CONDITIONS**

Acceptance - Purchaser may accept this document ("Contract") by returning to FORCE America Inc. ("FORCE") a signed copy of this document, by otherwise acknowledging receipt without objection within a reasonable period of time, or by expressing acceptance in any other legal manner, whether or not such acceptance contains terms additional to or different from those stated herein; provided that FORCE objects to and rejects any such different or additional provisions, and such provisions shall not be a part of the contract between the parties. If this Contract shall be deemed an acceptance of a prior offer by Purchaser, such acceptance is limited to the express terms contained on the face and the back hereof. Additional or different terms or any attempt by Purchaser to vary in any degree any of the terms of this order shall be deemed material and are rejected. However, this Contract shall not operate as a rejection of the Purchaser's offer unless it contains variances in the terms of the description, quantity, price, or delivery schedule of the items.

Delivery - The estimated shipping date is based on production time required to process the order commencing with the date the order is received by FORCE. In the event it is necessary to revise the design, specifications, or this Contract, the shipping date shall be extended by the period of time required to achieve the mutually agreed upon corrections or adjustments.

Delays in Delivery - The Purchaser shall not hold FORCE responsible for any delay or for any damages suffered by the Purchaser by reason of any delay due to fires, strikes, riots, Acts of God, priorities, government orders or restrictions, delays in transportation, delays by suppliers of materials or parts, inability to obtain necessary labor, or other causes beyond the control of FORCE. In the event of such delay, the shipping date shall be extended for a period equal to the time lost by reason of such delay.

Damage or Loss in Transit - Delivery of goods to a carrier at FORCE's plant or other shipping point shall constitute delivery. Regardless of freight payment, all risk of loss or damage in transit shall pass to Purchaser at that time. Purchaser shall make claims for loss or damage to goods while in transit against the carrier; FORCE will assist Purchaser in securing satisfactory adjustment of such claims. Terms are F.O.B. FORCE Distribution Center.

Warranties - FORCE warrants that all goods manufactured by it shall be free from defects in material and workmanship for a period of one (1) year from the date of shipment to Purchaser. If within such one year period, such goods shall be proven to be defective to FORCE's reasonable satisfaction, then such defective goods shall be repaired or replaced, at FORCE's sole option. Such corrections or replacements shall constitute a fulfillment of all liabilities in respect of such goods. The warranty for all goods sold by FORCE but manufactured by others shall be the warranty provided by such manufacturer for such goods. FORCE shall take all reasonably commercial efforts (other than the payment of money) to provide the manufacturer's warranty to Purchaser.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES WHATSOEVER, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

FORCE is not liable for damage to goods, property or persons arising out of the improper installation of such goods, misuse of the goods or utilization of the goods under conditions which exceed specifications for such goods.

THE PARTIES EXPRESSLY AGREE THAT THE LIMITATIONS OF INCIDENTAL AND CONSEQUENTIAL DAMAGES SET FORTH HEREIN ARE AGREED ALLOCATIONS OF RISK AND SHALL SURVIVE THE DETERMINATION OF ANY COURT OF COMPETENT JURISDICTION THAT ANY REMEDY HEREIN FAILS OF ITS ESSENTIAL PURPOSE.

Additional Disclaimer - Without limiting the generality of any other disclaimer set forth herein, FORCE expressly disclaims any warranty or representation whatsoever concerning the strength, performance, endurance or impact resistant characteristics of the goods.

Description of Goods - This Contract applies only to the goods described herein. The only specifications which are a part of this Contract are those specifications which are acknowledged in writing by FORCE and which FORCE has initialed and attached hereto or otherwise clearly identified with this Contract. All other documents describing or setting forth characteristics or specifications for the goods and all samples or demonstration models thereof are intended only to provide Purchaser with a general ideal about the goods.

**THIS LITERATURE MAY NOT MEET EXACT
SPECIFICATIONS REQUESTED. THE PRODUCT
WILL BE BUILT TO SPECIFICATIONS
UNLESS VARIATIONS ARE NOTED**

Purchaser acknowledges that such specifications do not constitute a part of this Contract or any other contract between the parties and are excluded from this Contract.

Terms - Net 30 days; past due thereafter. Payment in U.S. funds. Interest on past due balances at the rate 18% per annum.

Quotations and Prices - Orders are accepted with the understanding that the goods will be billed at price in effect at time of order, unless otherwise specified in quotation.

The price and performance of this order is subject to resource availability and costs within the control of FORCE at the time of manufacture. FORCE reserves the right to cancel or adjust prices and delivery.

Freight Terms - F.O.B. FORCE Distribution Center.

Cancellation - Orders for normal quantities of goods may be canceled without charge if communicated to FORCE in time to stop shipment.

Returned Goods - Authorization and shipping instructions for the return of any goods must first be obtained by the Purchaser from FORCE, otherwise shipment will be refused. Only unused goods in original cartons of current design manufactured by FORCE will be considered for return. Modified products are not returnable.

If goods are in salable condition, a 15% restocking charge will be deducted from our Credit Memorandum on the returned goods. Transportation charges on the returned goods must be prepaid. Any cost in excess of 15% restocking charge incurred in placing the goods in salable condition will be charged to the Purchaser by a corresponding deduction from the allowed credit. Goods returned for credit must be carefully packed so as to reach FORCE without damage.

Goods built to a customer's specifications or special ordered cannot be returned for credit. If the return of our goods is made necessary through some fault of FORCE, full credit will be allowed, including whatever transportation expense the Purchaser may have incurred, provided that the return has been authorized by FORCE and is in accordance with the shipping instructions.

Taxes and Other Charges - Any manufacturer's tax, retailer's occupation tax, use tax, sales tax, excise tax, duty, custom, inspection or testing fee, or other tax, fee or charge of any nature whatsoever, imposed by any governmental authority on or measured by any transaction between FORCE and Purchaser, shall be paid by Purchaser in addition to the prices quoted or invoiced.

Consequential Damages - NOTWITHSTANDING ANYTHING CONTAINED HEREIN TO THE CONTRARY, FORCE SHALL NOT BE LIABLE FOR ANY CON-SEQUENTIAL, CONTINGENT OR INCIDENTAL DAMAGES WHATSOEVER.

Penalty Clause - No penalty clause of any description, in any specification or order, will be effective unless approved in writing over the signature of an officer of FORCE.

Errors - All clerical errors are subject to correction.

General - This Contract, together with all documents attached hereto which FORCE has signed or initialed intending to make them a part hereof, constitutes the entire agreement between the parties relating to the sale of goods described herein and supersedes any and all prior oral or written understandings. No addition to or modification of any provision shall be binding upon FORCE, and FORCE shall not be deemed to have waived any provision hereof shall be binding upon FORCE, and FORCE shall not be deemed to waive any provision hereof or any remedy available to it unless such addition, modification or waiver is in writing and signed by a duly authorized officer of FORCE. This Contract shall be governed by and construed in accordance with the Uniform Commercial Code as adopted in the State of Minnesota.

177106.WPD Rev0803

NORTHERN TRUCK EQUIPMENT CORP.
PH. (605) 886-5816 WATERTOWN, SD
PH. (605) 543-5206 SIOUX FALLS, SD
PH. (605) 341-8780 RAPID CITY, SD
PH. (701) 281-1718 FARGO, ND



www.ntecorp.com

Northern Truck Equipment Corp.
Watertown, SD 605-886-5816
Sioux Falls, SD 605-543-5206
Rapid City, SD 605-341-8780
Fargo, ND 701-281-1718

WHELEN®

THIS LITERATURE MAY NOT MEET EXACT SPECIFICATIONS REQUESTED. THE PRODUCT WILL BE BUILT TO SPECIFICATIONS UNLESS VARIATIONS ARE NOTED.

WHELEN DIRECT WARRANTY (FOR AUTOMOTIVE PRODUCTS)

Whelen Engineering Company, Inc. warrants products of its manufacture against defects in material and workmanship. This is provided that the product has been installed and operated in accordance with the manufacturer's recommendations. During the warranty period (see below) the Factory Repair Center or an Authorized Whelen Repair Center† will repair or replace (at its option) any parts or electronic assemblies of the unit which disclose a defect in material or workmanship. The Repair Center will return the repaired unit, transportation cost prepaid.

The above warranty is between the first purchaser (ultimate user) only and Whelen Engineering Company, Inc. (manufacturer). No prior authorization is required for returning Whelen products for warranty consideration. Each Whelen product sold is covered only by the official warranty in effect at time of purchase.

This warranty is not applicable to any Whelen product that has failed due to abuse, misuse, improper installation, excessive voltages, or alterations to the product that affects, in the manufacturer's judgment, intended use and service. Whelen will not be held liable for any incidental or consequential damages, and assumes no responsibility or liability for expenses incurred in the removal and/or re-installation of products requiring service and/or repair; nor the packaging, handling, and shipping to the Factory Repair Center or Authorized Whelen Repair Center†; nor for the handling of products returned from the repair center after service or repair.

There are no other warranties, expressed or implied, including, but not limited to, any implied merchantability or fitness for a particular use. Whelen Engineering Company, Inc. reserves the right to modify this warranty statement at any time; or discontinue, modify, or upgrade any products of its manufacture with design improvements without prior notice.

All power plugs/cigar plugs, incandescent and halogen bulbs, polycarbonate/plastic materials, radar products, aviation equipment, industrial products and high power voice/siren systems are not covered by this warranty (see applicable warranty statement). This warranty will be void when using or substituting other than all-genuine Whelen system components, such as remote head assemblies, xenon flash tubes, shielded cables, strobe power supplies, siren amplifiers and siren speakers.

This warranty gives you specific rights, and you may also have other rights which vary from state to state.

WHELEN ENGINEERING COMPANY ELECTRO-MECHANICAL AND STROBE PRODUCTS

STANDARD / 2-YEAR WARRANTY

Whelen products are covered by a direct warranty for up to a maximum two years from date of purchase (not to exceed three years from date of manufacture), with proof of purchase. In accordance with the policy statement described herein, the unit may be returned directly to the factory or to an Authorized Whelen Repair Center† for warranty consideration. Whelen 100 watt siren speakers are covered by a 2-year warranty from the date of manufacture. Heavy-Duty motor assemblies (so marked) are covered by a direct warranty for up to three years from date of manufacture. For warranty consideration, both the siren speakers and motor assemblies are subject to the conditions and steps described herein.

HDP® / 5-YEAR WARRANTY

Whelen Automotive Non-Lightbar Strobe Power Supplies, LED Ballasts and LED Products bearing the official HDP label and manufactured to HDP standards, are covered by a direct warranty for up to five years from date of manufacture. In accordance with the policy statement described herein, the unit may be returned directly to the factory or to an Authorized Whelen Repair Center† for warranty consideration.



12 MONTH WARRANTY — BACK-UP ALARMS

Whelen Back-Up Alarms are covered by a 12 month warranty. Both are subject to the conditions and steps described herein.

*10 YEAR LIMITED WARRANTY — LIGHTBAR POWER SUPPLY

All repairable warranty and non-warranty Edge® style lightbar strobe power supplies will be replaced with a compatible new power supply. If out of initial warranty period but less than 7 years old, the charge will be a flat fee of \$130.00; if between 7 & 10 years old, the charge will be a flat fee of \$145.00 (warranty for standard power supply is 2 years and Heavy-Duty Professional (HDP®) power supply is 5 years). This is subject to the conditions and steps described herein.

12 AND 24 MONTH DIRECT WARRANTY — XENON FLASH TUBES

(Except Flash Tubes from 1000/1500/2000/3000 & VP Series which are covered by a 6 month warranty)

If the xenon flash tube component of a "Whelen" brand (not from 1000/1500/2000/3000 or VP Series) product is returned to Whelen within 12 months of the date which is affixed to the flash tube, Whelen will replace that flash tube free of charge ONE TIME ONLY, subject to the conditions and steps herein. Whelen "Gold Medallion" flash tubes including all linear flash tube assemblies, carry a 24 month warranty. Whelen will pay ground transportation from Whelen's factory or Authorized Whelen Repair Center† to the customer via UPS where available (in the Continental U.S.).

12 MONTH EXTENDED WARRANTY — WHELEN REPAIRED STROBE POWER SUPPLIES

Whelen offers to repair or replace, free of charge, any part of its strobe light power supplies that have been repaired by Whelen within 12 months and are less than 5 years old, subject to the conditions and steps herein. Whelen will pay ground transportation from Whelen's factory or Authorized Whelen Repair Center† to the customer via UPS where available (in the Continental U.S.).

*WHELEN ENGINEERING COMPANY OUT-OF-WARRANTY FACTORY REPAIR PROGRAM:

If found to be repairable, the Whelen Factory Repair Center (only) will repair Non-Lightbar Electronic Strobe Power Supplies for \$80 each. This does not include replacement of any other electro-mechanical parts including flash tubes, polycarbonate domes, motors, or hardware items.

Follow the "Steps To Be Taken For Return" noted below, and include a check or money order for \$80 for each unit returned. For Whelen products older than 10 years, repair charges will be determined upon examination only (minimum charge is \$145). Contact factory service center for further details.

STEPS TO BE TAKEN FOR WARRANTY RETURN:

- 1) Whelen products are to be returned freight prepaid to the: Whelen Factory Repair Center Building B, 51 Winthrop Road, Chester, CT 06412-0684; or an Authorized Whelen Repair Center†. Do not ship by bus.
- 2) A copy of the sales receipt must be returned with the defective unit to qualify for warranty coverage from date of purchase.
- 3) Include a short statement explaining the problem.
- 4) Include your name, address, and day-time telephone number.
- 5) Whelen and its Authorized Repair Centers will, via UPS, ship back the repaired unit freight prepaid, usually within a few days after its receipt.

WHELEN®

ENGINEERING COMPANY, INC.

51 Winthrop Road
Chester, CT 06412-0684
Phone: (860) 526-9504
Fax: (860) 526-4078
www.whelen.com

— EFFECTIVE 7/1/10, REPLACES ALL PREVIOUSLY PUBLISHED SERVICE POLICIES —

† The only AUTHORIZED WHELEN REPAIR CENTER(S) are predetermined by the Whelen Factory via official listing obtained from Whelen Engineering Company, Chester, CT.

*New/Revised

10250S-070110

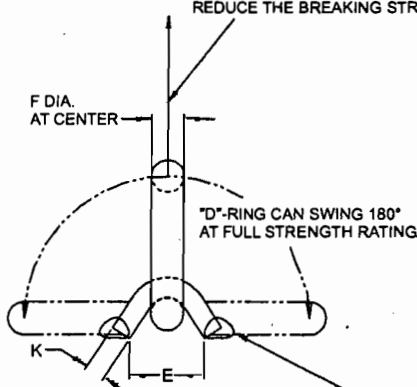
© 2010 Whelen.

D-RINGS & STRAPS

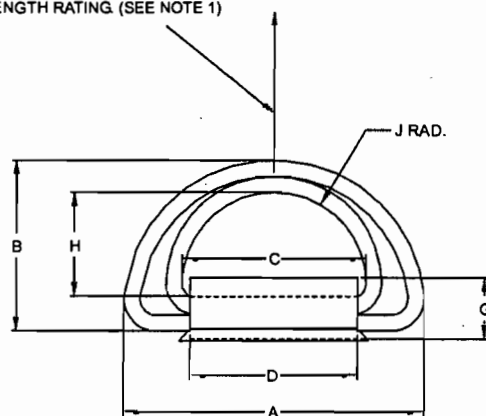
Cage Code: 65059 | Drawing No: SAJ12A00 | Revision: D | Sheet: 1 of 2

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES
DO NOT SCALE DRAWING

THE STRENGTH RATINGS ARE BASED ON THE LOAD DIRECTION SHOWN ON THE "D"-RING WITH THE STRAP WELDED TO A SUITABLY STRONG STRUCTURE. OTHER LOAD ANGLES WILL REDUCE THE BREAKING STRENGTH RATING. (SEE NOTE 1)



WELD STRAP TO SUITABLE STRUCTURE WITH "K" SIZE FILLET WELDS. WELD AROUND EDGES. AVOID HEATING THE D-RING EXCESSIVELY.



NOTE:

- FOR LIFTING PURPOSES, WHERE A 3:1 SAFETY FACTOR TO YIELD IS REQUIRED, THE WLL (WORK LOAD LIMIT) IS 1/3 OF THE MAX. LOAD WITHOUT YIELD. WHEN PROOF TESTING IS REQUIRED, THE PROOF TEST IS TWO X THE WLL. FOR MIL STD 209H CONFORMANCE, THE MAX LOAD WITHOUT YIELD IS USED TO DETERMINE THE USE CAPACITY. LIFTING D-RING AND STRAPS ARE BY REQUEST ONLY AND HAVE ADDITIONAL COST.
- MATERIAL: D-RING - HEAT TREATED ALLOY STEEL
STRAP - LOW CARBON STEEL
- FOR LOWER STRENGTH STAINLESS STEEL VERSION OF AJ12A00-DS18, SEE AJ10A00-DS07.
- AJ12A00-D46G "D"-RING IS GALVANIZED TO ASTM A123
- STRAP AND RING NOT SOLD SEPARATELY.
- PARTS THAT ARE BLASTED AND SPRAYED WITH A RUST INHIBITOR HAVE A-BRI AFTER THE PART NUMBER.

"D"-RING & STRAP P/N	"D"-RING ONLY P/N	STRAP ONLY P/N	MAX LOAD WITHOUT YIELD STRAIGHT TENSION LB.	AVERAGE ULTIMATE STRENGTH LB.	WEIGHT LB.		DIMENSIONS (INCHES)										MIN STRAP THICKNESS	MIN WELD SIZE
					"D"-RING	STRAP	A	B	C	D	E±.19	F	G	H	J	K		
AJ12A00-DS79	AJ12A00-D79	AJ12A00-S79	47,400	79,000	4.2	2.3	7.95	5.00	5.13	4.75	2.31	.94	1.65	3.12	2.56	.45	.45	
AJ12A00-DS110	AJ12A00-D110	AJ12A00-S110	66,000	110,000	5.7	3.8	9.21	5.55	5.62	5.13	2.50	1.00	1.94	3.55	2.81	.60	.60	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ADDED THE -DS46 PART NUMBER AND NOTE 4	1/14/10	DAH
B	ADDED NOTE 5 AND PART -DS11	2/23/11	DAH
C	ADDED SECOND SHEET	1/12/12	DAH
D	ADDED NOTE 6	1/23/12	DAH

To avoid lifter failure, potential death and property damage, never exceed WLL (Working Load Limit)

This document contains the proprietary information of Tandemloc, Inc. and your access and use shall be, and is at all times, pursuant to and limited by the Tandemloc, Inc. Terms of Use.

You shall not, and shall not encourage, assist, or authorize another party to copy, distribute, publicly display, modify, reverse engineer, decompile, or take any other action to reproduce or replicate this document or the information contained herein. © Copyright 2012 by Tandemloc, Inc.

Dimensions are subject to manufacturing tolerance and change.



Email: info@tandemloc.com • www.tandemloc.com
824 Highway 101 • Havelock, NC 28532
TEL: 1.800.258.7324 (252.447.7155)
FAX: 1.800.892.3273 (252.447.5502)

Tandemloc designs, manufactures and tests lifting, securing and mobilizing components for all industries. See our website for details and important safety information.

Read all safety labels and instructions prior to use. Product to be used by qualified personnel only.

THIS LITERATURE MAY NOT MEET EXACT
SPECIFICATIONS REQUESTED. THE PRODUCT
WILL BE BUILT TO SPECIFICATIONS
UNLESS VARIATIONS ARE NOTED.

NORTHERN TRUCK EQUIPMENT CORP.

PH. (605) 886-5816 WATERTOWN, SD

PH. (605) 543-5206 SIOUX FALLS, SD

PH. (605) 341-8780 RAPID CITY, SD

PH. (701) 281-1718 FARGO, ND



SAF-HOLLAND Group

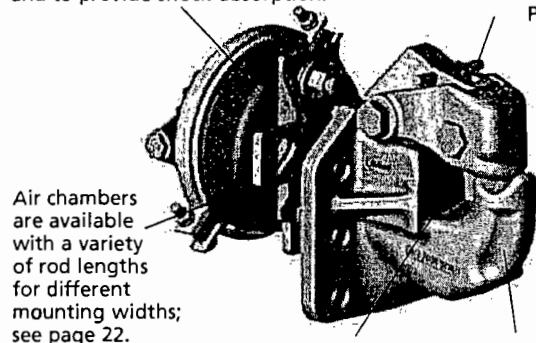
Pintle Hooks – Rigid Mount – Air Cushioned

PH-410

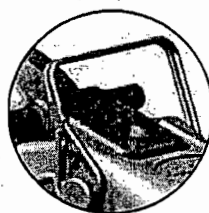
Application

A rigid mount pintle hook designed for trailers and semitrailers used in doubles and triples operations. Used for off- and over-the-road applications. Air cushioned snubber is designed to minimize the gap between the pintle hook and the drawbar on vehicles with air systems.

Plunger/snubber force is developed by the vehicle's air system to reduce wear and to provide shock absorption.



FAST LATCH
One-hand operated latch
Patent #7,431,321



Available with a tethered lock pin. (Replace "11" with "21" in model number)

Threaded plunger is adjustable.

Cast steel alloy body is heat treated for increased strength, durability, and wear resistance.

Weight: 42 lbs.

PH-410RA11 – Complete assembly includes a pintle hook, plunger, air chamber, and mounting bracket.

PH-410RN11 – Pintle hook without an air chamber, bracket or plunger.

PH-410RM11 – Pintle hook with plunger only.

For additional model numbers with various air chamber rod lengths, see page 22. The PH-410 can be operated with or without the air chamber. For easier coupling, drawbar guides are available, see page 61.

Capacities

20,000 lbs. Maximum Vertical Load
100,000 lbs. Maximum Gross Trailer Weight

Drawbar Eye Dimensions

2.38" to 3" I.D. with 1.25" to 1.63" diameter section.

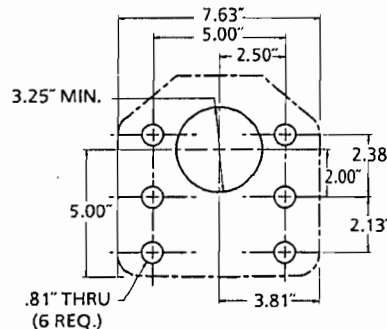
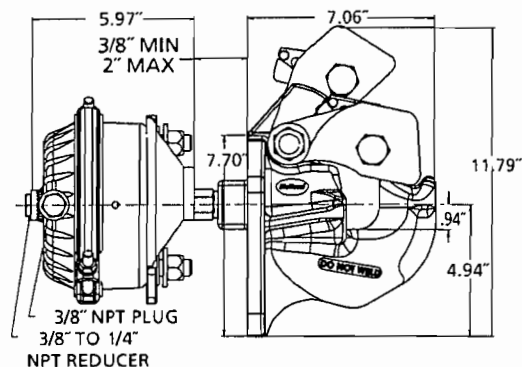
Additional Information

- For off-road applications, reduce the above maximum capacities by 25% and use with a swivel-mount drawbar.
- Tested in accordance with SAE J847 (Type II).
- For additional specification detail, refer to document number XL-PH341.
- Also available – PH410 Series with tethered lock pin. Replace "11" with "21" in model number.

Product Cross Reference Information

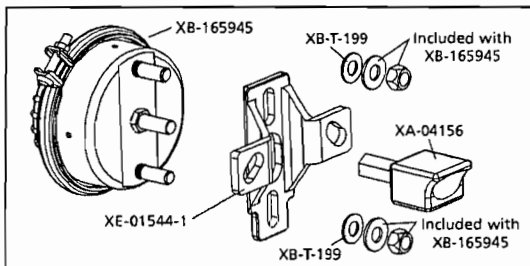
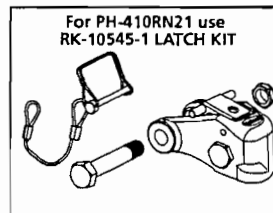
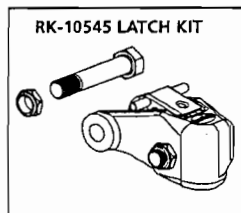
Holland	Premier	Wallace	Buyers
PH-410	470A 240A	R-45-A10	–
	Safe-Tite 100-4		

Mounting Dimensions



THIS LITERATURE MAY NOT MEET EXACT SPECIFICATIONS REQUESTED. THE PRODUCT WILL BE BUILT TO SPECIFICATIONS UNLESS VARIATIONS ARE NOTED.

Replacement Parts



XA-02608 Cylinder and Bracket Sub-Assembly



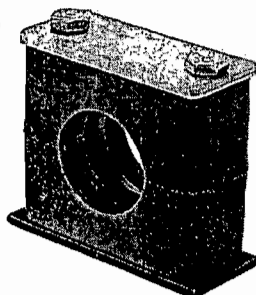
HOSE CLAMPS



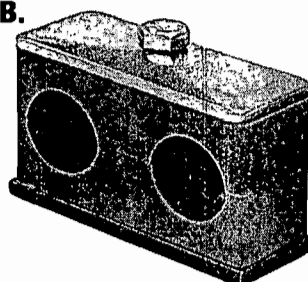
www.ntecorp.com

Northern Truck Equipment Corp
Watertown, SD 605-886-5816
Sioux Falls, SD 605-543-5206
Rapid City, SD 605-341-8780
Fargo, ND 701-281-1718

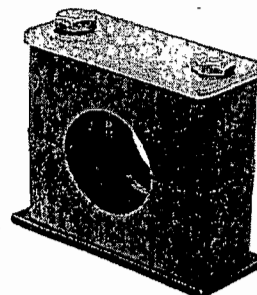
A.



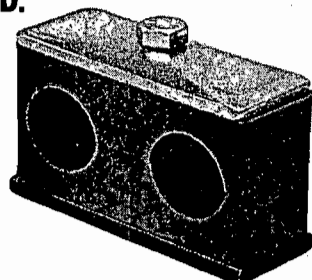
B.



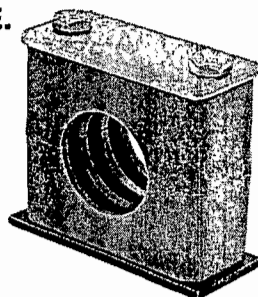
C.



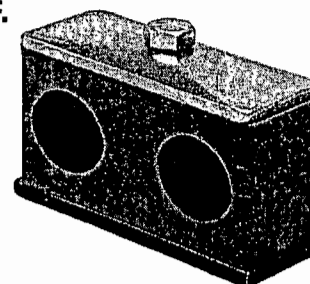
D.



E.



F.



A. Standard Series Clamp for Tubing B. Twin Series Clamp for Tubing C. Standard Series Clamp for Pipe

D. Twin Series Clamp for Pipe E. Standard Series Clamp for Hose F. Twin Series Clamp for Hose

ORDERING INFORMATION

PART NO.	DESCRIPTION	I.D.	WEIGHT	CAT.
A SSCT025	Standard Series Clamp for Tubing	1/4"	0.18 lbs.	634 (N)
A SSCT031	Standard Series Clamp for Tubing	3/16"	0.20 lbs.	634 (N)
A SSCT038	Standard Series Clamp for Tubing	3/8"	0.17 lbs.	634 (N)
A SSCT050	Standard Series Clamp for Tubing	1/2"	0.21 lbs.	634 (N)
A SSCT062	Standard Series Clamp for Tubing	5/8"	0.21 lbs.	634 (N)
A SSCT075	Standard Series Clamp for Tubing	3/4"	0.26 lbs.	634 (N)
A SSCT100	Standard Series Clamp for Tubing	1"	0.24 lbs.	634 (N)
A SSCT125	Standard Series Clamp for Tubing	1 1/4"	0.41 lbs.	634 (N)
B TSCT025	Twin Series Clamp for Tubing	1/4"	0.21 lbs.	634 (N)
B TSCT038	Twin Series Clamp for Tubing	3/8"	0.20 lbs.	634 (N)
B TSCT050	Twin Series Clamp for Tubing	1/2"	0.29 lbs.	634 (N)
B TSCT062	Twin Series Clamp for Tubing	5/8"	0.30 lbs.	634 (N)
B TSCT075	Twin Series Clamp for Tubing	3/4"	0.38 lbs.	634 (N)
B TSCT087	Twin Series Clamp for Tubing	7/8"	0.57 lbs.	634 (N)
B TSCT100	Twin Series Clamp for Tubing	1"	0.37 lbs.	634 (N)
B TSCT125	Twin Series Clamp for Tubing	1 1/4"	0.63 lbs.	634 (N)
B TSCT150	Twin Series Clamp for Tubing	1 1/2"	0.61 lbs.	634 (N)
C SSCP012	Standard Series Clamp for Pipe	1/8"	0.17 lbs.	634 (N)
C SSCP025	Standard Series Clamp for Pipe	1/4"	0.21 lbs.	634 (N)
C SSCP038	Standard Series Clamp for Pipe	3/8"	0.20 lbs.	634 (N)
C SSCP050	Standard Series Clamp for Pipe	1/2"	0.24 lbs.	634 (N)
C SSCP075	Standard Series Clamp for Pipe	3/4"	0.29 lbs.	634 (N)
C SSCP100	Standard Series Clamp for Pipe	1"	0.41 lbs.	634 (N)
C SSCP125	Standard Series Clamp for Pipe	1 1/4"	0.40 lbs.	634 (N)

ORDERING INFORMATION

PART NO.	DESCRIPTION	I.D.	WEIGHT	CAT.
D TSCP012	Twin Series Clamp for Pipe	1/8"	0.20 lbs.	634 (N)
D TSCP025	Twin Series Clamp for Pipe	1/4"	0.29 lbs.	634 (N)
D TSCP038	Twin Series Clamp for Pipe	3/8"	0.31 lbs.	634 (N)
D TSCP050	Twin Series Clamp for Pipe	1/2"	0.38 lbs.	634 (N)
D TSCP075	Twin Series Clamp for Pipe	3/4"	0.43 lbs.	634 (N)
D TSCP100	Twin Series Clamp for Pipe	1"	0.63 lbs.	634 (N)
D TSCP125	Twin Series Clamp for Pipe	1 1/4"	0.59 lbs.	634 (N)

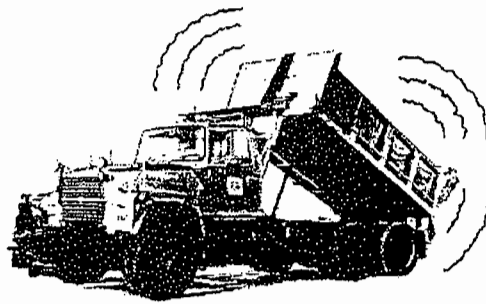
ORDERING INFORMATION

PART NO.	DESCRIPTION	I.D.	O.D.	WEIGHT	CAT.
E SSCH018	Standard Series Clamp for Hose	3/16"	.557	0.24 lbs.	634 (N)
E SSCH025	Standard Series Clamp for Hose	1/4"	.619	0.22 lbs.	634 (N)
E SSCH038	Standard Series Clamp for Hose	3/8"	.777	0.24 lbs.	634 (N)
E SSCH050	Standard Series Clamp for Hose	1/2"	.908	0.38 lbs.	634 (N)
E SSCH062	Standard Series Clamp for Hose	5/8"	1.034	0.29 lbs.	634 (N)
E SSCH075	Standard Series Clamp for Hose	3/4"	1.19	0.28 lbs.	634 (N)
E SSCH100	Standard Series Clamp for Hose	1"	1.531	0.42 lbs.	634 (N)
F TSCH025	Twin Series Clamp for Hose	1/4"	.619	0.28 lbs.	634 (N)
F TSCH038	Twin Series Clamp for Hose	3/8"	.777	0.39 lbs.	634 (N)
F TSCH050	Twin Series Clamp for Hose	1/2"	.908	0.24 lbs.	634 (N)
F TSCH062	Twin Series Clamp for Hose	5/8"	1.034	0.49 lbs.	634 (N)
F TSCH075	Twin Series Clamp for Hose	3/4"	1.19	0.48 lbs.	634 (N)
F TSCH100	Twin Series Clamp for Hose	1"	1.531	0.60 lbs.	634 (N)

THIS LITERATURE MAY NOT MEET EXACT SPECIFICATIONS REQUESTED. THE PRODUCT WILL BE BUILT TO SPECIFICATIONS UNLESS VARIATIONS ARE NOTED.

Dump Body Vibrators

Satisfaction Guaranteed



The TENDAIRE RV-1750/RV-3500A rotating vibrator will discharge sticky, wet, and frozen materials quickly and safely.

There's no need to bang tailgates, jam brakes, or pop clutches. Tendaire Vibrators will give you a cleaner dump every time reducing the risk of vehicle damage.

TENDAIRE vibrators also let you discharge compacted materials at a lower dumping angle to avoid possible vehicle tip-over potential. We'd like to prove it to you with our Satisfaction Guarantee.

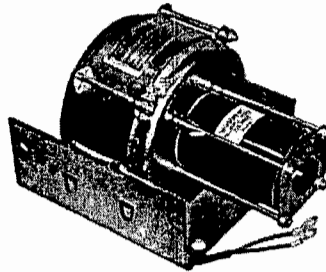
TENDAIRE vibrators are ideal for Dump Trucks, Sand Spreaders, Bottom Dump Trailers, Salt Spreaders, Concrete Batch Hoppers, Detachable Trailers, Snow Removal Equipment, Front End Loader Buckets, Dozer Blades and many more applications.

Studies show that the optimum vibrations from vibrators are in the start up and wind down of each cycle. Tendaire Industries VT-6 Vibrator Timer Switch is designed to let your vibrator run for six seconds then automatically shutoff to allow the vibrator to wind down. The dash-mounted button must be released before the next cycle may be started. Included as standard equipment, this timer will increase the life of the vibrator by preventing the operator from running it excessive lengths of time and also will take the guesswork out of trying to decide if the vibrator has run long enough.

SPECIFICATIONS

MODEL RV-1750

Voltage:	12 Volts D.C.
Amps:	24 Amps
Vibrations:	2800 per minute
Thrust:	1750 lbs.
Weight:	27 lbs.
Switch:	Push Button
Cable:	50' #6 AWG
USAGE:	INTERMITTENT (<10 SEC.)
TIMER SWITCH:	VT-6



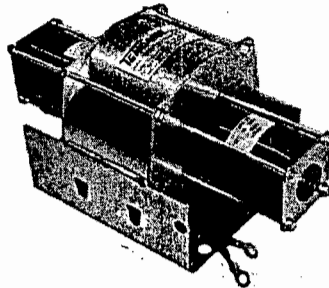
WARRANTY: 1 YEAR LIMITED (VT-6 Timer must be used else warranty is VOID!)

The Model RV-1750 is designed for lighter duty. It is designed to be used on small dump trucks up to 5 cubic yards, concrete pumps, small bins, bulk feed truck hoppers, chutes, and many other applications where discharging a load is a problem.

SPECIFICATIONS

MODEL RV-3500A

Voltage:	12 Volts D.C.
Amps:	48 Amps
Vibrations:	2800 per minute
Thrust:	3500 lbs.
Weight:	36 lbs.
Switch:	Push Button
Cable:	50' #6 AWG
USAGE:	INTERMITTENT (<10 SEC.)
TIMER SWITCH:	VT-6



WARRANTY: 1 YEAR LIMITED (VT-6 Timer must be used else warranty is VOID!)

Our new Model RV-3500A combines the best features of the older RV-3500 and the Power-Ox.

- Ease of mounting and compactness of a RV-3500
- Better force transfer, better seal against elements as in the Power-Ox

It is designed to be used on dump trucks 5 cubic yards and up, dump trailers, off the road haulers, dirt scrapers, hoppers, ag lime and fertilizer spreaders, and many other applications where discharging a load is a problem.

Temperature Range:	30 to 140 degrees Fahrenheit
Length:	14.25 Inches
Width:	7.25 inches
Height:	6.75 inches

*RV-3500A also available for 24 volt trucks. 50' cable, timer and switch provided.

NORTHERN TRUCK EQUIPMENT CORP.

PH. (605) 886-5816 WATERTOWN, SD

PH. (605) 543-5206 SIOUX FALLS, SD

PH. (605) 341-8780 RAPID CITY, SD

PH. (701) 281-1718 FARGO, ND

THIS LITERATURE MAY NOT MEET EXACT SPECIFICATIONS REQUESTED. THE PRODUCT WILL BE BUILT TO SPECIFICATIONS UNLESS VARIATIONS ARE NOTED.

LIMITED WARRANTY

Alum-Line, Inc. warrants that each Alum-Line or Pro-Line Product. (Products included in this warranty are trailers, truck bodies and tool boxes) operated by the original purchaser under normal use in the Continental United States or Canada will be free from defects in materials and workmanship for one year following the original purchase, subject to the requirements and limitations stated below which will be strictly applied. If the product is rented or used for commercial hauling, this Limited Warranty is null and void.

YOU MUST SEND US A SIGNED COPY OF THIS WARRANTY

In order to validate the Limited Warranty, the original copy of this form, signed by the dealer and the purchaser, must be postmarked and mailed by certified mail return receipt requested to Alum-Line Inc., P.O. Box 59, Cresco, Iowa 52136 no later than ten (10) days following the receipt of this warranty statement. IF THIS SIGNED WARRANTY IS NOT POSTMARKED BY THE TENTH DAY AFTER RECEIVING THIS WARRANTY STATEMENT. ALL EXPRESS WARRANTIES CONTAINED IN THIS LIMITED WARRANTY SHALL BE NULL AND VOID.

PRO-LINE THREE YEAR LIMITED WARRANTY

Subject to the requirements, exclusions and limitations stated below, the structure of your Pro-Line Trailer is warranted to the original retail purchaser against defects in materials and workmanship by Alum-Line, Inc., arising from normal use for three (3) years from the date of purchase. The structure is that portion of the trailer which includes the main frame, consisting of the bottom rails, cross members, side posts and exterior walls, roof rails and bows and the sub frame, excluding the running gear, and floor boards.

ALUM-LINE FIVE YEAR LIMITED WARRANTY

Subject to the requirements, exclusions and limitations stated below, the structure of your Alum-Line Product is warranted to the original retail purchaser against defects in materials and workmanship by Alum-Line, Inc., arising from normal use for five (5) years from the date of purchase. The structure is that portion of the product which includes the main frame, consisting of the bottom rails, cross members, side posts and exterior walls, roof rails and bows and the sub frame, excluding the running gear, and floor boards.

ONE YEAR LIMITED WARRANTY

Alum-Line, Inc. warrants its paint finish to be consistent with industry standards for one year after the date of original retail purchase, with the exception of "normal use" limitations set forth below and of deterioration due to use or exposure, such as chipping, scratching, fading, cracks in caulk seams, road salt or tar, damage by animals or pressure washing. Warrantable paint repairs are limited to spot repairs and blending consistent with standards in the trailer industry. Any repainting due to welding or work related warranty is not covered by this warranty.

ONE YEAR LIMITED WARRANTY

Alum-Line, Inc. manufactures some products into which other persons or companies who are not employees or agents of Alum-Line, Inc. install living quarters or other interior or exterior features or modifications. This Limited Warranty extends only to materials used or workmanship performed by Alum-Line, Inc. or its employees in the construction of the original product subject to all limitations and exclusions set forth herein. ALUM-LINE, INC. EXPRESSLY DISCLAIMS AND EXCLUDES ANY RESPONSIBILITY OR LIABILITY FOR ANY MATERIALS OR WORKMANSHIP IN ANY ITEMS INSTALLED INTO ALUM-LINE, INC. PRODUCTS BY ANY OTHER PERSON OR COMPANY, INCLUDING ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OR CONTINGENT LIABILITIES ARISING THEREFROM.

EXCLUSION OF COMPONENTS WARRANTED BY OTHER MANUFACTURERS

Tires, axles, and brake components, springs and suspension components, couplers, jacks, castors, mats, batteries, windows, doors, hinges, hardware, locks and installation hardware purchased and installed by Alum-Line, Inc. are warranted by their manufacturers and are excluded from the Limited Warranty.

NORMAL USE, NO REPAIRS OR ALTERATIONS

This Limited Warranty covers only defects in original components which arise from normal use and does not apply if the product has been subjected to negligence, accident, abuse, misuse, neglect or overload or has been repaired or altered without the prior written consent of Alum-Line, Inc. Normal wear items, including but not limited to doors, struts, lights, bearings, brakes, brake linings and tires and batteries, will not be replaced due to wear.

TRANSPORTATION COSTS EXCLUDED

Transportation of any product to and/or from your dealer or any approved repair facility is the responsibility of the owner. Alum-Line, Inc. shall not be liable for any such costs.

PRIOR WRITTEN CONSENT REQUIRED AND RETURN OF DEFECTIVE PARTS REQUIRED

No reimbursement will be made to any dealer or owner for repairs made without the prior written consent of Alum-Line, Inc. Any defective part(s) must be sent by prepaid freight to Alum-Line, Inc., in order to qualify for replacement or reimbursement under this Limited Warranty.

OTHER PRODUCTS EXCLUDED

This Limited Warranty applies exclusively to Alum-Line or Pro-Line Products manufactured by Alum-Line, Inc. Any other products manufactured by Alum-Line, Inc. are specifically excluded from this warranty. Authorized repairs do not extend the term of this Limited Warranty.

CONSENT TO VENUE AND GOVERNING LAW

BY SIGNING THIS LIMITED WARRANTY AGREEMENT, PURCHASER AGREES THAT THIS AGREEMENT SHALL IN ALL RESPECTS BE GOVERNED BY AND SUBJECT TO AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF IOWA. FURTHER, IN THE EVENT OF ANY LITIGATION, PURCHASER CONSENTS TO THE EXCLUSIVE JURISDICTION AND VENUE IN THE IOWA DISTRICT COURT IN AND FOR HOWARD COUNTY, IOWA.

LIMITATIONS

THE SOLE RESPONSIBILITY OF ALUM-LINE, INC. UNDER THIS LIMITED WARRANTY SHALL BE TO REPAIR AND REPLACE PARTS AT THE ALUM-LINE, INC. FACTORY OR, FOR A REASONABLE ALLOWANCE, AT ANOTHER PLACE AND AUTHORIZED IN WRITING BY ALUM-LINE, INC. ALL OTHER OBLIGATIONS OR LIABILITIES, INCLUDING INCIDENTAL OR CONSEQUENTIAL DAMAGES OR CONTINGENT LIABILITIES ARISING OUT OF THE FAILURE OF ANY PARTS TO OPERATE PROPERLY, ARE HEREBY EXCLUDED, INCLUDING BUT NOT LIMITED TO ANY DAMAGES RESULTING FROM LOSS OF USE, INCONVENIENCE, LOSS OF TIME, COMMERCIAL LOSS OR ANY OTHER TYPE OF DAMAGES, GENERAL OR SPECIFIC, FORESEEN OR UNFORESEEN, UNLESS APPLICABLE STATE LAW PROVIDES OTHERWISE.

DISCLAIMERS

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER EXPRESS WARRANTIES AND REPRESENTATIONS. ALUM-LINE, INC. MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO ALUM-LINE AND PRO-LINE PRODUCTS WHETHER AS TO THE MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER MATTER. NO ONE, INCLUDING AN AUTHORIZED ALUM-LINE, INC. DEALER IS AUTHORIZED TO MAKE FURTHER OR ADDITIONAL WARRANTIES ON BEHALF OF ALUM-LINE, INC.

ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR EXTENDED USE ARE LIMITED TO WARRANTY PERIODS STATED ABOVE, UNLESS ANY APPLICABLE STATE LAW PROVIDES OTHERWISE.

IF PULLING VEHICLE EXCEEDS 26,000 POUNDS GVWR THIS TRAILER WARRANTY IS VOIDED IMMEDIATELY.

DEALER RESPONSIBILITIES

Your Dealer is responsible for "dealer prep" which includes checking all cosmetic features and repairing all minor problems without charge to you or the manufacturer. Your dealer is responsible for submitting to the manufacturer any claim you wish to make under the terms of this Limited Warranty.

REQUIRED WARRANTY CLAIM PROCEDURE

1. In order to validate this Limited Warranty, the original copy of this form, signed by the dealer and the purchaser, must be postmarked and mailed certified mail return receipt requested to Alum-Line, Inc. no later than ten (10) days after receiving this warranty statement. IF THIS SIGNED WARRANTY IS NOT POSTMARKED BY THE TENTH DAY AFTER RECEIVING THIS WARRANTY STATEMENT, ALL EXPRESS WARRANTIES SHALL BE NULL AND VOID.
2. Within five (5) days after discovering a problem with your Alum-Line or Pro-Line Product, return your product for inspection to your Alum-Line dealer where you bought your product. Dealers are responsible for fixing minor problems without charge to you or the factory.
3. If your dealer cannot repair the problem free of charge and you want to file a claim under this warranty, your local dealer must send to Alum-Line, Inc. by registered letter or fax a limited warranty claim form, together with all required information, within ten (10) days of your discovery of the defect.
4. Alum-Line, Inc. will acknowledge such receipt of claim by registered letter to the dealer and to the claimant. Alum-Line, Inc. will respond as soon as possible, but not later than thirty (30) days after receipt of claim.
5. Before warranty work can be performed or authorized, a factory warranty report form must be filled out, signed and returned to the factory. Please contact the warranty department at: Phone: 800-446-1407, Fax: 563-547-5366, E-mail: alumline@alumline.com.
6. Any defective part(s) must be sent by prepaid freight to Alum-Line, Inc. in order to qualify the claimant for replacement or reimbursement under this Limited Warranty. ANY DEFECTIVE PARTS MUST BE RETURNED TO ALUM-LINE, INC. WITHIN 30 DAYS FROM DATE OF APPROVAL TO QUALIFY FOR REIMBURSEMENT.
7. Alum-Line, Inc. will not reimburse any claimant for any adjustment or repair of Alum-Line or Pro-Line Product without prior written approval by Alum-Line, Inc.
8. If you return your product for repair to the factory, we will warrant the repair or replacement parts for a year from the date of repair. If authorized repair must be done other than at the factory, Alum-Line, Inc. will not warrant such repair work or replacement parts.
9. Alum-Line, Inc. reserves the right to refuse to pay unreasonable costs for replacement or repair of defects in Alum-Line or Pro-Line Products and may, at its discretion, establish a reasonable reimbursement for any authorized work performed under the terms of this Limited Warranty.

ALUM-LINE, INC. MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES AND THERE ARE NO OTHER WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION OF THE FACE OF THIS LIMITED WARRANTY.

THIS LITERATURE MAY NOT MEET EXACT
SPECIFICATIONS REQUESTED. THE PRODUCT
WILL BE BUILT TO SPECIFICATIONS
UNLESS VARIATIONS ARE NOTED.

NORTHERN TRUCK EQUIPMENT CORP.
PH. (605) 886-5816 WATERTOWN, SD
PH. (605) 543-5206 SIOUX FALLS, SD
PH. (605) 341-8780 RAPID CITY, SD
PH. (701) 281-1718 FARGO, ND

**STATE OF NORTH DAKOTA
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
STATE FLEET SERVICES
608 East Boulevard Avenue
Bismarck, ND 58505-0700**

SOLICITATION AMENDMENT

03/19/2013

**SOLICITATION NUMBER AND TITLE: RFP 065-30-13-030 Snow Plow Turnkey
Truck Package**

AMENDMENT NUMBER: 1 – Chassis Specifications

In accordance with section 3.01 of RFP 065-30-13-030, chassis specifications will be provided to assist the offeror with planning and pricing. It is the intent of the State of North Dakota to award the chassis bid to Nelson International as bid with the attached specifications. Please note that there are two sets of specifications, one for right wing installation and one for left wing installation. The chassis will not be ordered until after the RFP award has been made so that if any changes need to be made to the chassis, it can be done.

Vendors are instructed to acknowledge receipt of and compliance with this amendment by signing below and returning this acknowledgement with your bid or proposal.

Any questions regarding this amendment must be submitted in writing to the undersigned Procurement Officer.

Robin Rehborg
Procurement Officer
PHONE: 701-328-2543
FAX: 701-328-2514
E-MAIL: rrehborg@nd.gov

SOLICITATION AMENDMENT

ACKNOWLEDGEMENT

SOLICITATION NUMBER AND TITLE: RFP 065-30-13-030 Snow Plow Turnkey Truck Package

AMENDMENT NUMBER: 1 – Chassis Specifications

By my signature below, I hereby acknowledge receipt of and compliance with this amendment to the above referenced solicitation.

NAME OF BIDDER OR OFFEROR

NORTHERN TRUCK EQUIPMENT CORP.

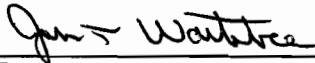
MAILING ADDRESS

PO BOX 2435
SIOUX FALLS, SD 57101-2435

PRINTED NAME

JOHN WARTENBEE

SIGNATURE



TITLE

VICE PRESIDENT

DATE

MARCH 28, 2013



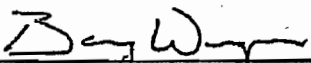
INVITATION FOR BID
State of North Dakota
OMB/Central Services Division

State Procurement Office
14th Floor Capitol Tower – Dept 012
600 East Boulevard
Bismarck, ND 58505-0310

Bid Number: Invitation For Bid (IFB) 110.7-13-006	Bid Title: Current Model Trucks	
Date Issued: 01/18/2013	Procurement Officer: Dillys Bach	
Deadline for Questions: 01/30/2013 – 2:00 PM CT	Telephone: 701-400-4589	Fax: 701-328-0109
Bid Opening Date and Time: 02/07/2013 - 2:00 PM CT	E-mail: dbach@nd.gov	
State Contract Number: 378	Term of Contract: 03/01/2013 thru 12/31/2013	

You are invited to participate in this Invitation for Bid. Please submit your bid response in conformance with the instructions specified herein. By submitting a bid response, the bidder agrees and promises to sell, furnish, and deliver to the State all commodities and services contained in this Invitation for Bid for which a contract is awarded by the State. The bidder shall fully perform the contract in accordance with the all specifications, terms and conditions, and requirements contained in the Invitation for Bid and shall comply with all applicable provisions of the North Dakota Century Code Chapters § 54-44.4, 46-02, 44-08 and North Dakota Administrative Code Chapter 4-12, made a part of the Invitation for Bid and contract by reference.

Written acceptance of the bidder's bid response by the State, by issuance of a purchase order or contract, constitutes a binding contract made and entered into by and between the State of North Dakota, acting through the Purchasing Agency named above, and the bidder named below:

Bidder Company Name: NELSON INTERNATIONAL			
Street Address: 1716 REVERE DRIVE			
P.O. Box: 550	City: BISMARCK	State: ND	Zip Code: 58501
Toll Free Telephone: 800-666-7604	Telephone: (701)223-7676	Fax: (701)224-9192	
Federal I.D. or Social Security No.: 41-0882287		E-Mail: barrywegner@nelsonleasing.com	
Type or Print Name of Person Signing: BARRY WEGNER		Title: GENERAL MANAGER	
Authorized Signature: 			
(For State Use Only) – Acceptance: Bid response accepted and contract awarded. STATE OF NORTH DAKOTA, OFFICE OF MANAGEMENT AND BUDGET, acting through its State Procurement Office:			
By _____		Title _____	
Signature _____		Date _____	

1/08/13

13-SSP-22-2UBLW

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
SPECIFICATIONS
FOR
TRUCK, TANDEM AXLE
58,000 LB G.V.W., 80,000 LB G.C.W.
INTL 7600, MACK GU803**

Bidders Instructions: Indicate compliance to the specifications on the "COMPLY YES/NO" line by each specification. Indicate any deviations from the specifications whether the minimum specifications are met or not on the "SPECIFICATION DEVIATIONS" line. Failure to comply with bid specifications may result in rejection of the bid. The state reserves the right to waive minor deficiencies or technical variances.

These trucks shall be fitted with rear-mounted snow wings attached on the left side and an underbody scraper blade. Mounting requires a 24" ground clearance area under the frame back of cab and 18" ground clearance under cab (see attached drawings). Locations of the components and exhaust system shall accommodate these installations.

	COMPLY YES	NO	SPECIFICATION DEVIATIONS
1) Axle			
a) Front I-beam type – 20,000 lb with shock absorbers.	X	—	_____
b) Rear – 40,000 lb	X	—	_____
c) Wheelbase – Approximately 195"-214". Distance between center of bogey to back of cab, 128"-138" to be determined after award.	X	—	_____
d) Minimum of 70" AF	X	—	_____
2) Body			
a) Air ride cab	X	—	_____
b) Air conditioning – heater and defroster. Inside/outside air control, with dust filter. Inlet to be screened to prevent debris entry. Automatic A/C shut down if overheating occurs.	X	—	_____
c) Steps and external grab handles for entry into cab to include grab handle on drivers inside door panel.	X	—	_____
d) Hood – tilt	X	—	_____
e) Stationary grill to be maximum 2" opening.	X	—	_____
f) Horn – air to include cover(s) if mounted on roof of cab.	X	—	_____
g) Seating			
i) Driver and passenger seat, cloth, air ride suspension, high back or head restraint. Seat belt retractor. Three point shoulder harness. Ezyrider, National 2000 or approved equal. The State of North Dakota is requesting the highest possible seat back to be engineered into this chassis to protect the driver, (up to 6' 5" tall), from hitting his/her head on the back of the cab in a rear end collision.	X	—	_____
h) Dual sun visors.	X	—	_____
i) Side mirrors, two (one each side 102" width) adjustable approximately 16"x 6" each. Electrically defrosted. Electric adjustable, driver controlled. Passenger side only approximately 8" convex mirror mounted bottom of mirror.	X	—	_____
j) Front fender mounted electrically heated mirrors on each side.	X	—	_____
i) Approximately 9" adjustable convex heated mirror.	X	—	_____
ii) Separate switch for heated mirrors with no time out feature.	X	—	_____

BIDDER NELSON INTERNATIONAL

	COMPLY YES NO	SPECIFICATION DEVIATIONS
k) Steering, power with dual steering gears.	X —	
l) 18" steering wheel, with tilt.	X —	
l) Paint, Omaha Orange or equal. Basecoat/clear coat or Imron 6000. Paint number to be provided at time of award.	X —	
m) Maximum cab noise level of 80 db.	X —	
n) Cab head liner.	X —	
o) Power windows.	X —	
p) Front wheel wells to be skirted/guarded from engine compartment.	X —	
q) Power outlet (cigar lighter type).	X —	
r) Tinted glass	X —	
s) Dome light	X —	
t) Cab rear window	X —	
u) Book/manual pocket storage located on back wall of cab and/or overhead.	X —	
3) Differential		
a) Tandem axle drive	X —	
b) Ratio to be determined after award.	X —	
c) U-joints, half round, not less than Spicer No. SPL-250 with heavy tube.	X —	
l) Inter-axle, half round, not less than Spicer No. SPL-170.	X —	
d) Driver control full locking differential, both axles.	X —	
e) Lube oil pump.	X —	
f) Synthetic gear lube.	X —	
4) Electrical — 12 Volt	X —	
a) Batteries, minimum of three 12volt, 900 CCA each, Group 31, Jump stud.	X —	
b) Alternator, 130 amp minimum.	X —	
c) Hour meter, solid state, engine controller activated, inside cab.	X —	
d) AM/FM radio	X —	
e) Heavy duty windshield wipers, two speed including Intermittent with washers.	X —	
f) Tachometer	X —	
g) Gauges — volt, oil, coolant, temperature, fuel, transmission temperature and air.	X —	
h) Circuit breakers required.	X —	
i) Kysor solid state signal flasher or approved equal.	X —	
j) Lights to meet all ICC regulations.	X —	
k) Body builder junction box and connector kit for body builder or sealed connector at the end of frame include clearance lights, tail lights, turn signals, backup lights and stop lights.	X —	
l) Headlamp circuit pre-wired for the attachment of plow lights.	X —	
l) Instrument panel switch to alternate between OEM and plow headlamps.	X —	
ii) Plow lamp wiring to extend to hood hinge area.	X —	

	COMPLY YES	NO	SPECIFICATION DEVIATIONS
iii) High beam indicator shall function in either mode.	X	—	
m) Vehicle speed sensor circuit with a pulse rate of 50,000 PPM wired into cab for ground speed oriented equipment installation.	X	—	
n) Instrument panel switch package.	X	—	
i) Power to be supplied via relay controlled by ignition switch.	X	—	
ii) Switch panel to be protected by minimum 60 amp main circuit breaker.	X	—	
(1) Body vendor will install individual circuit breakers for switches.			
iii) Switches to be configured to control these functions:			
(1) Amber warning.(on/off 6A)	X	—	
(2) Clear warning.(on/off 4A)	X	—	
(3) Work light.(on/off 10A)	X	—	
(4) Momentary switch for box vibrator.(N.O. 15A)	X	—	
(5) Momentary switch for hydraulic pump override.(N.C. 15A)	X	—	
(6) Air tailgate.(on/off 10A)	X	—	
iv) All switches, functions & names shall be backlit/illuminated and means of labeling provided.	X	—	
5) Engine – wet sleeved – diesel – 13L class	X	—	
a) Minimum 410 horsepower.	X	—	430 HP
b) Minimum 1550 lb-ft of torque.	X	—	
c) Minimum warranty: First 100,000 miles or 60 months, whichever comes first.	X	—	60 month / 200,000 mil.
i) 100% engine parts and labor including turbo and fuel injectors.	X	—	
d) Corrosion resistant steel or aluminum oil pan.	X	—	
e) Fan clutch automatic on/off Horton, Kysor, or equal.	X	—	
f) Cooling system to contain extended life coolant.	X	—	
g) Custom fitted winter front (heavy duty) mounted to grill.	X	—	
h) Engine block heater – 1500 watt minimum.	X	—	
i) Air cleaner, dry element.	X	—	
l) Air cleaner restriction gauge dash mounted.	X	—	
j) Inside/outside air intake of Precleaner/separation module.	X	—	
k) Engine coolant or return fuel heated thermostatic controlled fuel heater with water separation system designed for optimum performance for installed engine under sub zero severe snow plowing conditions.	X	—	
l) Automatic engine shut down system. Preprogrammed with 15 minute idle shut down.	X	—	
m) Rear engine PTO.	X	—	
6) Frame			
a) Exhaust system – vertical exhaust system with turn out minimum of 18" to 24" above cab. Right side mounted. Heat guard shield to cover from bottom of cab to top of door.	X	—	
b) Single frame- Minimum 120,000 psi 21.47 section modulus RBM 2,576,000.	X	—	

	COMPLY		SPECIFICATION
	YES	NO	DEVIATIONS
c) Fuel tank – minimum 100 gal aluminum, with gauge. Single tank mounted right side frame rail back of cab with filler location at forward end of tank or under cab if under body scraper clearance can be obtained.	X	—	
d) Frame – black	X	—	
e) Seven wire connector box in back of frame for towing units. Connector hook-up shall be connected to rear tail and brake light harness so trailer has tail, signal and brake lights.	X	—	
f) Minimum 15" integral front frame extension.	X	—	
7) Springs – Hendrickson Haulmaax® model HMX400 suspension with shock absorbers.	X	—	
a) Front, 20,000 lb (10,000 lb each) at ground.	X	—	
b) Rear, 40,000 lb (20,000 lb each) at ground.	X	—	
8) Transmission			
a) Allison automatic 4000 RDS	X	—	
b) 6 speed	X	—	
c) Synthetic transmission oil.	X	—	
d) Automatic neutral with the application of the park brake.	X	—	
e) I/P or control console mounted low oil sensor.	X	—	
f) Push button shift selector, Instrument panel mount preferred, but not required.	X	—	
g) Transmission ECU to be mounted in cab. If dealer relocated, location must be approved.	X	—	
9) Wheels			
a) Front tires – 385/65R 22.5, 18-ply tubeless, all standard tread.	X	—	
b) Rear tires – 11:00R x 22.5, 14-ply, tubeless all highway traction.	X	—	
c) Dual tires on driving axles.	X	—	
d) Brakes – air with compressor not less than 15.5 CFM. Auxillary air brake filler source via Schrader valve.	X	—	
i) Integral or compressor mounted safety valve, Midland SN 161 or equal. May be omitted if Bendix AD-IS integrated solution air dryer is used.	X	—	
ii) Compressor air intake shall be drawn from filtered engine air intake.	X	—	
e) Brake system heated desiccant type dryer with spin on cartridge or Bendix AD-IS total system integrated solution air dryer mounted outside of the frame.	X	—	
f) Sealed air chambers – MGM TRS 3030T	X	—	
i) Position to meet asphalt spreader/paver clearance requirements.	X	—	
g) Suspended brake pedal.	X	—	
h) Disc wheel, hub piloted. Mylar wheel guard spacers for all wheels.	X	—	
i) Front wheel bearing oilers or permanently lubed with synthetic grease.	X	—	
j) Rear wheel rim size 8.25".	X	—	
k) Front wheel rim size 12.25".	X	—	
l) Front and rear dust shields.	X	—	

	COMPLY		SPECIFICATION DEVIATIONS
	YES	NO	
m) Four wheel trailer-tractor package complete to end of frame, including glad hands and dummy couplings.	X	—	_____
n) Four corner parking brake.	X	—	_____
10) General			
a) Web-based service manuals preferred otherwise eight complete shop service manuals on CD-ROM provided to State Fleet Services for distribution.	X	—	_____
b) Dealer or manufacturer to provide minimum 2 hours introduction of model at district locations.	X	—	_____
c) Must have a factory approved warranty facility that can perform recalls, electronic diagnoses, engine and major repairs within a radius of 175 miles of each district headquarters.	X	—	_____

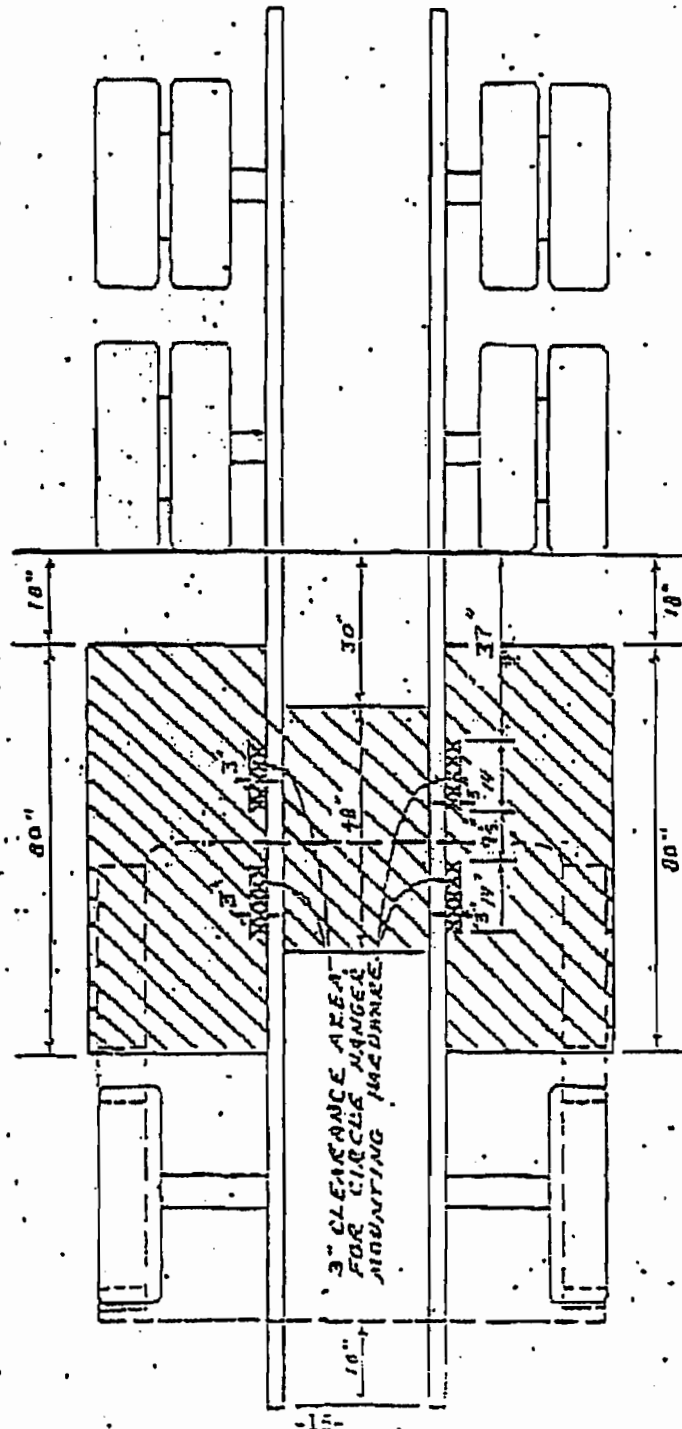
The truck is to be delivered as a complete unit ready for operation.

TRUCK MAKE: INTERNATIONAL MODEL: 7600 SBA 6x4

DELIVERY POINT: FOB box and hydraulics installer, bidder will be notified of delivery point.

BIDDER NELSON INTERNATIONAL

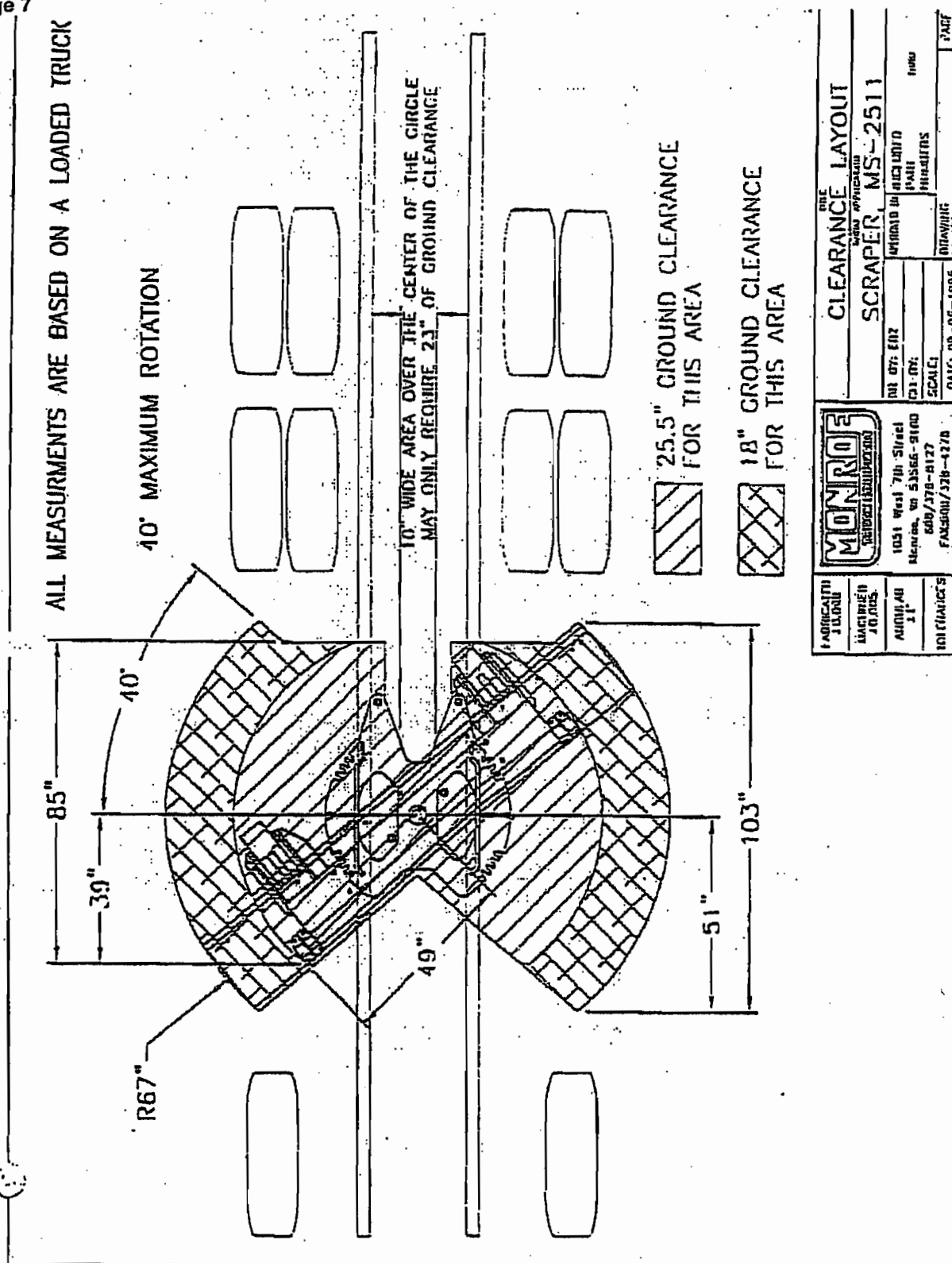
TOP VIEW
(CIRCLE HANGER & SCRAPER MOUNTING AREA)



ROOT SPRING SCRAPER CO.
MOUNTING SPECS.
MODEL F-55
and F-87

ESXX CIRCLE HANGER MOUNTING AREA
CZTA 24" GROUND CLEARANCE AREA

Exhibit A



FABRICATED ILLINOIS		CLEARANCE LAYOUT	
MANUFACTURED 10/02/05		SCRAPER MS-2511	
AUGUST 11		REVISION 1	
10/11/05		DATE: 08-06-1996	
10/11/05		DRAWING REVISION	
10/11/05		DATE: 08-06-1996	
10/11/05		DATE: 08-06-1996	

MS2511 CLEARANCE LAYOUT



7600 SBA 6x4 2010

**Sales Proposal For:
ND DOT**

**Presented By:
Nelson Leasing, Inc.**

INTERNATIONAL®

February 06, 2013

Prepared For:
ND DOT
Tim Paul
608 E Boulevard Ave.
Bismarck, ND 58505-0606
(701)328 - 2683
Reference ID: N/A

Presented By:
Nelson Leasing, Inc.
Barry Wegner
2700 East Hwy 12
PO Box 893
Willmar MN 56201 -
(320)235-2770

Thank you for the opportunity to provide you with the following quotation on a new International truck. I am sure the following detailed specification will meet your operational requirements, and I look forward to serving your business needs.

Model Profile
2014 7600 SBA 6X4 2010 (SF667)

APPLICATION:	Front Plow and Underbelly Scraper with Spreader
MISSION:	Requested GVWR: 58000. Calc. GVWR: 59480 Calc. Start / Grade Ability: 28.90% / 3.32% @ 55 MPH Calc. Geared Speed: 68.1 MPH
DIMENSION:	Wheelbase: 205.00, CA: 137.90, Axle to Frame: 75.00
ENGINE, DIESEL:	{MaxxForce 13} EPA 10, 430 HP @ 1700 RPM, 1550 lb-ft Torque @ 1000 RPM, 2100 RPM Governed Speed, 430 Peak HP (Max)
TRANSMISSION, AUTOMATIC:	{Allison 4000_RDS_P} 4th Generation Controls; Close Ratio, 6-Speed, With Double Overdrive; On/Off Hwy; Includes Oil Level Sensor, With PTO Provision, Less Retarder
CLUTCH:	Omit Item (Clutch & Control)
AXLE, FRONT NON-DRIVING:	{Meritor MFS-20-133A} Wide Track, I-Beam Type, 20,000-lb Capacity
AXLE, REAR, TANDEM:	{Meritor MT-40-14X-4DCR-P} Single Reduction, 0.433"(11mm) Wall Housing Thickness, 40,000- lb Capacity, R Wheel Ends, Lube Pump, With Driver Controlled Locking Differential in Forward Rear and Rear Rear Axle Gear Ratio: 5.86
CAB:	Conventional
TIRE, FRONT:	(2) 385/65R22.5 HTC1 (CONTINENTAL) 495 rev/mile, load range L, 20 ply
TIRE, REAR:	(8) 11R22.5 HDL ECO PLUS (CONTINENTAL) 493 rev/mile, load range G, 14 ply
SUSPENSION, REAR, TANDEM:	{Hendrickson HMX-400-54} Walking Beam Type 54" Axle Spacing; 40,000-lb Capacity, With Rubber End Bushings, Transverse Torque Rods, Less Shock Absorbers
PAINT:	Cab schematic 100GS Looation 1: 0311, Omaha Orange (Std) Chassis schematic N/A

INTERNATIONAL®**Vehicle Specifications
2014 7600 SBA 6X4 2010 (SF667)**

February 06, 2013

<u>Code</u>	<u>Description</u>
SF66700	Base Chassis, Model 7600 SBA 6X4 2010 with 205.00 Wheelbase, 137.90 CA, and 75.00 Axle to Frame.
1CAJ	FRAME RAILS Heat Treated Alloy Steel (120,000 PSI Yield); 10.866" x 3.622" x 0.433" (276.0mm x 92.0mm x 11.1mm); 456.0" (11582mm) Maximum OAL
1LLK	BUMPER, FRONT Omit Item
1WDS	FRAME EXTENSION, FRONT Integral; 20" In Front of Grille
1WHP	WHEELBASE RANGE 183" (465cm) Through and Including 248" (630cm)
2ARY	AXLE, FRONT NON-DRIVING (Meritor MFS-20-133A) Wide Track, I-Beam Type, 20,000-lb Capacity
	<u>Notes</u> : The following features should be considered when calculating Front GAWR: Front Axles; Front Suspension; Brake System; Brakes, Front Air Cam; Wheels; Tires.
3AGA	SUSPENSION, FRONT, SPRING Parabolic, Taper Leaf, 20,000-lb Capacity; With Shock Absorbers
	<u>Includes</u> : SPRING PINS Rubber Bushings, Maintenance-Free
	<u>Notes</u> : The following features should be considered when calculating Front GAWR: Front Axles; Front Suspension; Brake System; Brakes, Front Air Cam; Wheels; Tires.
4091	BRAKE SYSTEM, AIR Dual System for Straight Truck Applications
	<u>Includes</u> : BRAKE LINES Color and Size Coded Nylon : DRAIN VALVE Twist-Type : DUST SHIELDS, FRONT BRAKE : DUST SHIELDS, REAR BRAKE : GAUGE, AIR PRESSURE (2) Air 1 and Air 2 Gauges; Located In Instrument Cluster : PARKING BRAKE CONTROL Yellow Knob, Located on Instrument Panel : PARKING BRAKE VALVE For Truck : QUICK RELEASE VALVE Bendix On Rear Axle for Spring Brake Release: 1 for 4x2, 2 for 6x4 : SLACK ADJUSTERS, FRONT Automatic : SLACK ADJUSTERS, REAR Automatic : SPRING BRAKE MODULATOR VALVE R-7 for 4x2, SR-7 with relay valve for 6x4
	<u>Notes</u> : Rear Axle Is Limited to 46,000-lb GAWR with Code 04091 BRAKE SYSTEM, AIR and Standard Rear Air Cam Brakes Regardless of Axle /Suspension Ordered.
4193	BRAKES, FRONT, AIR CAM 16.5" x 6", Includes 24 SqIn Long Stroke Brake Chambers
	<u>Notes</u> : The following features should be considered when calculating Front GAWR: Front Axles; Front Suspension; Brake System; Brakes, Front Air Cam; Wheels; Tires.
4619	TRAILER CONNECTIONS Four-Wheel, With Hand Control Valve and Tractor Protection Valve, for Straight Truck
4732	DRAIN VALVE (Berg) Manual; With Pull Chain, for Air Tank
4AZA	AIR BRAKE ABS (Bendix AntiLock Brake System) Full Vehicle Wheel Control System (4-Channel)
4EBD	AIR DRYER (Meritor Wabco System Saver 1200) with Heater
	<u>Includes</u> : AIR DRYER LOCATION Inside Left Rail, Back of Cab
4ETE	BRAKE CHAMBERS, FRONT AXLE (Haldex) 24 SqIn

INTERNATIONAL®**Vehicle Specifications**
2014 7600 SBA 6X4 2010 (SF667)

February 06, 2013

<u>Code</u>	<u>Description</u>
4EVL	BRAKE CHAMBERS, REAR AXLE (Haldex GC3030LHDHO) 30/30 Spring Brake <u>Includes</u> : BRAKE CHAMBERS, SPRING (2) Rear Parking; WITH TRUCK BRAKES: All 4x2, 4x4; WITH TRACTOR BRAKES: All 4x2, 4x4; 6x4 & 6x6 with Rear Tandem Axles Less Than 46,000-lb. or GVWR Less Than 54,000-lb. : BRAKE CHAMBERS, SPRING (4) Rear Parking; WITH TRUCK BRAKES: All 6x4, 6x6; WITH TRACTOR BRAKES: 6x4 & 6x6 with Rear Tandem Axles 46,000-lb. or Greater or GVWR of 54,000-lb. or Greater
4LAA	SLACK ADJUSTERS, FRONT (Haldex) Automatic
4LGA	SLACK ADJUSTERS, REAR (Haldex) Automatic
4NDB	BRAKES, REAR, AIR CAM S-Cam; 16.5" x 7.0"; Includes 30/30 Sq.In. Long Stroke Brake Chamber and Spring Actuated Parking Brake <u>Notes</u> : The following features should be considered when calculating Rear GAWR: Rear Axles; Rear Suspension; Brake System; Brakes, Rear Air Cam; Brake Shoes, Rear; Special Rating, GAWR; Wheels; Tires.
4SPM	AIR COMPRESSOR (Bendix) 15.9 CFM Capacity, Single Cylinder
4VCJ	AIR TANK LOCATION (2) : Two Mounted Under Cab, Outside Left Rail, on Step Bracket, with 24" Ground Clearance
4VGK	AIR DRYER LOCATION Mounted To Battery Box, Right Side, Under Cab
4WDW	BRAKE CHAMBERS, SPRING on Rear/Rear Axle Located Inside Rear Tire Envelope (Meets Asphalt Spreader/Paver Clearance Requirements)
5708	STEERING COLUMN Tilting
5CAL	STEERING WHEEL 2-Spoke, 18" Diam., Black
5PTB	STEERING GEAR (2) (Sheppard M-100/M-80) Dual Power
6DDC	DRIVESHAFT SYSTEM SPL250XL Driveshaft and SPL170XL Inneraxle Shaft in lieu of 1810 Driveshaft and 1710 Inneraxle Shaft
7BDS	EXHAUST SYSTEM Single, Vertical Aftertreatment Device Frame Mounted Right Side; Includes Vertical Tail Pipe & Guard <u>Includes</u> : EXHAUST HEIGHT 10' Exhaust Height - Based on Empty Chassis with Standard Components (+ or - 1" Height) : MUFFLER/TAIL PIPE GUARD Non-Bright Finish
7WAZ	TAIL PIPE (1) Turnback Type, Non-Bright, for Single Exhaust
7WBU	EXHAUST HEIGHT 11' 6"
8000	ELECTRICAL SYSTEM 12-Volt, Standard Equipment <u>Includes</u> : BATTERY BOX Steel with Plastic Lid : DATA LINK CONNECTOR For Vehicle Programming and Diagnostics In Cab : FUSES, ELECTRICAL SAE Blade-Type : HAZARD SWITCH Push On/Push Off, Located on Top of Steering Column Cover : HEADLIGHT DIMMER SWITCH Integral with Turn Signal Lever : HEADLIGHTS (2) Sealed Beam, Round, with Chrome Plated Bezels : HORN, ELECTRIC Single : JUMP START STUD Located on Positive Terminal of Outermost Battery : PARKING LIGHT Integral with Front Turn Signal and Rear Tail Light : RUNNING LIGHT (2) Daytime, Included With Headlights : STARTER SWITCH Electric, Key Operated

<u>Code</u>	<u>Description</u>
	: STOP, TURN, TAIL & B/U LIGHTS Dual, Rear, Combination with Reflector
	: TURN SIGNAL SWITCH Self-Cancelling for Trucks, Manual Cancelling for Tractors, with Lane Change Feature
	: TURN SIGNALS, FRONT Includes Reflectors and Auxiliary Side Turn Signals, Solid State Flashers; Flush Mounted
	: WINDSHIELD WIPER SWITCH 2-Speed with Wash and Intermittent Feature (5 Pre-Set Delays), Integral with Turn Signal Lever
	: WINDSHIELD WIPERS Single Motor, Electric, Cowl Mounted
	: WIRING, CHASSIS Color Coded and Continuously Numbered
8518	CIGAR LIGHTER Includes Ash Cup
8GGN	ALTERNATOR (Bosch LH160) Brush Type, 12 Volt 160 Amp. Capacity, Pad Mount
8HAA	BODY BUILDER WIRING To Rear of Frame, With Stop, Tail, Turn, and Marker Lights Circuits, Ignition Controlled Auxiliary Feed and Ground, Less Trailer Socket
8MKX	BATTERY SYSTEM (International) Maintenance-Free (3) 12-Volt 2775CCA Total
8RKB	RADIO (Panasonic CQ120) AM/FM, Includes Multiple Speakers, Includes Auxiliary Input
	<u>Includes</u>
	: SPEAKERS IN CAB (2) Dual-Cone with Deluxe Interior
	: SPEAKERS IN CAB (4) Coaxial with Premium Interior
8THJ	AUXILIARY HARNESS 3.0' for Auxiliary Front Head Lights and Turn Signals for Front Plow Applications
8VZR	SWITCH, BODY CIRCUITS, MID for Bodybuilder, 6 Momentary Switches in Instrument Panel; One Power Module with 6 Channels, 20 Amp Max. Per Channel, 80 Amp Max Output, Switches Control Power Module Through Multiplex Wiring, Mounted in Cab Behind Driver Seat
8WBW	JUMP START STUD Remote Mounted
	<u>Includes</u>
	: JUMP START STUD Mounted to Battery Box
8WCL	HORN, AIR Black, Single Trumpet, Air Solenoid Operated
8WXG	STARTING MOTOR (Mitsubishi Electric Automotive America 105P) 12-Volt, with Soft-Start
	<u>Notes</u>
	: This starter is designed to work reliably without the need for thermal overcrank protection and provides the same warranty coverage as starters with thermal overcrank protection.
8XAH	CIRCUIT BREAKERS Manual-Reset (Main Panel) SAE Type III With Trip Indicators, Replaces All Fuses Except For 5-Amp Fuses
9585	FENDER EXTENSIONS Rubber
9HAN	INSULATION, UNDER HOOD for Sound Abatement
9HAT	GRILLE Stationary, with Vendor Painted Grille & Headlight Bezels, Argent NAV 8752
9HBN	INSULATION, SPLASH PANELS for Sound Abatement
9WAC	BUG SCREEN Front End; Mounted Behind Grille
9WBK	FRONT END Tilting, Fiberglass, With Three Piece Construction Includes Long Hood
10060	PAINT SCHEMATIC, PT-1 Single Color, Design 100
	<u>Includes</u>
	: PAINT SCHEMATIC ID LETTERS "GS"
10761	PAINT TYPE Base Coat/Clear Coat, 1-2 Tone

INTERNATIONAL®**Vehicle Specifications
2014 7600 SBA 6X4 2010 (SF667)**

February 06, 2013

<u>Code</u>	<u>Description</u>
10UAB	VEHICLE REGISTRATION IDENTITY ID for US States EXCLUDING: California, Connecticut, Delaware, Georgia, Maine, Massachusetts, New Jersey, New York, North Carolina, Pennsylvania
10WPK	GROUND CLEARANCE IDENTITY For 24" Ground Clearance.
11001	CLUTCH Omit Item (Clutch & Control)
12864	BLOCK HEATER, ENGINE {Phillips} 120 Volt/1500 Watt
	<u>Includes</u> : BLOCK HEATER SOCKET Receptacle Type; Mounted below Drivers Door
12BAV	ENGINE, DIESEL {MaxxForce 13} EPA 10, 430 HP @ 1700 RPM, 1550 lb-ft Torque @ 1000 RPM, 2100 RPM Governed Speed, 430 Peak HP (Max)
	<u>Includes</u> : AIR COMPRESSOR AIR SUPPLY LINE Naturally-Aspirated (Air Brake Chassis Only) : ANTI-FREEZE Yellow Shell Rotella Extended Life Coolant; -40 Degrees F/ -40 Degrees C; for MaxxForce 2010 Engines : COLD STARTING EQUIPMENT Automatic; With Engine ECM Control : CRUISE CONTROL Electronic; Controls Integral to Steering Wheel : ENGINE BLOCK Compacted Graphite Iron : ENGINE SHUTDOWN Electric, Key Operated : FUEL FILTER Top Access, Cartridge Type Filter Element; Engine Mounted : FUEL SYSTEM High Pressure Common Rail : GOVERNOR Electronic : HEAT MANAGEMENT SYSTEM Eco-Therm : OIL FILTER, ENGINE Drop-In Cartridge Type : OIL PAN Laminate Steel Composite : TURBO Twin Series : WET TYPE CYLINDER SLEEVES
12THJ	FAN DRIVE {Horton Drivemaster} Automatic On/Off Type, With Normally Closed Temperature Control
	<u>Includes</u> : FAN Nylon
12UBL	RADIATOR Aluminum; Welded, Front to Back CrossFlow System, 1593 SqIn, 1929 SqIn Dual CAC, 1548 SqIn 3 Core LTR
	<u>Includes</u> : DEAERATION SYSTEM with Clear Fill/Surge Tank : HOSE CLAMPS, RADIATOR HOSES Gates Shrink Band Type; Thermoplastic Coolant Hose Clamps : RADIATOR HOSES Premium, Rubber
12UXH	FEDERAL EMISSIONS for 2010; MaxxForce 13 Engines
12VAG	AIR CLEANER Single Element, with Integral Snow Valve and In-Cab Control
	<u>Includes</u> : GAUGE, AIR CLEANER RESTRICTION Air Cleaner Mounted
12VYL	ACCESSORY WIRING, SPECIAL for Road Speed Wire Coiled Under Instrument Panel for Customer Use
12WEG	COLD STARTING EQUIPMENT Automatic; With Engine ECM Control
12WPP	PTO, ENGINE REAR for MaxxForce 11 & 13 Engines (Ratio 1.276:1)
12WTA	FAN DRIVE SPECIAL EFFECTS Fan Cooling Ring with Fan Shroud Effects, Engine Mounted
12WZE	EMISSION COMPLIANCE Federal, Does Not Comply With California Clean Air Idle Regulations
12XAN	OBD COMPLIANCE for 2013 OBD

INTERNATIONAL®**Vehicle Specifications
2014 7600 SBA 6X4 2010 (SF667)**

February 06, 2013

<u>Code</u>	<u>Description</u>
13AMT	TRANSMISSION, AUTOMATIC (Allison 4000_RDS_P) 4th Generation Controls; Close Ratio, 6-Speed, With Double Overdrive; On/Off Hwy; Includes Oil Level Sensor, With PTO Provision, Less Retarder <u>Includes</u> : OIL FILTER, TRANSMISSION Mounted on Transmission : TRANSMISSION OIL PAN Magnet in Oil Pan
13WAW	OIL COOLER, AUTO TRANSMISSION (Modine) Water to Oil, for Allison or CEEMAT Transmission
13WBL	TRANSMISSION SHIFT CONTROL (Allison) Push-Button Type; for Allison 3000 & 4000 Series Transmission
13WLM	TRANSMISSION OIL Synthetic; 63 thru 76 Pints
13WUA	AUTOMATIC NEUTRAL Allison WT Transmission Shifts to Neutral When Parking Brake Is Engaged and Remains in Neutral When Park Brake Is Disengaged
13WUS	ALLISON SPARE INPUT/OUTPUT for Rugged Duty Series (RDS); General Purpose Trucks Modified for Single Input Auto Neutral
13WYH	TRANSMISSION TCM LOCATION Located Inside Cab
13WYL	SHIFT CONTROL PARAMETERS Allison Performance Programming in Primary and Allison Economy Programming in Secondary
14GVL	AXLE, REAR, TANDEM (Meritor MT-40-14X-4DCR-P) Single Reduction, 0.433"(11mm) Wall Housing Thickness, 40,000-lb Capacity, R Wheel Ends, Lube Pump, With Driver Controlled Locking Differential in Forward Rear and Rear Rear Axle . Gear Ratio: 5.86 <u>Includes</u> : POWER DIVIDER LOCK Electric over Air Operated, Cab Control with Indicator Light : REAR AXLE DRAIN PLUG (2) Magnetic, For Tandem Rear Axle <u>Notes</u> : The following features should be considered when calculating Rear GAWR: Rear Axles; Rear Suspension; Brake System; Brakes, Rear Air Cam; Brake Shoes, Rear; Special Rating, GAWR; Wheels; Tires.
14ULX	SUSPENSION, REAR, TANDEM (Hendrickson HMX-400-54) Walking Beam Type 54" Axle Spacing; 40,000-lb Capacity, With Rubber End Bushings, Transverse Torque Rods, Less Shock Absorbers <u>Includes</u> : CROSSMEMBER, SUSPENSION Stamped Steel Double Dogbone <u>Notes</u> : The following features should be considered when calculating Rear GAWR: Rear Axles; Rear Suspension; Brake System; Brakes, Rear Air Cam; Brake Shoes, Rear; Special Rating, GAWR; Wheels; Tires.
14WAL	SUSPENSION/REAR-AXLE IDENTITY for Meritor Tandem Rear Axles With Bar-Pin Beam Attachment Type Suspensions
14WBV	SHOCK ABSORBERS, REAR (4) for Hendrickson HMX Suspension Only, Mounted from Frame to Beam
14WLD	AXLE, REAR, LUBE (EmGard 75W-90) Synthetic Oil; 50 thru 64.99 Pints
15LKW	FUEL/WATER SEPARATOR (Davco Fuel Pro 382) with Fuel Heated Fuel Heater, Thermostatic Fuel Temperature Control, Mounted in Standard Position, Includes Water-In-Fuel Light
15SNU	FUEL TANK Top Draw; D Style, Non Polished Aluminum, 100 U.S. Gal., 378.5 L Capacity, 19.0" Tank Depth, Mounted Left Side BOC, 6" Above the frame rail
16030	CAB Conventional <u>Includes</u> : ARM REST (2) Molded Plastic; One Each Door : CLEARANCE/MARKER LIGHTS (5) Flush Mounted : COAT HOOK, CAB Located on Rear Wall, Centered Above Rear Window

<u>Code</u>	<u>Description</u>
	: CUP HOLDERS Two Cup Holders, Located in Lower Center of Instrument Panel
	: DOME LIGHT, CAB Rectangular, Door Activated and Push On-Off at Light Lens, Timed Theater Dimming, Integral to Console, Center Mounted
	: GLASS, ALL WINDOWS Tinted
	: GRAB HANDLE, CAB INTERIOR (1) "A" Pillar Mounted, Passenger Side
	: GRAB HANDLE, CAB INTERIOR (2) Front of "B" Pillar Mounted, One Each Side
	: INTERIOR SHEET METAL Upper Door (Above Window Ledge) Painted Exterior Color
	: STEP (4) Two Steps Per Door
16HBA	GAUGE CLUSTER English With English Electronic Speedometer
	<u>Includes</u>
	: GAUGE CLUSTER (6) Engine Oil Pressure (Electronic), Water Temperature (Electronic), Fuel (Electronic), Tachometer (Electronic), Voltmeter, Washer Fluid Level
	: ODOMETER DISPLAY, Miles, Trip Miles, Engine Hours, Trip Hours, Fault Code Readout
	: WARNING SYSTEM Low Fuel, Low Oil Pressure, High Engine Coolant Temp, and Low Battery Voltage (Visual and Audible)
16HGH	GAUGE, OIL TEMP, ALLISON TRAN
16HHE	GAUGE, AIR CLEANER RESTRICTION (Filter-Minder) With Black Bezel Mounted In Instrument Panel
16HKT	IP CLUSTER DISPLAY On Board Diagnostics Display of Fault Codes In Gauge Cluster
16JNV	SEAT, DRIVER (National 2000) Air Suspension, High Back With Integral Headrest, Cloth, Isolator, 1 Chamber Lumbar, 2 Position Front Cushion Adjust, -3 to +14 Degree Back Angle Adjust
	<u>Includes</u>
	: SEAT BELT 3-Point, Lap and Shoulder Belt Type
16RPX	SEAT, PASSENGER (National) Air-Suspension, High Back With Integral Headrest, Cloth, Isolated, 1 Chamber Lumbar, 2 Position Front Cushion Adjustment, -3 to +14 Degree Seat Back Adjustment
16SDC	GRAB HANDLE (2) Chrome Towel Bar Type With Anti-Slip Rubber Inserts; for Cab Entry, Mounted Left and Right, Each Side at "B" Pillar
16SDT	MIRRORS (2) (Lang Mekra) Styled; Rectangular, 7.09" x 15.75" & Integral Convex Both Sides, 102" Inside Spacing, Breakaway Type, Heated Heads Thermostat Controlled, Power Both Sides Flat Glass Only, Clearance Lights LED,
16SJW	MIRROR, CONVEX, HOOD MOUNTED (2) (Lang Mekra) Heated, Left and Right Sides 7.44" Sq
16WCT	AIR CONDITIONER (Blend-Air) With Integral Heater & Defroster
	<u>Includes</u>
	: HEATER HOSES Premium
	: HOSE CLAMPS, HEATER HOSE Mubea Constant Tension Clamps
	: REFRIGERANT Hydrofluorocarbon HFC-134A
16WJS	INSTRUMENT PANEL Center Section, Flat Panel
16WJU	WINDOW, POWER (2) And Power Door Locks, Left and Right Doors, Includes Express Down Feature
16WKY	HVAC FRESH AIR FILTER
16WRZ	CAB INTERIOR TRIM Premium
	<u>Includes</u>
	: "A" PILLAR COVER Molded Plastic
	: CAB INTERIOR TRIM PANELS Cloth Covered Molded Plastic, Full Height; All Exposed Interior Sheet Metal is Covered Except for the Following: with a Two-Man Passenger Seat or with a Full Bench Seat the Back Panel is Completely Void of Covering
	: CAB SOUND INSULATION Includes Dash Insulator and Engine Cover Insulator, Premium Floormat, and Sound Dampening Patches

<u>Code</u>	<u>Description</u>
	: CAB, INTERIOR TRIM, CLOSEOUT Lower Dash Closeout Panel; Molded Plastic; Under Instrument Panel Driver Side
	: CONSOLE, OVERHEAD Molded Plastic; With Dual Storage Pockets with Retainer Nets, CB Radio Pocket, Speakers, and Reading Lights
	: COURTESY LIGHT (2) Mounted In Front Map Pocket Left and Right Side
	: DOOR TRIM PANELS with Cloth Insert on Bolster Driver and Passenger Doors
	: FLOOR COVERING Rubber, Black
	: GAUGE, TEMPERATURE, AMBIENT Includes Compass Readout and Wiring and Sensor With Display Unit Mounted In Cluster
	: HEADLINER Soft Padded Cloth
	: INSTRUMENT PANEL TRIM Molded Plastic with Black Center Section
	: STORAGE POCKET, DOOR (2) Molded Plastic (Carpet Texture), Full-Length; Driver and Passenger Doors
	: SUN VISOR (3) Padded Vinyl: 2 Moveable (Front-to-Side) Primary Visors, Driver Side with Vanity Mirror and Toll Ticket Strap, plus 1 Auxiliary Visor (Front Only), Driver Side
16WSK	CAB REAR SUSPENSION Air Bag Type
27DNP	WHEELS, FRONT DISC; 22.5" Painted Steel, 10-Stud (285.75MM BC) Hub Piloted, 5 Hand Hole, Flanged Nut, Metric Mount, 12.25 DC Rims; With Steel Hubs, with 5.375" Offset
	<u>Includes</u>
	: PAINT IDENTITY, FRONT WHEELS White
	<u>Notes</u>
	: Compatible Tire Sizes: 385/65R22.5, 425/65R22.5
28DRN	WHEELS, REAR DUAL DISC; 22.5" Painted Steel, 5 Hand Hole, 10-Stud (285.75MM BC) Hub Piloted, Flanged Nut, Metric Mount, 8.25 DC Rims; With .472" Thick Increased Capacity Disc and Steel Hubs
	<u>Includes</u>
	: PAINT IDENTITY, REAR WHEELS White
	<u>Notes</u>
	: Compatible Tire Sizes: 11R22.5, 12R22.5, 255/70R22.5, 255/80R22.5, 265/75R22.5, 275/70R22.5, 275/80R22.5, 295/75R22.5, 295/80R22.5
29WAP	WHEEL GUARDS, FRONT (Accuride) for Metric Hub Piloted Wheels with Flanged Mounting Nuts Mounted Between Hub and Wheel
29WAR	WHEEL GUARDS, REAR (Accuride) for Metric Hub Piloted Wheels with Flanged Mounting Nuts, Mounted Between Hub & Wheel and Between Dual Wheels
29WLA	WHEEL BEARING, FRONT, LUBE (EmGard 50W) Synthetic Oil
7372135401	(8) TIRE, REAR 11R22.5 HDL ECO PLUS (CONTINENTAL) 493 rev/mile, load range G, 14 ply
7792655412	(2) TIRE, FRONT 385/65R22.5 HTC1 (CONTINENTAL) 495 rev/mile, load range L, 20 ply

Services Section:

40JAS	SRV CONTRACT, EXT ENGINE To 60-Month/200,000 Miles (320,000 km), 7,200 Hours; Includes Engine, Engine Electronics, Turbocharger, Water Pump and Fuel Injectors, for MaxxForce 11 and MaxxForce 13 with LESS than 500 Horsepower
	Connector Kit, 7-way connector, Gad hands, and Couplers
	Drivers door Grab Handle
	Install schader fill valve
	Winterfront installation
	Programming

INTERNATIONAL®

Vehicle Specifications
2014 7600 SBA 6X4 2010 (SF667)

February 06, 2013

Code

Description

TSC-switch programming and mirror switch mods

Tranny cooler line change out

1/08/13

13-SSP-22-2UBRW

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
SPECIFICATIONS
FOR
TRUCK, TANDEM AXLE
58,000 LB G.V.W., 80,000 LB G.C.W.
INTL 7600, MACK GU803

Bidders Instructions: Indicate compliance to the specifications on the "COMPLY YES/NO" line by each specification. Indicate any deviations from the specifications whether the minimum specifications are met or not on the "SPECIFICATION DEVIATIONS" line. Failure to comply with bid specifications may result in rejection of the bid. The state reserves the right to waive minor deficiencies or technical variances.

These trucks shall be fitted with rear-mounted snow wings attached on the right side and an underbody scraper blade. Mounting requires a 24" ground clearance area under the frame back of cab and 18" ground clearance under cab (see attached drawings). Locations of the components and exhaust system shall accommodate these installations.

	COMPLY YES	NO	SPECIFICATION DEVIATIONS
1) Axle			
a) Front I-beam type – 20,000 lb with shock absorbers.	X	—	_____
b) Rear – 40,000 lb	X	—	_____
c) Wheelbase – Approximately 195"-214". Distance between center of bogey to back of cab, 128"-138" to be determined after award.	X	—	_____
d) Minimum of 70" AF	X	—	_____
2) Body			
a) Air ride cab	X	—	_____
b) Air conditioning – heater and defroster. Inside/outside air control, with dust filter. Inlet to be screened to prevent debris entry. Automatic A/C shut down if overheating occurs.	X	—	_____
c) Steps and external grab handles for entry into cab to include grab handle on drivers inside door panel.	X	—	_____
d) Hood – tilt	X	—	_____
e) Stationary grill with maximum 2" opening.	X	—	_____
f) Horn – air to include cover(s) if mounted on roof of cab.	X	—	_____
g) Seating			
i) Driver and passenger seat, cloth, air ride suspension, high back or head restraint. Seat belt retractor. Three point shoulder harness. Ezyrider, National 2000 or approved equal. The State of North Dakota is requesting the highest possible seat back to be engineered into this chassis to protect the driver, (up to 6' 5" tall), from hitting his/her head on the back of the cab in a rear end collision.	X	—	_____
h) Dual sun visors.	X	—	_____
i) Side mirrors, two (one each side 102" width) adjustable approximately 16"x 6" each. Electrically defrosted. Electric adjustable, driver controlled. Passenger side only approximately 8" convex mirror mounted bottom of mirror.	X	—	_____
j) Front fender mounted electrically heated mirrors on each side.	X	—	_____
i) Approximately 9" adjustable convex heated mirror.	X	—	_____
ii) Separate switch for heated mirrors with no time out feature.	X	—	_____

BIDDER NELSON INTERNATIONAL

	COMPLY YES	NO	SPECIFICATION DEVIATIONS
k) Steering, power with dual steering gears.	X	—	
i) 18" steering wheel, with tilt.	X	—	
l) Paint, Omaha Orange or equal. Basecoat/clear coat or Imron 6000. Paint number to be provided at time of award.	X	—	
m) Maximum cab noise level of 80 db.	X	—	
n) Cab head liner.	X	—	
o) Power windows.	X	—	
p) Front wheel wells to be skirted/guarded from engine compartment.	X	—	
q) Power outlet (cigar lighter type).	X	—	
r) Tinted glass	X	—	
s) Dome light	X	—	
t) Cab rear window	X	—	
u) Book/manual pocket storage located on back wall of cab and/or overhead.	X	—	
3) Differential			
a) Tandem axle drive	X	—	
b) Ratio to be determined after award.	X	—	
c) U-joints, half round, not less than Spicer No. SPL-250 with heavy tube.	X	—	
i) Inter-axle, half round, not less than Spicer No. SPL-170.	X	—	
d) Driver control full locking differential, both axles.	X	—	
e) Lube oil pump.	X	—	
f) Synthetic gear lube.	X	—	
4) Electrical – 12 Volt	X	—	
a) Batteries, minimum of three 12volt, 900 CCA each, Group 31, Jump stud.	X	—	
b) Alternator, 130 amp minimum.	X	—	
c) Hour meter, solid state, engine controller activated, inside cab.	X	—	
d) AM/FM radio	X	—	
e) Heavy duty windshield wipers, two speed including intermittent with washers.	X	—	
f) Tachometer	X	—	
g) Gauges – volt, oil, coolant, temperature, fuel, transmission temperature and air.	X	—	
h) Circuit breakers required.	X	—	
i) Kysor solid state signal flasher or approved equal.	X	—	
j) Lights to meet all ICC regulations.	X	—	
k) Body builder junction box and connector kit for body builder or sealed connector at the end of frame include clearance lights, tail lights, turn signals, backup lights and stop lights.	X	—	
l) Headlamp circuit pre-wired for the attachment of plow lights.	X	—	
i) Instrument panel switch to alternate between OEM and plow headlamps.	X	—	
ii) Plow lamp wiring to extend to hood hinge area.	X	—	

	COMPLY YES NO	SPECIFICATION DEVIATIONS
iii) High beam indicator shall function in either mode.	X	
m) Vehicle speed sensor circuit with a pulse rate of 50,000 PPM wired into cab for ground speed oriented equipment installation.	X	
n) Instrument panel switch package.	X	
i) Power to be supplied via relay controlled by ignition switch.	X	
ii) Switch panel to be protected by minimum 60 amp main circuit breaker.	X	
(1) Body vendor will install individual circuit breakers for switches.		
iii) Switches to be configured to control these functions:		
(1) Amber warning.(on/off 6A)	X	
(2) Clear warning.(on/off 4A)	X	
(3) Work light.(on/off 10A)	X	
(4) Momentary switch for box vibrator.(N.O. 15A)	X	
(5) Momentary switch for hydraulic pump override.(N.C. 15A)	X	
(6) Air tailgate.(on/off 10A)	X	
iv) All switches, functions & names shall be backlit/illuminated and means of labelling provided.	X	
5) Engine – wet sleeved – diesel- 13L class	X	
a) Minimum 410 horsepower.	X	430 HP
b) Minimum 1550 lb-ft of torque.	X	
c) Minimum warranty: First 100,000 miles or 60 months, whichever comes first.	X	60 MONTH / 200,000
i) 100% engine parts and labor including turbo and fuel injectors.	X	
d) Corrosion resistant steel or aluminum oil pan.	X	
e) Fan clutch automatic on/off Horton, Kysor, or equal.	X	
f) Cooling system to contain extended life coolant.	X	
g) Custom fitted winter front (heavy duty) mounted to grill.	X	
h) Engine block heater – 1500 watt minimum.	X	
i) Air cleaner, dry element.	X	
i) Air cleaner restriction gauge dash mounted.	X	
j) Inside/outside air Intake of Precleaner/separation module.	X	
k) Engine coolant or return fuel heated thermostatic controlled fuel heater with water separation system designed for optimum performance for installed engine under sub zero severe snow plowing conditions.	X	
l) Automatic engine shut down system. Preprogrammed with 15 minute idle shut down.	X	
m) Rear engine PTO.	X	
6) Frame		
a) Exhaust system – vertical exhaust system with turn out minimum of 18" to 24" above cab. Right side mounted. Heat guard shield to cover from bottom of cab to top of door.	X	
b) Single frame- Minimum 120,000 psi 21.47 section modulus RBM 2,576,000.	X	

	COMPLY		SPECIFICATION
	YES	NO	DEVIATIONS
c) Fuel tank – minimum 100 gal aluminum, with gauge. Single tank mounted left side frame rail back of cab with filler location at forward end of tank or under cab if under body scraper clearance can be obtained.	X	—	_____
d) Frame – black	X	—	_____
e) Seven wire connector box in back of frame for towing units. Connector hook-up shall be connected to rear tail and brake light harness so trailer has tail, signal and brake lights.	X	—	_____
f) Minimum 15" integral front frame extension.	X	—	_____
7) Springs – Hendrickson Haulmaax® model HMX400 suspension with shock absorbers.	X	—	_____
a) Front, 20,000 lb (10,000 lb each) at ground.	X	—	_____
b) Rear, 40,000 lb (20,000 lb each) at ground.	X	—	_____
8) Transmission			
a) Allison automatic 4000 RDS	X	—	_____
b) 6 speed	X	—	_____
c) Synthetic transmission oil.	X	—	_____
d) Automatic neutral with the application of the park brake.	X	—	_____
e) I/P or control console mounted low oil sensor.	X	—	_____
f) Push button shift selector, instrument panel mount preferred, but not required.	X	—	_____
g) Transmission ECU to be mounted in cab. If dealer relocated, location must be approved.	X	—	_____
9) Wheels			
a) Front tires – 385/65R 22.5, 18-ply tubeless, all standard tread.	X	—	_____
b) Rear tires – 11:00R x 22.5, 14-ply, tubeless all highway traction.	X	—	_____
c) Dual tires on driving axles.	X	—	_____
d) Brakes – air with compressor not less than 15.5 CFM. Auxiliary air brake filler source via Schrader valve.	X	—	_____
i) Integral or compressor mounted safety valve, Midland SN 161 or equal. May be omitted if Bendix AD-IS integrated solution air dryer is used.	X	—	_____
ii) Compressor air intake shall be drawn from filtered engine air intake.	X	—	_____
e) Brake system heated desiccant type dryer with spin on cartridge or Bendix AD-IS total system integrated solution air dryer mounted outside of the frame.	X	—	_____
f) Sealed air chambers – MGM TRS 3030T	X	—	_____
i) Position to meet asphalt spreader/paver clearance requirements.	X	—	_____
g) Suspended brake pedal.	X	—	_____
h) Disc wheel, hub piloted. Mylar wheel guard spacers for all wheels.	X	—	_____
i) Front wheel bearing oilers or permanently lubed with synthetic grease.	X	—	_____
j) Rear wheel rim size 8.25".	X	—	_____
k) Front wheel rim size 12.25".	X	—	_____
l) Front and rear dust shields.	X	—	_____

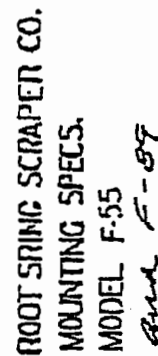
	COMPLY		SPECIFICATION DEVIATIONS
	YES	NO	
m) Four wheel trailer-tractor package complete to end of frame, including glad hands and dummy couplings.	X	—	_____
n) Four corner parking brake.	X	—	_____
10) General			
a) Web-based service manuals preferred otherwise eight complete shop service manuals on CD-ROM provided to State Fleet Services for distribution.	X	—	_____
b) Dealer or manufacturer to provide minimum 2 hours Introduction of model at district locations.	X	—	_____
c) Must have a factory approved warranty facility that can perform recalls, electronic diagnoses, engine and major repairs within a radius of 175 miles of each district headquarters.	X	—	_____

The truck is to be delivered as a complete unit ready for operation.

TRUCK MAKE: INTERNATIONAL MODEL: 7600 SBA 6x4

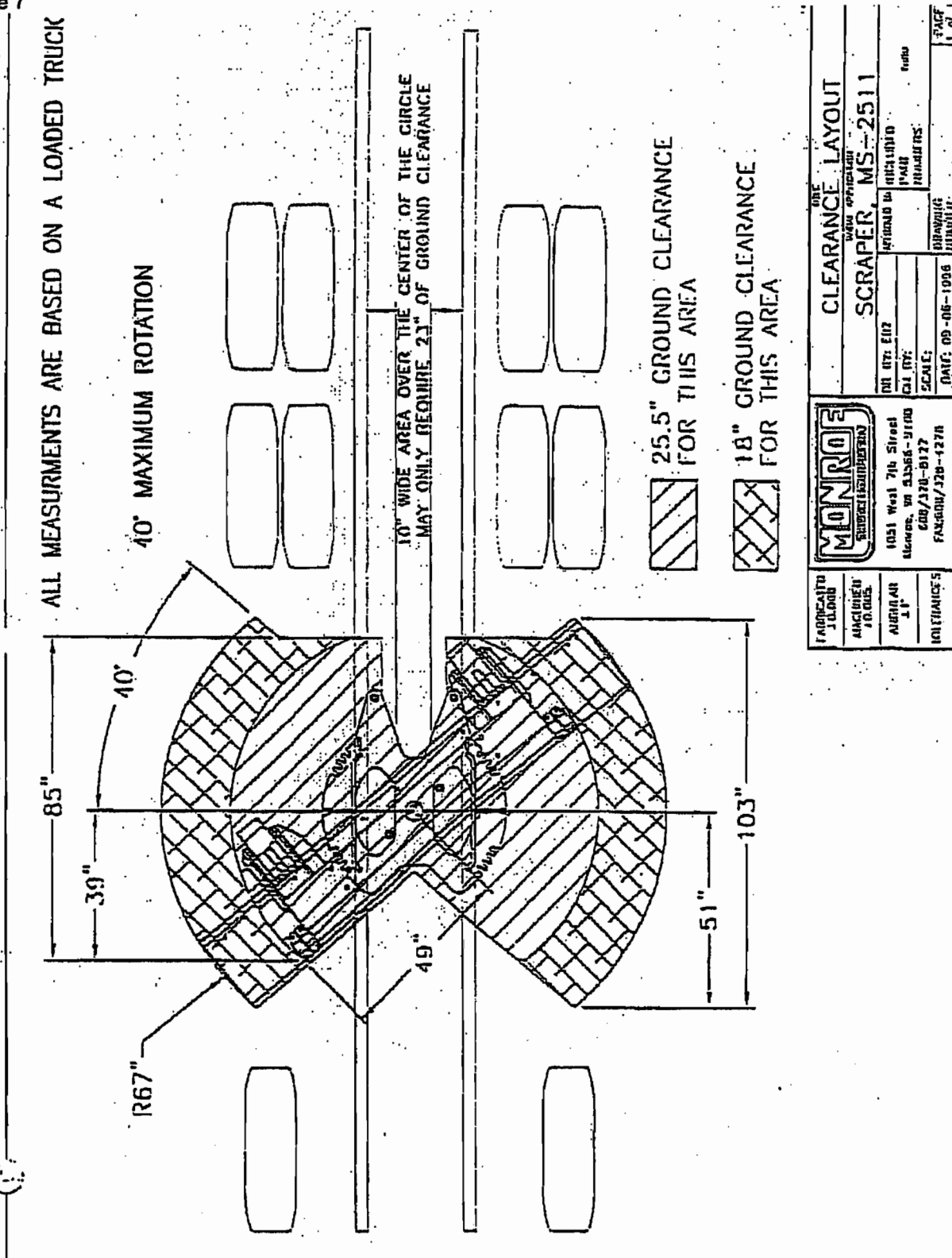
DELIVERY POINT: FOB box and hydraulics installer, bidder will be notified of delivery point.

BIDDER NELSON INTERNATIONAL



~~XXXX~~ CIRCLE HANGER MOUNTING AREA
~~XXXX~~ 24" GROUND CLEARANCE AREA

Exhibit A



FABRICATED 11/00/00		CLEARANCE LAYOUT	
ASSEMBLED 10/05/00		SCRAPER, MS-2511	
ASSEMBLED 11/05/00		DATE: 09-06-1998	
DIST: 012		DATE: 09-06-1998	
CITY: 012		DATE: 09-06-1998	
SCALE: 1"=10'		DATE: 09-06-1998	
1031 West 7th Street Alameda, CA 94608-3100 608/328-8127 FAX: 608/328-4278		DATE: 09-06-1998	
DISTANCE: 5		DATE: 09-06-1998	

MS2511 CLEARANCE LAYOUT



7600 SBA 6x4 2010

**Sales Proposal For:
ND DOT**

**Presented By:
Nelson Leasing, Inc.**

INTERNATIONAL®

February 06, 2013

Prepared For:
ND DOT
Tim Paul
608 E Boulevard Ave.
Bismarck, ND 58505-0606
(701)328 - 2683
Reference ID: N/A

Presented By:
Nelson Leasing, Inc.
Barry Wegner
2700 East Hwy 12
PO Box 993
Willmar MN 56201 -
(320)235-2770

Thank you for the opportunity to provide you with the following quotation on a new International truck. I am sure the following detailed specification will meet your operational requirements, and I look forward to serving your business needs.

Model Profile**2014 7600 SBA 6X4 2010 (SF667)**

APPLICATION:	Front Plow and Underbelly Scraper with Spreader
MISSION:	Requested GVWR: 58000. Calc. GVWR: 59480 Calc. Start / Grade Ability: 28.90% / 3.32% @ 55 MPH Calc. Geared Speed: 68.1 MPH
DIMENSION:	Wheelbase: 205.00, CA: 137.90, Axle to Frame: 75.00
ENGINE, DIESEL:	{MaxxForce 13} EPA 10, 430 HP @ 1700 RPM, 1550 lb-ft Torque @ 1000 RPM, 2100 RPM Governed Speed, 430 Peak HP (Max)
TRANSMISSION, AUTOMATIC:	{Allison 4000_RDS_P} 4th Generation Controls; Close Ratio, 6-Speed, With Double Overdrive; On/Off Hwy; Includes Oil Level Sensor, With PTO Provision, Less Retarder
CLUTCH:	Omit Item (Clutch & Control)
AXLE, FRONT NON-DRIVING:	{Meritor MFS-20-133A} Wide Track, I-Beam Type, 20,000-lb Capacity
AXLE, REAR, TANDEM:	{Meritor MT-40-14X-4DCR-P} Single Reduction, 0.433"(11mm) Wall Housing Thickness, 40,000- lb Capacity, R Wheel Ends, Lube Pump, With Driver Controlled Locking Differential in Forward Rear and Rear Rear Axle Gear Ratio: 5.86
CAB:	Conventional
TIRE, FRONT:	(2) 385/65R22.5 HTC1 (CONTINENTAL) 495 rev/mile, load range L, 20 ply
TIRE, REAR:	(8) 11R22.5 HDL ECO PLUS (CONTINENTAL) 493 rev/mile, load range G, 14 ply
SUSPENSION, REAR, TANDEM:	{Hendrickson HMX-400-54} Walking Beam Type 54" Axle Spacing; 40,000-lb Capacity, With Rubber End Bushings, Transverse Torque Rods, Less Shock Absorbers
PAINT:	Cab schematic 100GS Location 1: 0311, Omaha Orange (Std) Chassis schematic N/A

INTERNATIONAL®**Vehicle Specifications**
2014 7600 SBA 6X4 2010 (SF667)

February 06, 2013

<u>Code</u>	<u>Description</u>
SF66700	Base Chassis, Model 7600 SBA 6X4 2010 with 205.00 Wheelbase, 137.90 CA, and 75.00 Axle to Frame.
1CAJ	FRAME RAILS Heat Treated Alloy Steel (120,000 PSI Yield); 10.866" x 3.622" x 0.433" (276.0mm x 92.0mm x 11.1mm); 456.0" (11582mm) Maximum OAL
1LLK	BUMPER, FRONT Omit Item
1WDS	FRAME EXTENSION, FRONT Integral; 20" In Front of Grille
1WHP	WHEELBASE RANGE 183" (465cm) Through and Including 248" (630cm)
2ARY	AXLE, FRONT NON-DRIVING (Meritor MFS-20-133A) Wide Track, I-Beam Type, 20,000-lb Capacity
	<u>Notes</u> : The following features should be considered when calculating Front GAWR: Front Axles; Front Suspension; Brake System; Brakes, Front Air Cam; Wheels; Tires.
3AGA	SUSPENSION, FRONT, SPRING Parabolic, Taper Leaf; 20,000-lb Capacity; With Shock Absorbers
	<u>Includes</u> : SPRING PINS Rubber Bushings, Maintenance-Free
	<u>Notes</u> : The following features should be considered when calculating Front GAWR: Front Axles; Front Suspension; Brake System; Brakes, Front Air Cam; Wheels; Tires.
4091	BRAKE SYSTEM, AIR Dual System for Straight Truck Applications
	<u>Includes</u> : BRAKE LINES Color and Size Coded Nylon : DRAIN VALVE Twist-Type : DUST SHIELDS, FRONT BRAKE : DUST SHIELDS, REAR BRAKE : GAUGE, AIR PRESSURE (2) Air 1 and Air 2 Gauges; Located in Instrument Cluster : PARKING BRAKE CONTROL Yellow Knob, Located on Instrument Panel : PARKING BRAKE VALVE For Truck : QUICK RELEASE VALVE Bendix On Rear Axle for Spring Brake Release: 1 for 4x2, 2 for 6x4 : SLACK ADJUSTERS, FRONT Automatic : SLACK ADJUSTERS, REAR Automatic : SPRING BRAKE MODULATOR VALVE R-7 for 4x2, SR-7 with relay valve for 6x4
	<u>Notes</u> : Rear Axle is Limited to 46,000-lb GAWR with Code 04091 BRAKE SYSTEM, AIR and Standard Rear Air Cam Brakes Regardless of Axle /Suspension Ordered.
4193	BRAKES, FRONT, AIR CAM 16.5" x 6", Includes 24 SqIn Long Stroke Brake Chambers
	<u>Notes</u> : The following features should be considered when calculating Front GAWR: Front Axles; Front Suspension; Brake System; Brakes, Front Air Cam; Wheels; Tires.
4619	TRAILER CONNECTIONS Four-Wheel, With Hand Control Valve and Tractor Protection Valve, for Straight Truck
4732	DRAIN VALVE (Berg) Manual; With Pull Chain, for Air Tank
4AZA	AIR BRAKE ABS (Bendix AntiLock Brake System) Full Vehicle Wheel Control System (4-Channel)
4EBD	AIR DRYER (Meritor Wabco System Saver 1200) with Heater
	<u>Includes</u> : AIR DRYER LOCATION Inside Left Rail, Back of Cab
4ETE	BRAKE CHAMBERS, FRONT AXLE (Haldex) 24 SqIn

INTERNATIONAL®**Vehicle Specifications**
2014 7600 SBA 6X4 2010 (SF667)

February 06, 2013

Code	Description
4EVL	BRAKE CHAMBERS, REAR AXLE (Haldex GC3030LHDHO) 30/30 Spring Brake <u>Includes</u> : BRAKE CHAMBERS, SPRING (2) Rear Parking; WITH TRUCK BRAKES: All 4x2, 4x4; WITH TRACTOR BRAKES: All 4x2, 4x4; 6x4 & 6x6 with Rear Tandem Axles Less Than 46,000-lb. or GVWR Less Than 54,000-lb. : BRAKE CHAMBERS, SPRING (4) Rear Parking; WITH TRUCK BRAKES: All 6x4, 6x6; WITH TRACTOR BRAKES: 6x4 & 6x6 with Rear Tandem Axles 46,000-lb. or Greater or GVWR of 54,000-lb. or Greater
4LAA	SLACK ADJUSTERS, FRONT {Haldex} Automatic
4LGA	SLACK ADJUSTERS, REAR {Haldex} Automatic
4NDB	BRAKES, REAR, AIR CAM S-Cam; 16.5" x 7.0" ; Includes 30/30 Sq.In. Long Stroke Brake Chamber and Spring Actuated Parking Brake <u>Notes</u> : The following features should be considered when calculating Rear GAWR: Rear Axles; Rear Suspension; Brake System; Brakes, Rear Air Cam; Brake Shoes, Rear; Special Rating, GAWR; Wheels; Tires.
4SPM	AIR COMPRESSOR {Bendix} 15.9 CFM Capacity, Single Cylinder
4VCJ	AIR TANK LOCATION (2) : Two Mounted Under Cab, Outside Left Rail, on Step Bracket, with 24" Ground Clearance
4VGK	AIR DRYER LOCATION Mounted To Battery Box, Right Side, Under Cab
4WDW	BRAKE CHAMBERS, SPRING on Rear/Rear Axle Located Inside Rear Tire Envelope (Meets Asphalt Spreader/Paver Clearance Requirements)
5708	STEERING COLUMN Tilting
5CAL	STEERING WHEEL 2-Spoke, 18" Diam., Black
5PTB	STEERING GEAR (2) {Sheppard M-100/M-80} Dual Power
6DDC	DRIVESHAFT SYSTEM SPL250XL Driveshaft and SPL170XL Inneraxle Shaft in lieu of 1810 Driveshaft and 1710 Inneraxle Shaft
7BDS	EXHAUST SYSTEM Single, Vertical Aftertreatment Device Frame Mounted Right Side; Includes Vertical Tail Pipe & Guard <u>Includes</u> : EXHAUST HEIGHT 10' Exhaust Height - Based on Empty Chassis with Standard Components (+ or - 1" Height) : MUFFLER/TAIL PIPE GUARD Non-Bright Finish
7WAZ	TAIL PIPE (1) Turnback Type, Non-Bright, for Single Exhaust
7WBU	EXHAUST HEIGHT 11' 6"
8000	ELECTRICAL SYSTEM 12-Volt, Standard Equipment <u>Includes</u> : BATTERY BOX Steel with Plastic Lid : DATA LINK CONNECTOR For Vehicle Programming and Diagnostics In Cab : FUSES, ELECTRICAL SAE Blade-Type : HAZARD SWITCH Push On/Push Off, Located on Top of Steering Column Cover : HEADLIGHT DIMMER SWITCH Integral with Turn Signal Lever : HEADLIGHTS (2) Sealed Beam, Round, with Chrome Plated Bezels : HORN, ELECTRIC Single : JUMP START STUD Located on Positive Terminal of Outermost Battery : PARKING LIGHT Integral with Front Turn Signal and Rear Tail Light : RUNNING LIGHT (2) Daytime, Included With Headlights : STARTER SWITCH Electric, Key Operated

<u>Code</u>	<u>Description</u>
	: STOP, TURN, TAIL & B/U LIGHTS Dual, Rear, Combination with Reflector
	: TURN SIGNAL SWITCH Self-Cancelling for Trucks, Manual Cancelling for Tractors, with Lane Change Feature
	: TURN SIGNALS, FRONT Includes Reflectors and Auxiliary Side Turn Signals, Solid State Flashers; Flush Mounted
	: WINDSHIELD WIPER SWITCH 2-Speed with Wash and Intermittent Feature (5 Pre-Set Delays), Integral with Turn Signal Lever
	: WINDSHIELD WIPERS Single Motor, Electric, Cowl Mounted
	: WIRING, CHASSIS Color Coded and Continuously Numbered
8518	CIGAR LIGHTER Includes Ash Cup
8GGN	ALTERNATOR {Bosch LH160} Brush Type, 12 Volt 160 Amp. Capacity, Pad Mount
8HAA	BODY BUILDER WIRING To Rear of Frame, With Stop, Tail, Turn, and Marker Lights Circuits, Ignition Controlled Auxiliary Feed and Ground, Less Trailer Socket
8MKX	BATTERY SYSTEM {International} Maintenance-Free (3) 12-Volt 2775CCA Total
8RKB	RADIO {Panasonic CQ120} AM/FM, Includes Multiple Speakers, Includes Auxiliary Input
	<u>Includes</u>
	: SPEAKERS IN CAB (2) Dual-Cone with Deluxe Interior
	: SPEAKERS IN CAB (4) Coaxial with Premium Interior
8THJ	AUXILIARY HARNESS 3.0' for Auxiliary Front Head Lights and Turn Signals for Front Plow Applications
8VZR	SWITCH, BODY CIRCUITS, MID for Bodybuilder, 6 Momentary Switches in Instrument Panel; One Power Module with 6 Channels, 20 Amp Max. Per Channel, 80 Amp Max Output, Switches Control Power Module Through Multiplex Wiring, Mounted in Cab Behind Driver Seat
8WBW	JUMP START STUD Remote Mounted
	<u>Includes</u>
	: JUMP START STUD Mounted to Battery Box
8WCL	HORN, AIR Black, Single Trumpet, Air Solenoid Operated
8WXG	STARTING MOTOR {Mitsubishi} Electric Automotive America 105P} 12-Volt, with Soft-Start
	<u>Notes</u>
	: This starter is designed to work reliably without the need for thermal overcrank protection and provides the same warranty coverage as starters with thermal overcrank protection.
8XAH	CIRCUIT BREAKERS Manual-Reset (Main Panel) SAE Type III With Trip Indicators, Replaces All Fuses Except For 5-Amp Fuses
9585	FENDER EXTENSIONS Rubber
9HAN	INSULATION, UNDER HOOD for Sound Abatement
9HAT	GRILLE Stationary, with Vendor Painted Grille & Headlight Bezels, Argent NAV 8752
9HBN	INSULATION, SPLASH PANELS for Sound Abatement
9WAC	BUG SCREEN Front End; Mounted Behind Grille
9WBK	FRONT END Tilting, Fiberglass, With Three Piece Construction Includes Long Hood
10060	PAINT SCHEMATIC, PT-1 Single Color, Design 100
	<u>Includes</u>
	: PAINT SCHEMATIC ID LETTERS "GS"
10761	PAINT TYPE Base Coat/Clear Coat, 1-2 Tone

INTERNATIONAL®**Vehicle Specifications**
2014 7600 SBA 6X4 2010 (SF667)

February 06, 2013

<u>Code</u>	<u>Description</u>
10UAB	VEHICLE REGISTRATION IDENTITY ID for US States EXCLUDING: California, Connecticut, Delaware, Georgia, Maine, Massachusetts, New Jersey, New York, North Carolina, Pennsylvania
10WPK	GROUND CLEARANCE IDENTITY For 24" Ground Clearance.
11001	CLUTCH Omit Item (Clutch & Control)
12864	BLOCK HEATER, ENGINE (Phillips) 120 Volt/1500 Watt <u>Includes</u> : BLOCK HEATER SOCKET Receptacle Type; Mounted below Drivers Door
12BAV	ENGINE, DIESEL (MaxxForce 13) EPA 10, 430 HP @ 1700 RPM, 1550 lb-ft Torque @ 1000 RPM, 2100 RPM Governed Speed, 430 Peak HP (Max) <u>Includes</u> : AIR COMPRESSOR AIR SUPPLY LINE Naturally-Aspirated (Air Brake Chassis Only) : ANTI-FREEZE Yellow Shell Rotella Extended Life Coolant; -40 Degrees F/ -40 Degrees C; for MaxxForce 2010 Engines : COLD STARTING EQUIPMENT Automatic; With Engine ECM Control : CRUISE CONTROL Electronic; Controls Integral to Steering Wheel : ENGINE BLOCK Compacted Graphite Iron : ENGINE SHUTDOWN Electric, Key Operated : FUEL FILTER Top Access, Cartridge Type Filter Element; Engine Mounted : FUEL SYSTEM High Pressure Common Rail : GOVERNOR Electronic : HEAT MANAGEMENT SYSTEM Eco-Therm : OIL FILTER, ENGINE Drop-In Cartridge Type : OIL PAN Laminate Steel Composite : TURBO Twin Series : WET TYPE CYLINDER SLEEVES
12THJ	FAN DRIVE (Horton Drivemaster) Automatic On/Off Type, With Normally Closed Temperature Control <u>Includes</u> : FAN Nylon
12UBL	RADIATOR Aluminum; Welded, Front to Back CrossFlow System, 1593 SqIn, 1929 SqIn Dual CAC, 1548 SqIn 3 Core LTR <u>Includes</u> : DEAERATION SYSTEM with Clear Fill/Surge Tank : HOSE CLAMPS, RADIATOR HOSES Gates Shrink Band Type; Thermoplastic Coolant Hose Clamps : RADIATOR HOSES Premium, Rubber
12UXH	FEDERAL EMISSIONS for 2010; MaxxForce 13 Engines
12VAG	AIR CLEANER Single Element, with Integral Snow Valve and In-Cab Control <u>Includes</u> : GAUGE, AIR CLEANER RESTRICTION Air Cleaner Mounted
12VYL	ACCESSORY WIRING, SPECIAL for Road Speed Wire Coiled Under Instrument Panel for Customer Use
12WEG	COLD STARTING EQUIPMENT Automatic; With Engine ECM Control
12WPP	PTO, ENGINE REAR for MaxxForce 11 & 13 Engines (Ratio 1.276:1)
12WTA	FAN DRIVE SPECIAL EFFECTS Fan Cooling Ring with Fan Shroud Effects, Engine Mounted
12WZE	EMISSION COMPLIANCE Federal, Does Not Comply With California Clean Air Idle Regulations
12XAN	OBD COMPLIANCE for 2013 OBD

INTERNATIONAL®**Vehicle Specifications
2014 7600 SBA 6X4 2010 (SF667)**

February 06, 2013

<u>Code</u>	<u>Description</u>
13AMT	TRANSMISSION, AUTOMATIC (Allison 4000_RDS_P) 4th Generation Controls; Close Ratio, 6-Speed, With Double Overdrive; On/Off Hwy; Includes Oil Level Sensor, With PTO Provision, Less Retarder <u>Includes</u> : OIL FILTER, TRANSMISSION Mounted on Transmission : TRANSMISSION OIL PAN Magnet in Oil Pan
13WAW	OIL COOLER, AUTO TRANSMISSION (Modine) Water to Oil, for Allison or CEEMAT Transmission
13WBL	TRANSMISSION SHIFT CONTROL (Allison) Push-Button Type; for Allison 3000 & 4000 Series Transmission
13WLM	TRANSMISSION OIL Synthetic; 63 thru 76 Pints
13WUA	AUTOMATIC NEUTRAL Allison WT Transmission Shifts to Neutral When Parking Brake is Engaged and Remains in Neutral When Park Brake is Disengaged
13WUS	ALLISON SPARE INPUT/OUTPUT for Rugged Duty Series (RDS); General Purpose Trucks Modified for Single Input Auto Neutral
13WYH	TRANSMISSION TCM LOCATION Located Inside Cab
13WYL	SHIFT CONTROL PARAMETERS Allison Performance Programming in Primary and Allison Economy Programming in Secondary
14GVL	AXLE, REAR, TANDEM (Meritor MT-40-14X-4DCR-P) Single Reduction, 0.433"(11mm) Wall Housing Thickness, 40,000-lb Capacity, R Wheel Ends, Lube Pump, With Driver Controlled Locking Differential in Forward Rear and Rear Rear Axle . Gear Ratio: 5.86 <u>Includes</u> : POWER DIVIDER LOCK Electric over Air Operated, Cab Control with Indicator Light : REAR AXLE DRAIN PLUG (2) Magnetic, For Tandem Rear Axle <u>Notes</u> : The following features should be considered when calculating Rear GAWR: Rear Axles; Rear Suspension; Brake System; Brakes, Rear Air Cam; Brake Shoes, Rear; Special Rating, GAWR; Wheels; Tires.
14ULX	SUSPENSION, REAR, TANDEM (Hendrickson HMX-400-54) Walking Beam Type 54" Axle Spacing; 40,000-lb Capacity, With Rubber End Bushings, Transverse Torque Rods, Less Shock Absorbers <u>Includes</u> : CROSSMEMBER, SUSPENSION Stamped Steel Double Dogbone <u>Notes</u> : The following features should be considered when calculating Rear GAWR: Rear Axles; Rear Suspension; Brake System; Brakes, Rear Air Cam; Brake Shoes, Rear; Special Rating, GAWR; Wheels; Tires.
14WAL	SUSPENSION/REAR-AXLE IDENTITY for Meritor Tandem Rear Axles With Bar-Pin Beam Attachment Type Suspensions
14WBV	SHOCK ABSORBERS, REAR (4) for Hendrickson HMX Suspension Only, Mounted from Frame to Beam
14WLD	AXLE, REAR, LUBE (EmGard 75W-90) Synthetic Oil; 50 thru 64.99 Pints
15LKW	FUEL/WATER SEPARATOR (Davco Fuel Pro 382) with Fuel Heated Fuel Heater, Thermostatic Fuel Temperature Control, Mounted in Standard Position, Includes Water-In-Fuel Light
15SNT	FUEL TANK Top Draw; D Style, Non Polished Aluminum, 100 U.S. Gal., 378.5 L Capacity, 19.0" Tank Depth, Mounted Right Side BOC, 8" Above the frame rail
16030	CAB Conventional <u>Includes</u> : ARM REST (2) Molded Plastic; One Each Door : CLEARANCE/MARKER LIGHTS (5) Flush Mounted : COAT HOOK, CAB Located on Rear Wall, Centered Above Rear Window

INTERNATIONAL®**Vehicle Specifications
2014 7600 SBA 6X4 2010 (SF667)**

February 06, 2013

<u>Code</u>	<u>Description</u>
	: CUP HOLDERS Two Cup Holders, Located In Lower Center of Instrument Panel
	: DOME LIGHT, CAB Rectangular, Door Activated and Push On-Off at Light Lens, Timed Theater Dimming, Integral to Console, Center Mounted
	: GLASS, ALL WINDOWS Tinted
	: GRAB HANDLE, CAB INTERIOR (1) "A" Pillar Mounted, Passenger Side
	: GRAB HANDLE, CAB INTERIOR (2) Front of "B" Pillar Mounted, One Each Side
	: INTERIOR SHEET METAL Upper Door (Above Window Ledge) Painted Exterior Color
	: STEP (4) Two Steps Per Door
16HBA	GAUGE CLUSTER English With English Electronic Speedometer
	<u>Includes</u>
	: GAUGE CLUSTER (6) Engine Oil Pressure (Electronic), Water Temperature (Electronic), Fuel (Electronic), Tachometer (Electronic), Voltmeter, Washer Fluid Level
	: ODOMETER DISPLAY, Miles, Trip Miles, Engine Hours, Trip Hours, Fault Code Readout
	: WARNING SYSTEM Low Fuel, Low Oil Pressure, High Engine Coolant Temp, and Low Battery Voltage (Visual and Audible)
16HGH	GAUGE, OIL TEMP, ALLISON TRAN
16HHE	GAUGE, AIR CLEANER RESTRICTION (Filter-Minder) With Black Bezel Mounted in Instrument Panel
16HKT	IP CLUSTER DISPLAY On Board Diagnostics Display of Fault Codes in Gauge Cluster
16JNV	SEAT, DRIVER (National 2000) Air Suspension, High Back With Integral Headrest, Cloth, Isolator, 1 Chamber Lumbar, 2 Position Front Cushion Adjust, -3 to +14 Degree Back Angle Adjust
	<u>Includes</u>
	: SEAT BELT 3-Point, Lap and Shoulder Belt Type
16RPX	SEAT, PASSENGER (National) Air-Suspension, High Back With Integral Headrest, Cloth, Isolated, 1 Chamber Lumbar, 2 Position Front Cushion Adjustment, -3 to +14 Degree Seat Back Adjustment
16SDC	GRAB HANDLE (2) Chrome Towel Bar Type With Anti-Slip Rubber Inserts; for Cab Entry, Mounted Left and Right, Each Side at "B" Pillar
16SDT	MIRRORS (2) (Lang Mekra) Styled; Rectangular, 7.09" x 15.75" & Integral Convex Both Sides, 102" Inside Spacing, Breakaway Type, Heated Heads Thermostat Controlled, Power Both Sides Flat Glass Only, Clearance Lights LED,
16SJW	MIRROR, CONVEX, HOOD MOUNTED (2) (Lang Mekra) Heated, Left and Right Sides 7.44" Sq
16WCT	AIR CONDITIONER (Blend-Air) With Integral Heater & Defroster
	<u>Includes</u>
	: HEATER HOSES Premium
	: HOSE CLAMPS, HEATER HOSE Mubea Constant Tension Clamps
	: REFRIGERANT Hydrofluorocarbon HFC-134A
16WJS	INSTRUMENT PANEL Center Section, Flat Panel
16WJU	WINDOW, POWER (2) And Power Door Locks, Left and Right Doors, Includes Express Down Feature
16WKY	HVAC FRESH AIR FILTER
16WRZ	CAB INTERIOR TRIM Premium
	<u>Includes</u>
	: "A" PILLAR COVER Molded Plastic
	: CAB INTERIOR TRIM PANELS Cloth Covered Molded Plastic, Full Height; All Exposed Interior Sheet Metal Is Covered Except for the Following: with a Two-Man Passenger Seat or with a Full Bench Seat the Back Panel Is Completely Void of Covering
	: CAB SOUND INSULATION Includes Dash Insulator and Engine Cover Insulator, Premium Floormat, and Sound Dampening Patches

INTERNATIONAL®**Vehicle Specifications**
2014 7600 SBA 6X4 2010 (SF667)

February 06, 2013

<u>Code</u>	<u>Description</u>
	: CAB, INTERIOR TRIM, CLOSEOUT Lower Dash Closeout Panel; Molded Plastic; Under Instrument Panel Driver Side
	: CONSOLE, OVERHEAD Molded Plastic; With Dual Storage Pockets with Retainer Nets, CB Radio Pocket, Speakers, and Reading Lights
	: COURTESY LIGHT (2) Mounted In Front Map Pocket Left and Right Side
	: DOOR TRIM PANELS with Cloth Insert on Bolster Driver and Passenger Doors
	: FLOOR COVERING Rubber, Black
	: GAUGE, TEMPERATURE, AMBIENT Includes Compass Readout and Wiring and Sensor With Display Unit Mounted In Cluster
	: HEADLINER Soft Padded Cloth
	: INSTRUMENT PANEL TRIM Molded Plastic with Black Center Section
	: STORAGE POCKET, DOOR (2) Molded Plastic (Carpet Texture), Full-Length; Driver and Passenger Doors
	: SUN VISOR (3) Padded Vinyl: 2 Moveable (Front-to-Side) Primary Visors, Driver Side with Vanity Mirror and Toll Ticket Strap, plus 1 Auxiliary Visor (Front Only), Driver Side
16WSK	CAB REAR SUSPENSION Air Bag Type
27DNP	WHEELS, FRONT DISC; 22.5" Painted Steel, 10-Stud (285.75MM BC) Hub Piloted, 5 Hand Hole, Flanged Nut, Metric Mount, 12.25 DC Rims; With Steel Hubs, with 5.375" Offset
	<u>Includes</u>
	: PAINT IDENTITY, FRONT WHEELS White
	<u>Notes</u>
	: Compatible Tire Sizes: 385/65R22.5, 425/65R22.5
28DRN	WHEELS, REAR DUAL DISC; 22.5" Painted Steel, 5 Hand Hole, 10-Stud (285.75MM BC) Hub Piloted, Flanged Nut, Metric Mount, 8.25 DC Rims; With .472" Thick Increased Capacity Disc and Steel Hubs
	<u>Includes</u>
	: PAINT IDENTITY, REAR WHEELS White
	<u>Notes</u>
	: Compatible Tire Sizes: 11R22.5, 12R22.5, 255/70R22.5, 255/80R22.5, 265/75R22.5, 275/70R22.5, 275/80R22.5, 295/75R22.5, 295/80R22.5
29WAP	WHEEL GUARDS, FRONT (Accuride) for Metric Hub Piloted Wheels with Flanged Mounting Nuts Mounted Between Hub and Wheel
29WAR	WHEEL GUARDS, REAR (Accuride) for Metric Hub Piloted Wheels with Flanged Mounting Nuts, Mounted Between Hub & Wheel and Between Dual Wheels
29WLA	WHEEL BEARING, FRONT, LUBE (EmGard 50W) Synthetic Oil
7372135401	(8) TIRE, REAR 11R22.5 HDL ECO PLUS (CONTINENTAL) 493 rev/mile, load range G, 14 ply
7792655412	(2) TIRE, FRONT 385/65R22.5 HTC1 (CONTINENTAL) 495 rev/mile, load range L, 20 ply
	Services Section:
40JAS	SRV CONTRACT, EXT ENGINE To 60-Month/200,000 Miles (320,000 km), 7,200 Hours; Includes Engine, Engine Electronics, Turbocharger, Water Pump and Fuel Injectors, for MaxxForce 11 and MaxxForce 13 with LESS than 500 Horsepower
	Connector Kit, 7-way connector, Gad hands, and Couplers
	Drivers door Grab Handle
	Install schader fill valve
	Winterfront Installation
	Programming

INTERNATIONAL®

Vehicle Specifications
2014 7600 SBA 6X4 2010 (SF667)

February 06, 2013

Code

Description

TSC-switch programming and mirror switch mods

Tranny cooler line change out

STATE OF NORTH DAKOTA
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
STATE FLEET SERVICES
608 East Boulevard Avenue
Bismarck, ND 58505-0700

SOLICITATION AMENDMENT

03/19/2013

SOLICITATION NUMBER AND TITLE: RFP 065-30-13-030 Snow Plow Turnkey Truck Package

AMENDMENT NUMBER: 2 – Responses to Questions

Section 1.03 of the solicitation established a deadline for receipt of questions. The deadline for questions was **March 14, 2013**. The responses to these questions are provided as addenda to the solicitation. When necessary, the solicitation has been amended.

1. Question: Is 201 Stainless Steel Acceptable In place of 304 Stainless steel in the specifications? In the past the state has accepted 201 as an equal to 304.

Response: **Yes, 201 stainless steel will be considered an equal for all attachments as stated in the specification header.**

No amendment necessary.

2. Question: Page 22 of specification ssp-22-2adsbw item 18-f, states 200 gallon tanks on box mounted fenders, while page 54 specification ssp-95-5700-4 final paragraph states "mounted onto the truck chassis rear fender" these two specification's somewhat contradict each other.

Response: **Page 54 is an error. Prewet tanks should be mounted on the box mounted fenders.**

Amend the RFP as follows: Bottom of page 54 to read "The prewet system shall be delivered mounted onto the truck chassis ~~rear fender~~ body."

3. Question: Is 45 degree sloped side acceptable? Specification ssp-22-2adsbw item 18-c states "not less than 35 degree slopes if not radius" is there a maximum degree on the side slope? A 45 degree slope may help accommodate the pre wet tanks better

Response: **The 45 degree slope exceeds the minimum 35 degrees as stated in the specification.**

No amendment necessary.

4. Question: What is considered raised edges on fenders? Would formed in tank supports be considered raised edges? Could the state please clarify this?

Response: **The DOT doesn't want material to be trapped on the top side of fender because of raised edges.**

No amendment necessary.

5. Question: SSP-22-2AUBW Page 11 Item 9k – Due to some fuel tank designs will it be acceptable to use a 10" or 12" I-beam so the dump body doesn't interfere with the fuel tank?

Response: **Yes as it exceeds the minimum 8" as stated in the specification.**

No amendment necessary.

6. Question: Page 15 Item 12d – Would American Truck Boxes be an acceptable brand? Here is the link to their website for underbody toolboxes:
<http://www.truckbox.com/underbodytrailertoolboxes.html>

Response: **Yes, American Truck boxes will be allowed.**

No amendment is necessary.

7. Question: Page 15 Item 13 – Would you please list Henderson Quick Hitch as an approved model?

Response: **Henderson is approved contingent on meeting the specification as written.**

No amendment is necessary.

8. Question: SSP-22-2ADSUBW Page 22 Item 18c – Will 201SS be acceptable for the understructure and floor in lieu of 304SS?

Response: **Yes**

Amend the RFP as follows: Minimum 7 gauge stainless steel, one piece sides of a radius design or of not less than a 35° slope if non radius. Understructure and floor to be minimum of 3/16" 304 stainless steel.

9. Question: Page 27 Item 21d – Would American Truck Boxes be an acceptable brand? Here is the link to their website for underbody toolboxes:
<http://www.truckbox.com/underbodytrailertoolboxes.html>

Response: **Yes, American Truck boxes will be allowed.**

No amendment is necessary.

10. Question: Page 27 Item 22 – Would you please list Henderson Quick Hitch as an approved model?

Response: **Henderson is approved contingent on meeting the specification as written.**

No amendment is necessary.

11. Question: SSP-95-5700-4 Page 52 – Would you please list Henderson PWS prewet system as an approved model?

Response: **Yes. Henderson's prewet system is approved.**

No amendment is necessary.

12. Question: SSP-95-5700-10 Page 57 – Would you please list Henderson PWS prewet system as an approved model?

Response: **Yes. Henderson's prewet system is approved.**

No amendment is necessary.

13. Page 52 Item 1 b & c – Due to the plumbing for the crossover and fill can the tank on the fill side be 165 gallons in lieu of minimum 200 gallon. We would use a 230 gallon tank on one side and a 165 gallon tank on the fill side for a total liquid capacity of 395 gallons.

Response: **No. Uneven distribution in tank volume creates a heavier load on the wing side of the truck which can make the truck lean to one side. NDDOT prefers equal sized tanks on both sides of the truck body. The 200 gallon or similar approved size capacity will remain. At this point the 165 gallon capacity is not adequate.**

No amendment is necessary.

14. Question: Page 34 Item# 8 – Could you explain this option more or what this option will be used for?

Response: **Pricing for additional boxes without labor.**

No amendment necessary.

15. Question: Page 35 Item# 9 – Could you explain this option more or what this option will be used for?

Response: **Pricing for additional boxes without labor.**

No amendment necessary.

16. Question: Is there a maximum number of miles that a truck can have on it before it is delivered? Under specific terms and conditions.

Response: **No.**

No amendment needed.

17. Question: Is there a maximum distance allowed for correcting deficiencies outside the State of North Dakota? Under specific terms and conditions.

Response: As stated in the specific terms and conditions, **"All trucks must pass a final inspection and be accepted by NDDOT at the contractor(s) location within ND, a bordering city, or other location as agreed to with NDDOT. Any deficiencies identified by the inspection team must be made at the inspection site or otherwise agreed upon location to bring the truck into compliance before delivery can be made."**

No amendment necessary.

18. Question: Will a pressed in side brace be acceptable in lieu of a weld on brace? Page 11, Item 9. G.

Response: **Neither type of side brace incorporation has been specified; therefore it is left to the preference of the box manufacturer to use their standard manufacturing preference.**

No amendment is necessary.

19. Question: The specification state 1" hinge pins. Industry standard are usually 1.25" Is 1.25" acceptable? Page 23, Item 18, L.

Response: **Yes, 1" hinge pins is the minimum specification. 1.25" exceeds the specification.**

No amendment necessary.

20. Question: Is a 201 stainless steel tailgate spreader acceptable? Page 47.

Response: **Yes, 201 stainless steel will be considered an equal to 304 stainless steel for all attachments.**

No amendment necessary.

21. Question: Is the HD 3" schedule 40 outer tube and 3" x 1/4" wall inner pipe acceptable as it was on the 2011 bid? Page 44, Item 4, G.

Response: **Yes.**

No amendment necessary.

22. Question: Are the 270 gallon tanks as shown in the attached pictures and drawing above acceptable? These tanks comply with tank thickness and the liquid rating as to the specification requirement. The tanks are equipped with tank floor baffles as well as the four mounting strap indentions which also serve as baffles, each tank is equipped with five 2" ports, (two at each end in the bottom and one on center in the top). Page 52, Item 1,B.

Response: No. The tanks must be elevated off the fender to allow for cleaning salt, sand, and debris from under the tanks. If the tanks can be mounted in a cradle with bottom supports to elevate them off the fender for cleaning then NDDOT would consider approving them.

No amendment necessary.

23. Question: Are the 270 gallon tanks as shown in the attached pictures and drawing above acceptable? These tanks comply with tank thickness and the liquid rating as to the specification requirement. The tanks are equipped with tank floor baffles as well as the four mounting strap indentions which also serve as baffles, each tank is equipped with five 2" ports, (two at each end in the bottom and one on center in the top). Page 52, Item 1, C

Response: No. The tanks must be elevated off the fender to allow for cleaning salt, sand, and debris from under the tanks. If the tanks can be mounted in a cradle with bottom supports to elevate them off the fender for cleaning then NDDOT would consider approving them.

No amendment necessary.

24. Question: Is 201 stainless steel brackets acceptable for the tank mounting? Page 53, Item 2. B.

Response: Yes, 201 stainless steel will be considered an equal to 304 stainless steel for all attachments.

No amendment necessary.

25. Question: Is the 3" fill port in the top a requirement with this unit having the bulk fill? Page 53, Item 1, h

Response: No. Item 1, h. 3" fill port with spin on lids and rubber gaskets can be removed. Item 1, i. Spin on lids shall be tethered to prevent being separated from the tank also will not apply if there are no spin on lids.

Amend RFP as follows: strike item 1, h. ~~h. 3" fill port with spin on lids and rubber gaskets.~~

26. Question: We use the top center port as the vent. We install an elbow and a hose that extends forward and up. This eliminates the potential of leakage due to water hammer when stopping, accelerating, and hoisting the body in the up position. This has proven successful. Is this acceptable? Page 53, Item 1. L i

Response: **Yes**

No amendment necessary.

27. Question: With the tanks installed flat to the fenders as shown in the pictures, are the SS skids and the 1" spacing between the tanks and the fenders a requirement? The flat bottom of the tank mounting direct to the top of the fender gives more support to the tanks and installed in this manner is less weight to a completed unit then a skid type mounted tank system. Page 53, Item 2, B.

Response: **Yes. Tanks must be elevated and properly supported to handle the weight of the tank plus its contents.**

No amendment necessary.

28. Under the "Liquid Pre-Wet System, Radius Dump Fender Mount" Page 52. 1.B and 1.C. The spec calls out 200 gallons tanks per side. Would the state accept 190 gallons per tank per side?

Response: **Yes. The 190 gallon tanks are acceptable.**

No amendment is necessary.

SOLICITATION AMENDMENT

ACKNOWLEDGEMENT

SOLICITATION NUMBER AND TITLE: RFP 065-30-13-030 Snow Plow Turnkey Truck Package

AMENDMENT NUMBER: 2 – Responses to Questions

Vendors are instructed to acknowledge receipt of and compliance with this amendment by signing below and returning this acknowledgement with your bid or proposal.

Any questions regarding this amendment must be submitted in writing to the undersigned Procurement Officer.

Robin Rehborg
Procurement Officer
PHONE: 701-328-2543
FAX: 701-328-2514
E-MAIL: rrehborg@nd.gov

By my signature below, I hereby acknowledge receipt of and compliance with this amendment to the above referenced solicitation.

NAME OF BIDDER OR OFFEROR

NORTHERN TRUCK EQUIPMENT CORP.

MAILING ADDRESS

PO BOX 2435
SIOUX FALLS, SD 57101-2435

PRINTED NAME

JOHN WARTENSEE

SIGNATURE

John Wartensee

TITLE

VICE PRESIDENT

DATE

MARCH 28, 2013

**RFP Number: 065-30-13-030
Proposal Response Sheets**

TURNKEY PACKAGE ITEM #1

Purchase price and labor to install 14' dump & spreader box, hydraulic system, plow lights, warning light system, quick hitch, 11' underbody scraper, 10' rear-mount snow wing and hopper pre-wet system.

Specification Number	Description	Unit Price Ea.
SSP-22-2ADSUBW SSP-01	14' dump & spreader box, hydraulic system, plow lights, strobe system, plow quick hitch, furnished and installed. Estimated Quantity total 20	\$ 65,111.00
SSP-95-4180-2	11' underbody scraper furnished and installed.	\$ 8,034.00
SSP-95-4200-23	10' rear mount snow wing, left or right hand	\$ 6,528.00
SSP-95-5700-4	220 gallon hopper pre-wet system furnished and installed.	\$ 2,917.00
Total package price each.		\$ 82,590.00
Package price x 20 = Total Contract Price for Package #1		\$ 1,651,800.00

TURNKEY PACKAGE ITEM #2

Purchase price and labor to install 14' dump box, hydraulic system, plow lights, warning light system, quick hitch, 11' underbody scraper, 10' rear mount snow wing, tailgate sander, box vibrator, and hopper pre-wet system.

Specification Number	Description	Unit Price Ea.
SSP-22-2AUBW SSP-01	14' dump box, hydraulic system, plow lights, strobe system, plow quick hitch, furnished and installed. Estimated Quantity total 15	\$ 57,589.00
SSP-95-4180-2	11' underbody scraper furnished and installed.	\$ 8,034.00
SSP-95-4200-23	10' rear mount snow wing, left or right hand	\$ 6,528.00
SSP-95-2400-4	Tailgate sander furnished and installed.	\$ 4,216.00
SSP-95-5700-10	150 gallon tailgate pre-wet system furnished and installed.	\$ 2,626.00
Box vibrator, Cougar model DC-3200, Tend Air model RV-3500 or approved equal, furnished and installed as per manufacturer's instructions with mounting and location to be approved by NDDOT.		\$ 834.00
Total package price.		\$ 79,827.00
Package price x 15 = Total Contract Price for Package #2		\$ 1,197,405.00

Truck Delivery Charges Per Unit for the Following Destinations:

Bismarck - \$ 437.00

Dickinson - \$ 588.00

Valley City - \$ 164.00

Grand Forks - \$ 205.00

Devils Lake - \$ 350.00

Williston - \$ 785.00

Minot - \$ 554.00

Fargo - \$ 0.00

PROPOSED DELIVERY TIME FOR 17 UNITS IN 2013: 120 DAYS (AFTER RECEIPT OF CHASSIS)

PROPOSED DELIVERY TIME FOR 18 UNITS IN 2014: 120 DAYS (AFTER RECEIPT OF CHASSIS)

ITEM #3

Option: Purchase additional complete quick hitch assemblies with installation hardware for life of contract.

FOB: Bismarck, ND. Price each \$ 2,165.00.

ITEM #4

Option: Purchase additional quick hitch assemblies without lift cylinder and with complete installation hardware for a life of contract.

FOB: Bismarck, ND. Price each \$ 1,808.00.

ITEM #5

Option: Purchase additional stainless steel tailgate spreaders with side shields, installation hardware, and as specified within for life of contract.

FOB: Bismarck, ND. Price each \$ 4,259.00.

ITEM #6

Option: Force America 6100-3 lane programming package with individual loose wires for lane selection. Truck portion of trailer anti-ice wiring harness. All necessary hydraulic plumbing and couplers needed to connect to the trailer at the rear of truck.

Price each installed \$ 1,964.00.

ITEM #7

Option: Force America 5 joystick controller and 2 additional valve sections with all necessary hydraulic plumbing and couplers needed to connect to the tow plow at the right rear of truck.

Price each installed \$ 6,728.00.

ITEM #8

Option: Purchase additional 14' stainless steel dump/spreader box with cylinder, installation hardware, and as specified within for life of contract.

FOB: Fargo, ND. Price each \$ 24,562.00.

ITEM #9

Option: Purchase additional 14' stainless steel dump box with cylinder, installation hardware, and as specified within for life of contract.

FOB: Fargo, ND. Price each \$ 15,312.00.

ITEM #9

Option: Purchase dual auger in lieu of conveyor chain on dump/spreader box.

Add/Deduct \$ 3,500.00.

ITEM #10

Option: Purchase stainless hydraulic tank in lieu of mild steel tank as specified with in.

Add/Deduct \$ 582.00.

ITEM #11

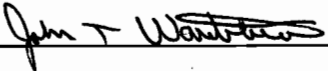
Option: Reflexite® V82 red and white reflective conspicuity tape.

Price per foot installed \$ 2.87

Receipt of the following addenda to the RFP, by date, is acknowledged:

AMENDMENT NUMBER 1 3/19/2013

AMENDMENT NUMBER 2 3/19/2013

SIGNED: 

FULL NAME: JOHN T. WARTENBEE
(Please Print)

TITLE: VICE PRESIDENT

FIRM NAME: NORTHERN TRUCK EQUIPMENT CORP.

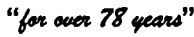
FIRM ADDRESS: PO BOX 2435 SIOUX FALLS, SD 57101-2435

FIRM PHONE NUMBER: 605-543-5206 FIRM FAX NUMBER: 605-543-5219

EMAIL ADDRESS: JWARTENBEE@NTECORP.COM

Proposals must remain open and valid for at least 90 DAYS from the deadline specified for submission of proposals. Proposals may be withdrawn at any time prior to proposal opening date.

The signatory agrees that the NDDOT has the right to reject any or all proposals for any reason.



P. O. Box 130 – Rapid City, SD 57709-0130 – Phone (605) 341-8780 – Fax: (605) 341-8786
P. O. Box 347 – Watertown, SD 57201-0013 – Phone (605) 886-5816 – Fax: (605) 886-5819
P. O. Box 9675 – Fargo, ND 58106-9675 – Phone (701) 281-1718 – Fax: (701) 281-1859
P. O. Box 2435 – Sioux Falls, SD 57101-2435 – Phone (605) 543-5206 – Fax: (605) 543-5219

SALES ORDER

SF 292245

DATE 3-28-13

PHONE

WE PROPOSE TO FURNISH THE FOLLOWING FOR YOUR CONSIDERATION:

TERMS:

QUOTATION FIRM FOR 30 DAYS

We accept the above quotation as a firm order, subject to confirmation from NTEC.

Buyer

(Name and Title of Official)