North Dakota Department of Transportation
INVITATION TO BID

NDDOT Contract # 50171013

Bid Number: 760-06-17-050	Bid Opening Date & Time: 08/08/2017 02:00 PM
Items: Cutting Edges	Buyer: Vanessa Brosten
Bid Mailing Address: 608 East Boulevard Avenue	Telephone Number: 701-328-4466
City, State, Zip: Bismarck, North Dakota, 58505-0700	Email: vbrosten@nd.gov
Contract Period: 08/15/2017 TO 07/31/2018	Date Prepared: 07/21/2017

BID RESPONSE

Please submit your bid response on the attached forms in conformance with the instructions and specifications in the NDAC 04-12-01 – 04-12-16. One copy of your bid response must be returned to the North Dakota Department of Transportation (NDDOT) prior to the time and date specified for the bid opening. Bid responses received after the time and day specified for the bid opening will be rejected. Mark envelope with word "BID" and the opening time and date. **If your bid response is accepted by NDDOT, then your bid response will constitute a binding contract.**

CONTRACT

This contract is made and entered into by and between NDDOT for the state of North Dakota (hereinafter state) and

Vendor Name	Vendor Address
Normont Equipment	1157 Wire Mill Rd, Black Eagle Mt 59414

(hereinafter vendor). In consideration of and for the acceptance by the state of the offer made by the vendor pursuant to the bid response, the vendor agrees and promises to sell, furnish, and deliver to the state, at the time, places, and prices specified in the bid response, all goods, merchandise, supplies, commodities, equipment, or other items contained in the bid response and for which the vendor has been awarded this contract by the state. The vendor shall fully perform this contract in accordance with the terms and conditions contained in the bid response including all specifications, rules, or regulations mentioned therein, and shall comply with all applicable provisions of the NDAC 04-12-01 – 04-12-16 promulgated by the State Purchasing Division; such manual being made a part of this contract by reference. The Risk Management Appendix and Appendices A and E of the Title VI Assurances, attached, are hereby incorporated into and made a part of this agreement.

The following must be completed by the vendor; failure to do so may result in the rejection of the vendors bid proposal.

Vendor Name: Normont Equipment Co.		
Mailing Address: 1157 Wire Mill Rd, Black Eagle Mt 59414		
Telephone Number: 406-453-4344	Fax Number: 406-761-7880	E-mail Address: pklabo@nmeqco.com

Name & Title (Type or Print): Pam Klabo / Sales manager

Signature: Pam Klabo

Date: 8/2/17

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

FOR ND DEPARTMENT OF TRANSPORTATION USE ONLY Accepted by the state according to provisions of award.

Authorized Signature: Thomas K Sorel		Date: 9-7-17
Recommended for approval: Brad Jan	Date: 9-7-17	Approximate contract amount: $ 6,064

NDDOT North Dakota Department of Transportation

APPROVED as to execution this 7th day of September 20 17
ATTORNEY GENERAL
By _____
SPECIAL ASST. ATTORNEY GENERAL

CLA 7480 (Div. 50)

MAILING INSTRUCTIONS

Mail only one completed and signed request for bid document per envelope, unless instructed otherwise. Request for bid documents not signed or received after the date and time specified in the request for bid will be rejected.

BID IS: ☒ SEALED ☐ NOT SEALED

Address the envelope containing your response in the following manner:

BID NUMBER – 760-06-17-050
BID OPENING DATE/TIME – August 8, 2017; 2:00 PM Central
N. D. DEPT. OF TRANSPORTATION
PROCUREMENT SECTION
608 E BOULEVARD AVE
BISMARCK ND 58505-0700

Sealed bids will be received for furnishing "**CUTTING EDGES**" as per the following instructions and specifications. To be considered, this bid form must be completed in its entirety and received by the **North Dakota Department of Transportation (NDDOT), 608 E. Boulevard Avenue, Bismarck ND 58505-0700 no later than 2:00 PM CENTRAL TIME, TUESDAY, AUGUST 8, 2017,** at which time and place such bids will be properly opened and read.

REORDER PRICING IS REQUIRED IF REQUESTED IN THIS DOCUMENT.

BIDDERS INSTRUCTIONS

1. **Assistance to Bidders with a Disability.** Bidders with a disability and/or language assistance, contact Civil Rights Division, NDDOT, 701-328-2978 or civilrights@nd.gov or TTY 711, as soon as possible so that reasonable accommodations can be made. Additionally, the Request for Reasonable Accommodations form (SFN 60135) can be accessed at the following NDDOT website location: http://www.dot.nd.gov/forms/sfn60135.pdf.

2. **Award.** Award will be made to a responsive, responsible bidder with the lowest price considering conformity with specifications, terms of delivery, quality, and serviceability. NDDOT reserves the right to consider bids varying in minor respects from any specific requirements herein, but judged to meet the intent of this request. Award will be made as follows:

Split award per item.

2. **Awards, Splitting of.** The state reserves the right to make awards by item, groups of items, or on the total low bid for all the items specified as indicated in the detailed specifications. Bidders interested only in the total low bid for all items are to state 'all or nothing' on their bid response.

3. **Bid Bond.** Waived in this instance: however, bidder(s) failing to enter into a contract with this office, upon notification of award, may be subject to removal from the bidder's list.

4. **Bid Held Firm.** Bids are not awarded at the bid opening. Bid responses will be firm for 30 days, unless stated otherwise.

5. **Bid Opening.** All sealed bids received by the NDDOT Procurement Office will be opened and read at 608 East Boulevard Avenue, Bismarck, North Dakota, at the time specified in the solicitation. Interested parties are invited to attend the bid opening.

6. **Bid Summary.** Bid summaries are available when the bid has been awarded. When bids are issued using the State's electronic bidding system, the bid summary will be posted and available for download from: http://www.nd.gov/spo/.

Bid summaries will be mailed to those bidders who supply a self-addressed, stamped envelope with their bid response. A copy of the bid summary may also be obtained by visiting the NDDOT Procurement Office during normal working hours.

7. **Bidder Checklist.** HAVE YOU REMEMBERED TO:
   - Review all instructions, terms and conditions, and specifications to ensure your bid response complies?
   - Prepare your price in the specified unit of measure, F.O.B. Destination, Freight Prepaid to the delivery location listed on the cover sheet?
   - Indicate whether you can meet the delivery date indicated on the cover sheet?
   - Sign your bid response on the cover sheet?
   - Initial all changes and corrections?
   - Submit any required samples or enclosures, if applicable?
   - Mark the envelope as indicated above?
   - Review and complete all requirements contained in this solicitation to ensure compliance.

8. **Clarifications, Bid Changes and Questions Deadline.** The Procurement Officer is the point of contact. Any irregularities, lack of clarity, requested bid changes and all questions regarding this bid and the procurement process must be addressed to the Procurement Officer referenced on the first page of this document not later than end of business July 28, 2017. (Contact information is indicated on cover page). If a bid amendment is required, it will generally be issued after this date.

The bidder is cautioned that the requirement of this solicitation can be altered only by written amendments and that verbal communications from whatever source are of no effect.

9. **Corrections.** The bidder's authorized representative must initial any corrections and alterations (i.e. erasures, whiteouts, correction tape, etc.) made to the bid response. Those bid responses with corrections and alterations that are not initialed are subject to confirmation by the Procurement Officer.

10. **Definitions.**
   - Bidder - any person or firm submitting a competitive bid in response to a solicitation.
   - Bid summary - a summary of all bid responses received by the NDDOT Procurement Office.
   - Bid response - the executed document submitted by a bidder in response to a solicitation.
   - Contract - a deliberate written agreement between two or more competent persons to perform specific act or acts.
   - Contractor - any person or firm having a contract with a governmental body.
   - Solicitation - the process of notifying prospective bidders that the State wishes to receive bids for furnishing goods or services.

11. **Electronic & Facsimile Bids.** Bid responses are not to be email attached or faxed to the NDDOT unless this transmittal method has been authorized by the Procurement Officer or bid document. (Contact the Procurement officer regarding additional requirements and exceptions.) Bid responses electronically submitted or faxed may be rejected as non-responsive. Bids may be faxed to a third party who will put it in a properly-addressed envelope and deliver it to the NDDOT Procurement Office before the date and time specified in the solicitation.

12. **Freight/F.O.B. Destination.** Freight and transportation charges are to be included in the price of the products, unless otherwise specified in the solicitation. (F.O.B. - Free On Board).

13. **Indemnification.** Bidders must review the attached Risk Management Appendix for indemnification and insurance requirements. The indemnification and insurance provisions are incorporated and made part of this solicitation and the resultant 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 or Entity in consultation with the North Dakota Risk Management Division. Upon receipt of the Notice of Award, the successful bidder 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 or Entity, in consultation with the North Dakota Risk Management Division. A bidder's failure to provide evidence of insurance coverage is a material breach and grounds for withdrawal of the award or termination of the contract.

14. **Late Bids.** It is the bidder's responsibility to ensure that a bid response is physically deposited with the NDDOT Procurement Office prior to the date and time specified for the opening. Late bid responses will not be opened and will be rejected and returned regardless of the degree of lateness or the reasons.

15. **Minor Informalities.** The State reserves the right to waive minor informalities in bid responses in accordance with N.D.A.C. 4-12-10. Minor informalities are insignificant omissions or nonjudgmental mistakes that are matters of form rather than substance, evident from the bid document, with a negligible effect on price, quantity, quality, delivery, or contractual conditions that can be waived or corrected without prejudice to other bidders.

16. **Multiple Bid(s).** Bidders may submit more than one bid response(s) for the item(s) specified in the solicitation. Each bid submitted must comply in all aspects with the bid requirements and these instructions.

17. **Negotiation.** NDDOT reserves the right to negotiate with the successful bidder to ensure the best possible consideration is afforded to all concerned.

18. **New Equipment and Materials**. Unless otherwise indicated in the detailed specifications of this solicitation, all equipment and materials shall be new and under current production for use in the United States.

19. **Open Records.** After the bid opening, bid documents 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 will determine whether the information is an exception to the North Dakota open records law, and the information will be processed appropriately. Those interested in reviewing the bid file are to make arrangements with the NDDOT Procurement Office. The NDDOT Procurement Office hours are 8:00 a.m. - 12:00 p.m. and 1:00 p.m. - 5:00 p.m. Monday through Friday.

20. **Packaging.** All shipments are to be packaged according to accepted commercial practices to avoid damage in shipment.

21. **Performance Bond.** Successful bidders will not be required to furnish a performance bond; however, failure to perform satisfactorily will result in the immediate termination of the contract(s) and bidders may be subject to removal from the bidder's list.

22. **Preparation of Bid.** Bids will be accepted on NDDOT forms only. The bidder's name shall be printed or typed on each sheet on which an entry is made. Bidders are cautioned to examine specifications and all instructions. Failure to do so will be at the bidder's risk. Any irregularities or lack of clarity in the invitation for bid must be brought to the attention of the Procurement Officer (Telephone: 701-328-4466, Fax: 701-328-0310, E-mail: vbrosten@nd.gov) as soon as possible. **Bidders shall indicate the manufacturer and provide complete specifications for materials being supplied at the time the bid is submitted. No bidder will be allowed to change any specification after the bid opening.**

23. **Pricing.** Unit prices are to be stated in United States currency and based on the unit of measurement specified in the solicitation, F.O.B. Destination, to the NDDOT delivery locations specified herein.

In the event of mathematical differences between the unit price and extended total, the unit price will prevail.

24. **Protest of Award.** An interested party may protest the award within seven days after receiving notice in accordance with N.D.C.C. 54-44.4-12 and N.D.A.C. 4-12-14. Notice of award will be issued only to those bidders who submitted responses to this IFB. Seven calendar days after award or issuance of the Notice of Intent to Award; it will be assumed that all interested parties knew or should have known all the facts surrounding the award.

25. **Rejection.** Bid responses may be rejected if:
    - The bid response is not legible.
    - The bid response is not completed as requested.
    - The bid response is faxed to the procurement office.
    - The bid response is not responsive to the specifications or other requirements of the solicitation.
    - The bid response is received after the time and date specified.
    - The bidder has not met Vendor Registration requirements or is suspended or debarred.
    - The bid document has been altered by the bidder.
    - The bidder is determined to be not responsible (N.D.A.C. 4-12-11-04).

26. **Signature.** The bid must be signed manually in ink. The name and title of the person signing the bid response must be typed or printed above the signature. The bid must be signed by **Owner, Partner, Corp. Pres., Vice Pres., or other authorized Corp. Officer** or the bid may be rejected. If signed by other authorized Corp. Officer or representative, please attach a letter signed by the Owner, Partner, Corp. Pres., or Vice Pres. indicating the individual has authority to enter into a contract on behalf of the company (or a Power of Attorney).

27. **Specifications, Brand Name or Equivalent**. Unless otherwise indicated in the detailed specifications of this solicitation, the use of a specific brand name or make/model is for illustrative purposes only, and the State will consider equivalent products. If a commodity or service put forth by a bidder is rejected as not being equivalent, the Procurement Officer will notify the bidder of the rejection.

28. **Specifications, Compliance.** All bids submitted in response to this Invitation for Bid must comply with the specifications contained herein, and the successful bidder will be held responsible. Noncompliance with specifications is grounds for rejection of the bid response. Bidders who desire to submit commodities or services that deviate from these specifications or have any objections to the specifications stated herein must be clearly pointed out PRIOR TO THE DEADLINE FOR RECEIPT OF QUESTIONS; otherwise, it will be considered that the items offered are in strict compliance with these specifications, and the bidder will be held responsible.

29. **Supplemental Terms and Conditions.** Bids including supplemental terms and conditions will be accepted, but supplemental conditions that conflict with any conditions contained in this ITB or that diminish the State's rights 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 a conflict arises between a supplemental term or condition included in the bid and a term or condition of the ITB, the term or condition of the ITB 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 bid, the supplemental term or condition will be considered null and void.

Changes, modifications, additions, or alterations to the bid document could be cause for rejection of the submitted bid at the sole discretion of the NDDOT. Contact the Procurement Officer in writing prior to the deadline for clarifications.

30. **Taxes.** The State does not pay sales tax or federal excise tax. The state sales tax exemption number is E-2001. The federal tax-free transaction number is 45-70-0010K. The Purchasing Agency will furnish a tax exempt certificate upon request.

31. **Vendor Registration.** Bids will be accepted from bidders who are not currently Approved Bidders for the State of North Dakota; however, the successful bidder may be required to become approved prior to award, in accordance with N.D.C.C. 54-44.4-09. To become an Approved Bidder, you must: 1) register with the North Dakota Secretary of State (fees apply), and 2) submit a completed Bidder List Application to the ND State Procurement Office. Registration instructions and forms are available on-line at: www.nd.gov/spo/vendor. Contact the ND State Procurement Office at 701-328-2683 or infospo@nd.gov for assistance.

Placement on the bidders list does not guarantee a bidder will receive notice of every formal solicitation. Bidders must maintain current information by submitting a Notice of Change form to the State Procurement Office (Fax 701-328-1615). Visit the website for forms: www.nd.gov/spo/vendor.

32. **Withdrawal or changes to a bid response prior to the bid opening date and time.** A bidder may withdraw or make a change to his bid response prior to the bid opening date and time. The request to make a change or withdraw must be in writing by a representative of the firm. The request to withdraw or change must be signed by the bidder or his designated representatives.

33. **Withdrawals after the bid opening date and time.** After the bid opening, no changes may be made to the bid response. The bidder may make a written request to withdraw the bid response, subject to approval by the NDDOT Procurement Office. Vendors continually withdrawing bids after the bid opening may be removed from the Vendor Database.

GENERAL CONTRACT TERMS AND CONDITIONS

1. **Affirmative Action.** The contractor will take affirmative action in complying with all Federal and State requirements concerning fair employment and employment of individuals with disabilities, and concerning the treatment of all employees without regard to discrimination by reason of race, color, religion, sex, national origin, or disability.

2. **Applicable Law and Venue.** Any dispute arising out of this agreement will be resolved under the laws of the State of North Dakota.

3. **Billing and Payment Procedures.** The initial order will be issued by the Procurement Office. Reorders may be placed by the individual NDDOT district locations during the contract period.

Invoices are to be submitted as indicated on the purchase orders unless otherwise instructed. Failure to submit correct invoices to the appropriate NDDOT office may delay contractor payment.

Payment will normally be made within thirty days after delivery and acceptance of commodities or services under this contract and receipt of a correct invoice. All invoice and payment inquiries must be directed to the purchasing agency.

4. **Binding Contract.** The acceptance of a bid response in writing by the purchasing agency constitutes a contract between the bidder and the State. Written acceptance from the purchasing agency will be in the form of a purchase order, notification of award, or contract. Any oral agreement or arrangement by a bidder with a State employee or purchasing agency will have no force or effect unless reduced to writing.

5. **Compliance with Laws.** The contractor must, in performance of work under this contract, fully comply with all applicable federal, state or local laws, rules, regulations and policies, including those relating to nondiscrimination, affirmative action, accessibility and civil rights including Title VI of the Civil Rights Act of 1964. The contractor agrees to file all required reports on time, to make required payroll deductions, and to pay all taxes and premiums owed on time, including sales and use taxes and unemployment compensation and workers' compensation premiums. The contractor shall have and keep current at all times during the term of this contract all licenses and permits required by law.

6. **Contract Amendments, Waivers.** After a binding contract has been entered into, no changes (i.e. additions, substitutions, subcontracting or a price adjustment) may be made, unless prior approval has been obtained from the purchasing agency and Procurement Officer.

The terms of this contract shall not be waived, altered, modified, supplemented, or amended, in any manner whatsoever, except by written instrument signed by 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.

7. **Contract Price Adjustment.** The Contract Unit Prices shall be firm for the twelve (12) months of the contract period. On an annual basis, all unit prices may be subject to price adjustment (increase / decrease). The request for a price adjustment shall be submitted to the Procurement Office at least forty five (45) days before the scheduled contract expiration date and must include justification for the proposed change. The Procurement Officer will respond as follows:

1) The request may be granted,
2) The contract may be cancelled and solicitation may be re-advertised, or
3) The contract may be continued without change.

If a price increase is approved by the NDDOT, the date the increase will be effective along with the new unit prices will be included in an amendment document. Approval of any price increase renews the twelve month firm price period.

The State shall also be advised of and receive the benefit of any price decrease. The same notification and review process will apply to a decrease in cost.

8. **Contract Term and Renewal Option.** The NDDOT will enter into a contract with an effective date **beginning August 15, 2017, and ending July 31, 2018**, inclusive. This contract may be renewed upon satisfactory completion of the initial contract term. The NDDOT reserves the right to execute up to two options to renew this contract for a period of twelve (12) months each, not to exceed thirty-six (36) months total. Renewals will be documented by amendment.

The NDDOT reserves the right to renegotiate price and terms provided that such negotiated price and terms fall within the original scope of work for this bid. Negotiations may be conducted annually or at such times that additional and unexpected services falling within the scope of the contract may occur. Such changes will be documented by amendment to the contract.

9. **Contract Termination.**

a. **Termination without Cause.** This contract may be terminated by mutual consent of both parties, or by either party upon 30 days' written notice.

b. **Termination for Lack of Funding or Authority.** The State may terminate this contract effective upon delivery of written notice to the contractor, or on any later date stated in the notice, under any of the following conditions:
   i. If funding from federal, state, or other sources is not obtained and continued at levels sufficient to allow for purchase of the services or supplies in the indicated quantities or term. 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. **Termination for Cause.** The State by written notice to the contractor may terminate the whole or any part of this contract:
   i. If the contractor fails to provide services required 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 the State, fails to correct such failures within ten days or such longer period as NDDOT may authorize.
   iii. The rights and remedies of the State provided in the above clause related to defaults by the contractor are not exclusive and are in addition to any other rights and remedies provided by law or under this contract.

d. **Termination, Deliveries.** If the contract is terminated for any reason, the contractor is responsible for delivery of all commodities and services ordered prior to the termination, unless those orders had been canceled by the Purchasing Agency or Entity.

10. **Inspection and Investigations.** The State reserves the right to conduct inspections and investigations related to the bidder and offered commodities or services, including but not limited to the firm, its facility, personnel, qualifications, and the commodities and/or services offered to make determinations regarding compliance with the bid requirements and responsibility of the bidder.

11. **Materials and Workmanship.** All material and workmanship shall be subject to inspection and testing at the discretion of the purchasing agency either at the point of manufacturer, place of storage, or upon receipt.

12. **Receiving.** Deliveries must arrive at the designated destination(s) during normal business hours unless other shipping/receiving instructions are issued by NDDOT personnel. The contractor shall contact the NDDOT to schedule delivery dates and times at least 24 hours in advance of delivery.

All NDDOT offices will be closed in recognition of State holidays. Any day declared a holiday by the President or Governor will also be recognized by office closure.

13. **Specifications. Bidder's shall submit detailed manufacturer's specifications along with this response,** and upon acceptance of the bid, shall become part of the bidder's specifications. Specifications must include: brand, composition, blade analysis, hardness rating, design, dimensions, weight, etc. Promotional literature is generally not adequate. Any discrepancies between products to be furnished on the bid and manufacturer's printed specification must be documented.

14. **Subcontracts, Assignment.** The contractor shall not subcontract, assign or transfer the contractor's interests or duties under this contract without express written consent of the purchasing agency. However, the contractor may enter into subcontracts provided that any such subcontractor acknowledges the binding nature of this contract and incorporates this contract, including any attachments. The contractor is solely responsible for the performance of any subcontractor. The contractor shall not have the authority to contract for or incur obligations on behalf of the State.

15. **Successors in Interest.** The provisions of this agreement shall be binding upon and shall inure to the benefit of the parties hereto, and their respective successors and assigns.

16. **Testing and acceptance.** Blades may be tested upon delivery to ensure compliance with specifications prior to payment. The testing procedure requires approximately sixty (60) days. Materials failing to meet specifications will be returned at the bidder's expense.

17. **Service Representative.** The contractor must provide a dedicated customer service representative to provide support for this contract. The contractor shall notify the Procurement Officer in the event the representative is changed.

NAME: Pam Klabo
(Name of person servicing this contract)

BUSINESS NAME: Normont Equipment Co.

MAILING ADDRESS: 1157 Wire Mill Road

CITY & STATE: Black Eagle Mt ZIP CODE: 59414

PHONE NUMBER: 406-453-4344 TOLL FREE: 1-800-624-6793

FAX NUMBER: 406-761-7880 E-MAIL: pklabo@nmegco.com

SECTIONAL TUNGSTEN CARBIDE INSERTED
SNOWPLOW ENCASED-IN RUBBER CUTTING EDGES, 6" HEIGHT, 5/8" HOLE-PUNCHING

Similar or equal to JOMA brand blades AND PolarFlex brand blades

Individual steel segments encased in rubber with steel bushings positioned on 12" centers to mount to a snow plow. Each segment is inserted with tungsten carbide bits, brazed in place along the wear edge. The finished blade is approximately 7/8" thick by 6" wide by 4' long. Steel bushings are located 1.5" from the top of the blade on 12" centers. Each blade will have orientation embossed in the rubber casing. A 1/2" X 3" clamp bar is mounted on top to hold the blade to the plow. The clamp bar should weigh approximately 5 lbs per foot and have 11/16" square holes located on 12" centers to align with the bushings in the blade. If supplying a product equivalent to JOMA or POLARFLEX, literature must be provided.

Option 1: Carbide impregnation is not required on the curb-runner guard.

Quantity	Unit	Detailed Specifications	Unit Price Each	Extended Price
JOMA 6000 ARTICULATING SYSTEM, LESS CURB-RUNNER GUARD NDDOT P/N 76006-367000				
Reorder Unknown at time of bid	EA	10' System FOB ANY NDDOT District	$	$
Reorder Unknown at time of bid	EA	11' System FOB ANY NDDOT District	$	$
Reorder Unknown at time of bid	EA	12' System FOB ANY NDDOT District	$	$
JOMA 6000 X 4' (39#) RUBBER EDGE – OR EQUAL NDDOT P/N 76006-367005				
150	EA	FOB NDDOT Fargo District 58103	$	$
30	EA	FOB NDDOT Grand Forks District 58208	$	$
88	EA	FOB NDDOT Bismarck District 58504	$	$
179	EA	FOB NDDOT Minot District 58701	$	$
72	EA	FOB NDDOT Valley City District 58072	$	$
10	EA	FOB NDDOT Dickinson District 58601	$	$
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$	$
JOMA 6000 X 3' RUBBER EDGE – OR EQUAL NDDOT P/N 76006-367006				
50	EA	FOB NDDOT Fargo District 58103	$	$
50	EA	FOB NDDOT Bismarck District 58504	$	$
55	EA	FOB NDDOT Minot District 58701	$	$
36	EA	FOB NDDOT Valley City District 58072	$	$
5	EA	FOB NDDOT Dickinson District 58601	$	$
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$	$

BIDDER _____

Quantity	Unit	Detailed Specifications	Unit Price Each	Extended Price
JOMA BS23901 4' BACK SUPPORT – OR EQUAL NDDOT P/N 76006-367010				
20	EA	FOB NDDOT Fargo District 58103	$	$
6	EA	FOB NDDOT Grand Forks District 58208	$	$
4	EA	FOB NDDOT Minot District 58701	$	$
10	EA	FOB NDDOT Dickinson District 58601	$	$
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$	$
JOMA BS23902 3' BACK SUPPORT – OR EQUAL NDDOT P/N 76006-367011				
20	EA	FOB NDDOT Fargo District 58103	$	$
7	EA	FOB NDDOT Minot District 58701	$	$
5	EA	FOB NDDOT Dickinson District 58601	$	$
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$	$
JOMA STRAP 4SEH (20#) – OR EQUAL NDDOT P/N 76006-367015				
20	EA	FOB NDDOT Fargo District 58103	$	$
6	EA	FOB NDDOT Grand Forks District 58208	$	$
3	EA	FOB NDDOT Minot District 58701	$	$
10	EA	FOB NDDOT Dickinson District 58601	$	$
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$	$
JOMA STRAP 3SEH (15#) – OR EQUAL NDDOT P/N 76006-367016				
20	EA	FOB NDDOT Fargo District 58103	$	$
7	EA	FOB NDDOT Minot District 58701	$	$
5	EA	FOB NDDOT Dickinson District 58601	$	$
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$	$

BIDDER _____

Quantity	Unit	Detailed Specifications	Unit Price Each	Extended Price
OPTION 1 - JOMA CURB-RUNNER GUARD 663158PLH (LEFT) NDDOT P/N 76006-367020				
16	EA	FOB NDDOT Minot District 58701	$	$
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$	$
Quantity	**Unit**	**Detailed Specifications**	**Unit Price Each**	**Extended Price**
OPTION 2 - JOMA CURB-RUNNER GUARD 663158PRH (RIGHT) NDDOT P/N 76006-367020				
16	EA	FOB NDDOT Minot District 58701	$	$
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$	$

BRAND NAME:_____

MANUFACTURER:_____

INITIAL ORDER DELIVERY DAYS ARO_____

DELIVERY FOR REORDERS _____ DAYS

BIDDER _____

Quantity	Unit	Detailed Specifications	Unit Price Each	Extended Price
X-48-W ASSEMBLY, 4' POLARFLEX FRONT MOUNT SYSTEM C/W 5/8" X 6" ADAPTER BLADES, 12' PLOW (3PER) – OR EQUAL NDDOT P/N 76006-367700				
12	EA	FOB NDDOT Williston District 58802	$	$
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$	$
5/8" X 6" POLARFLEX XWS-12 ADAPTER BLADES – OR EQUAL NDDOT P/N 76006-367500				
36	EA	FOB NDDOT Williston District 58802	$	$
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$	$
X-48-W-F, COMPLETE 4' SECTION, POLARFLEX – OR EQUAL				
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$	$
BUX-48-W, 4' ADAPTER BLADE, POLARFLEX – OR EQUAL				
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$	$
AUX-48, FRONT ANGLE – OR EQUAL				
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$	$
POLARFLEX CURB GUARD 10620029 – OR EQUAL				
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$	$

BRAND NAME:_____

MANUFACTURER:_____

INITIAL ORDER DELIVERY DAYS ARO_____

DELIVERY FOR REORDERS _____ DAYS

BIDDER _____

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
SPECIFICATIONS FOR
THROUGH-HARDENED STEEL MOTOR GRADER CUTTING EDGES

GENERAL SPECIFICATIONS:

1. Cutting edges must be cut in the lengths as specified herein.
2. Cutting edge ends shall be cleanly cut.
3. Cutting edges shall be uniformly through-hardened to Brinell hardness minimum of 400, (ASTM A370 & E18, AASHTO T70). Rating must be furnished with the bid.
4. Lengths, as noted on the proposal, shall not vary more than ± 1/8" specified in order to fit total moldboard length in various combinations.
5. Bidder must specify delivery dates.

GRADER CUTTING EDGES:

1. Size to be: Minimum wearing edge : "thick x 8" height x the designated length
2. Curved.
3. Painted.
4. Standard AASHTO punching.
5. If available, manufacturer's name, trademark, or identifying part number to be stamped in the non-wear area for warranty claim abilities.
6. Warranty replacement for breakage 2 for 1.

REFERENCE ATTACHMENT A DRAWING

BIDDER PIR

THRU-HARDENED STEEL MOTOR GRADER EDGES
5/8" BOLT & HOLE PUNCH (unless noted otherwise)

Quantity	Unit	Detailed Specifications	Unit Price Each	Extended Price
5/8" x 8" Grader Through Hardened – 5FT NDDOT P/N 76006-361646				
20	EA	FOB NDDOT Fargo District 58103	$ 58.25 (11.65 ft)	$ $1165.00
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$ 58.25 (11.65 ft)	$ —
5/8" x 8" Grader Through Hardened – 6FT NDDOT P/N 76006-361653				
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$ 69.91 (11.65 ft)	$ —
5/8" x 8" Grader Through Hardened – 7FT NDDOT P/N 76006-361778				
60	EA	FOB NDDOT Fargo District 58103	$ 81.65 (11.65 ft)	$ 4899.00
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$ 81.65 (11.65 ft)	$ —
5/8" x 8" Grader Through Hardened – 8FT NDDOT P/N 76006-361786				
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$ 93.22 (11.65 ft)	$ —
1/2" x 8" Grader Through Hardened - 6FT-6FT 11" NDDOT P/N 76006-361661				
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$ 59.43 (9.90 ft)	$ —
1/2" x 8" Grader Through Hardened - 7FT-7FT 11" NDDOT P/N 76006-361752				
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$ 69.33 (9.90 ft)	$ —
1/2" x 8" Grader Through Hardened - 8FT-8FT 11" NDDOT P/N 76006-361794				
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$ 79.25 (9.90 ft)	$ —

BRAND NAME: Black Cat

MANUFACTURER: Black Cat

INITIAL ORDER DELIVERY DAYS ARO 60-90

DELIVERY FOR REORDERS _____ DAYS

BIDDER pk

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS FOR

PREMIUM SECTIONAL TUNGSTEN CARBIDE-TIPPED CUTTING EDGES

SNOWPLOW AND UNDERBODY SCRAPER

Similar or equal to Kueper Premium Carbide Insert Snowplow Blade

BLADE

1. The blades shall be SAE1045 steel.
2. The blades shall be fabricated in various sections to provide the lengths indicated on the bid sheet, and shall be manufactured in accordance with the dimensions detailed in ATTACHMENT B.
3. Hole-punching shall be $^{11}/_{16}$" square, countersunk to receive $^{5}/_{8}$" diameter plow bolts. The hole spacing shall be as per AASHTO standards.
4. The finished blade sections shall be given one coat of rust resistant lacquer.
5. The finished blade sections shall be free of warpage, with the longitudinal deviation not to exceed $^{1}/_{8}$" in a four foot section.
6. The complete cutting edge shall consist of a combination of sections, with the two end sections interchangeable.

TUNGSTEN CARBIDE INSERTS

1. The inserts shall be high grade tungsten carbide with 10-12 percent cobalt content. The tungsten carbide shall be new. No reclaimed tungsten carbide will be allowed.
2. The density shall be in the range of 14.1 to 14.6.
3. The hardness shall be in the range of 88 minimum to 93 maximum Rockwell A scale.
4. The transverse rupture strength of the carbide shall be 350,000 psi minimum.
5. The sections shall essentially have 1" of tungsten per each 1" of section. A carbide analysis certification shall be submitted with each bid.

BRAZING

1. Brazing is required on all contact surfaces.
2. The braze material shall have a shear strength of 30,000 psi.

SPECIFIC REQUIREMENTS

1. If supplying a product equivalent to Kueper Premium Carbide Insert Snowplow Blades, **literature must be provided.**
2. The supplier shall provide written certification that states the cutting edges shipped meet all the requirement contained in the specification.
3. Materials and assembly shall be guaranteed with replacement against breakage and brazing failure, as well as satisfactory performance under normal cold weather snow and ice removal operations.

BIDDER PK

Quantity	Unit	Detailed Specifications	Unit Price Each	Extended Price
Premium Sectional Tungsten Carbide Tipped Cutting Edges Snowplow and Underbody Scraper – 3FT NDDOT P/N 76006-366505				
200	EA	FOB NDDOT Valley City District 58072	$ 131.52 (43.84 ft)	$ 26,304.00
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$ 131.52 (43.84 ft)	$ ———
Premium Sectional Tungsten Carbide Tipped Cutting Edges Snowplow and Underbody Scraper – 4FT NDDOT P/N 76006-366510				
400	EA	FOB NDDOT Valley City District 58072	$ 175.36 (43.84 ft)	$ 70,144.00
Reorder Unknown at time of bid	EA	FOB ANY NDDOT District	$ 175.36 (43.84 ft)	$ ———

BRAND NAME: Black Cat

MANUFACTURER: Black Cat

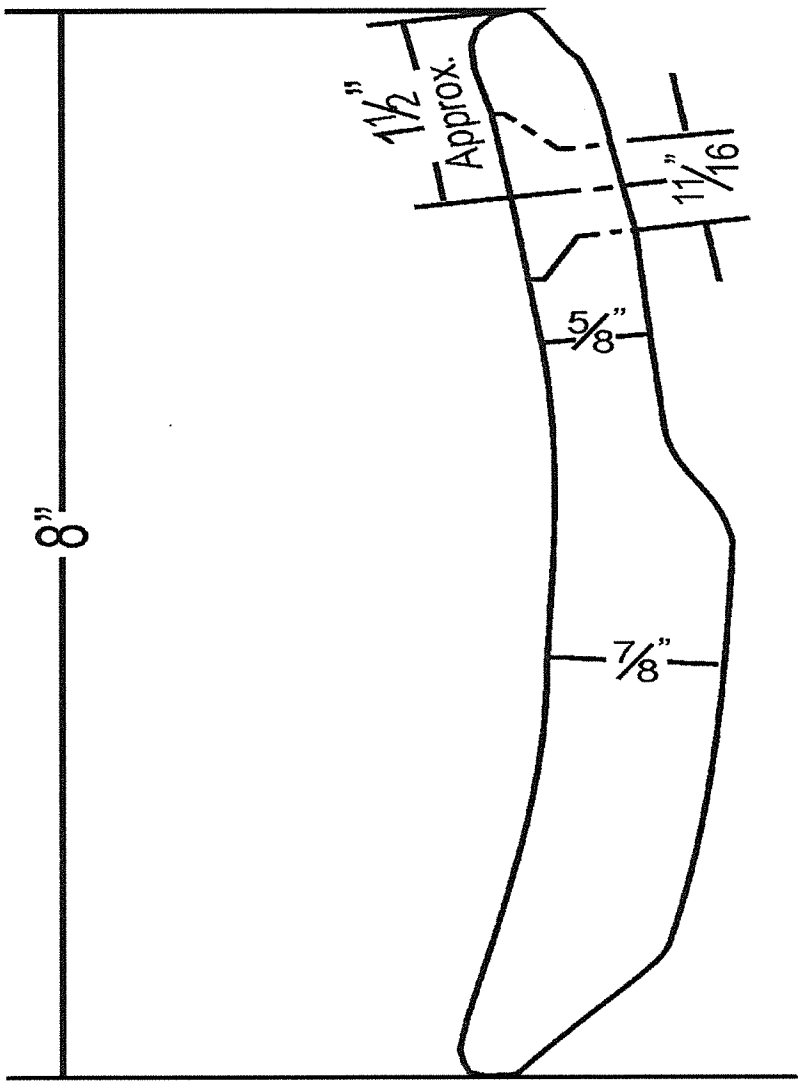
INITIAL ORDER DELIVERY DAYS ARO 60-90

DELIVERY FOR REORDERS _____ DAYS

BIDDER _____

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

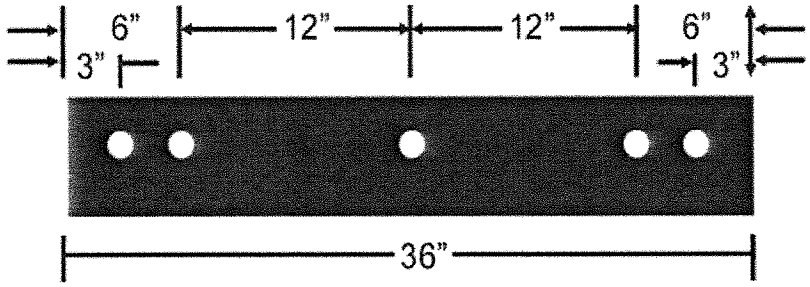
Surface Harden Cutting Edges

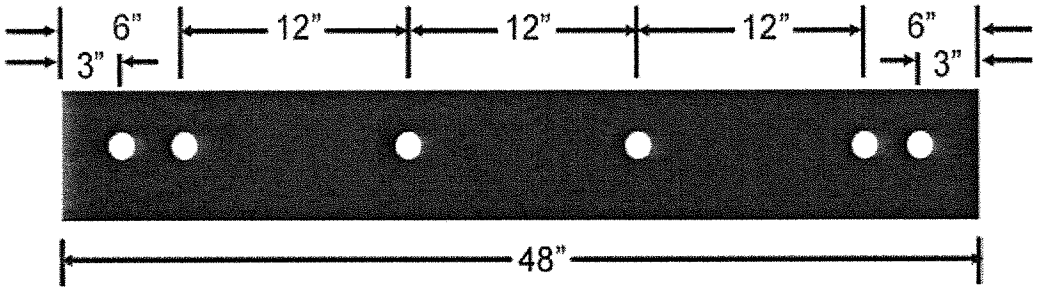


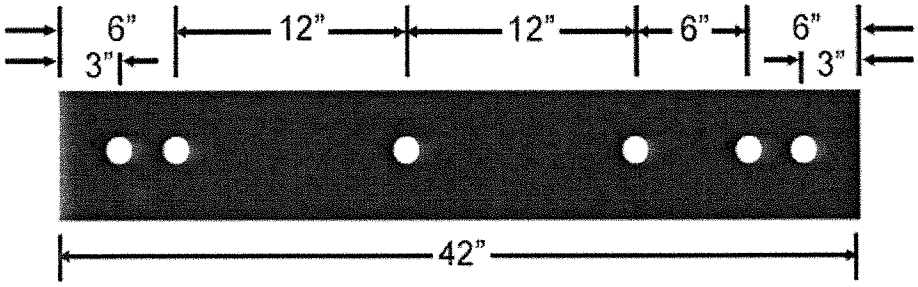
MOTOR GRADER

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

PUNCHING SPACE
SNOWPLOW CUTTING EDGES







N.D. DEPT. OF TRANSPORTATION - PURCHASING CONTACTS AND SHIP TO ADDRESSES

61 – BISMARCK DISTRICT:
NDDOT - BISMARCK DISTRICT (701) 328-6941
218 S AIRPORT ROAD (701) 328-6933 FAX
BISMARCK ND 58504-6003
MARC REED, STOREKEEPER

62 - VALLEY CITY DISTRICT:
NDDOT - VALLEY CITY DISTRICT (701) 845-8803
1524 8TH AVENUE SW (701) 845-8804 FAX
VALLEY CITY ND 58072-4200
RENEE HAZELTON, STOREKEEPER

63 - DEVILS LAKE DISTRICT:
NDDOT - DEVILS LAKE DISTRICT (701) 665-5119
316 6TH ST SE (701) 328-0329 FAX
DEVILS LAKE ND 58301
LISA VETSCH, STOREKEEPER

64 –MINOT DISTRICT:
NDDOT - MINOT DISTRICT (701) 857-6928
1305 HIGHWAY 2 BYPASS EAST (701) 857-6932 FAX
MINOT ND 58701-7922
LINDA KILLMER, STOREKEEPER

65 –DICKINSON DISTRICT:
NDDOT - DICKINSON DISTRICT (701) 227-6525
1700 3RD AVENUE W SUITE 101 (701) 227-6505 FAX
DICKINSON ND 58601-3009
SHARON PRIVRATSKY, STOREKEEPER

66 -GRAND FORKS DISTRICT:
NDDOT - GRAND FORKS DISTRICT (701) 787-6521
1951 NORTH WASHINGTON (701) 787-6515 FAX
PO BOX 13077
GRAND FORKS ND 58208-3077
GEORGE PALO, STOREKEEPER

67 –WILLISTON DISTRICT:
NDDOT - WILLISTON DISTRICT (701) 774-2721
605 DAKOTA PARKWAY WEST (701) 774-2704 FAX
PO BOX 698
WILLISTON ND 58802-0698
SUSAN PERCOSKI, STOREKEEPER

68 –FARGO DISTRICT:
NDDOT - FARGO DISTRICT (701) 239-8910
503- 38TH STREET SOUTH (701) 239-8915 FAX
FARGO ND 58103-1198
JONATHON LEE, STOREKEEPER

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
APPENDIX A OF THE TITLE VI ASSURANCES

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 (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, the Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. Non-discrimination: The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

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 will be notified by the Contractor of the Contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. Information and Reports: The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the Recipient or the Federal Highway Administration as appropriate, and will set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance: In the event of a contractor's noncompliance with the Nondiscrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

   a. withholding payments to the Contractor under the contract until the Contractor complies; and/or
   b. cancelling, terminating, or suspending a contract, in whole or in part.

6. Incorporation of Provisions: The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
APPENDIX E OF THE TITLE VI ASSURANCES

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the Contractor) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.),* (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.),* as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.),* (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.P.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

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

Amendment No. 1

To: ALL INTERESTED SUPPLIERS

From: North Dakota Department of Transportation

Date: July 31, 2017

Re: Amendment to Bid 760-06-17-050, Cutting Edges

Bidders Instruction #8 of the solicitation established a deadline for receipt of questions. The responses to these questions are provided as addenda to the solicitation. When necessary, the solicitation has been amended.

Question 1:
After reviewing the section for "Premium Sectional Tungsten Carbide Tipped Cutting Edges Snowplow and Underbody Scraper", I see the chemical specifications for the carbide inserts, but I don't see the required dimensions of the carbide insert. Do you have those available?

Answer 1:
Rectangular shaped
Height: 0.69"
Width: 0.30"
Length: 1" nominal
The bid is hereby amended.

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.

Vanessa Brosten, Procurement Officer
PHONE: 701-328-4466
FAX: 701-328-0310
E-MAIL: vbrosten@nd.gov

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

PRINTED NAME OF BIDDER OR OFFEROR and TITLE	
Pamela Klobo - Sales manager (Normont Equipment)	
SIGNATURE	DATE
P Klobo	8/15/17

BLACK CAT
WEAR PARTS

TUNGSTEN CARBIDE

Inserted Blade Specifications

Blade Material:
Square Edge Flat or Curved Hot Rolled Steel - SAE1026, 1045, 15B30, BCE400Mn
Material specifications vary based on application and material availability.
Note: The steel is not a material factor in the wear life of this product.

Tungsten Carbide Insert Properties:
Grade YG11C-N (100% Pure Virgin Tungsten Carbide)

Tungsten Carbide	84 - 89% by Physical Weight
Cobalt Binder	11% by Physical Weight
Intermetallic Compound	0 - 5% by Physical Weight
Density Range	12.95 - 14.60 Grams/Cubic Centimeter
Hardness Range	87.5 - 88.8 HRA
Transverse Rupture Strength	351,000 - 428,000 psi.
Porosity Range in ASTM Standards	A= 04 B=00 C=00
Average Carbide Particle Size	2.4 µm (microns)

Braze Composition & Properties:

Standard Nickel/Silver Braze
Copper 48 - 50 %
Nickel 9 - 11%
Zinc 38 - 42 %
Silicon 0.025 - 0.04 %
Phosphorous 0.25%
Lead 0.05%
Brazing Temperature 1650 °F
Tensile Strength - 70,000 psi.

This product is warranted against defects in material and workmanship.

BLACK CAT
WEAR PARTS

GRADER AND PLOW BLADE

HARDNESS VALUE & COMPOSITION

Heat Treated Steels

All Black Cat Heat Treated grader and snow blades are manufactured from high alloy Boron steel and through hardened to a hardness specification of 410 to 512 Brinell (44-52 HRC).
The chemical composition is as follows (in weight %):

Element	1/2" to 3/4"	1" & over
Carbon (C)	0.28 - 0.32	0.28 to 0.36
Manganese (Mn)	0.80 - 1.10	1.10 to 1.45
Sulphur (S)	0.05 maximum	0.05 maximum
Phosphorous (P)	0.04 maximum	0.04 maximum
Silicon (Si)	0.15 - 0.35	0.15 - 0.35
Boron (B)	0.0005 - 0.0080	0.0005 - 0.0080

High Carbon Steels

All Black Cat High Carbon grader and snow plow blades are manufactured with nominal as rolled hardness values of 271 to 301 Brinell (28-32 HRC).

The chemical composition is as follows (in weight %):

Element	1/2" to 3/4"
Carbon (C)	0.80 - 0.84
Manganese (Mn)	0.60 - 0.75
Sulphur (S)	0.05 maximum
Phosphorous (P)	0.04 maximum
Silicon (Si)	0.15 - 0.30

At Black Cat Wear Parts the hardness is measured in the Brinell Scale, the Rockwell value is a conversion using SAE conversion tables.

BLACK CAT
WEAR PARTS

LIMITED WARRANTY

Black Cat Wear Parts warrants its products against defects in materials and workmanship.

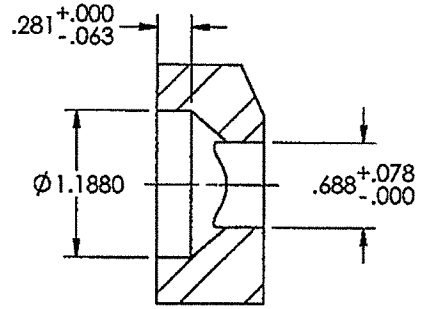
BCB500 Warranty

Black Cat Wear Parts through hardened parts are warranted against breakage during the usable life of the product. If any covered parts break during normal service, a new part will be supplied free of charge FOB the nearest Black Cat Wear Parts Factory.

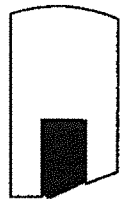
The obligation of Black Cat Wear Parts under this warranty does not include:

1. Resulting damage and or the labor/additional parts necessary for replacement.
2. Hardware or labor for the removal or installation of such parts.
3. Parts that have been hard surfaced or welded if the part was not designed for that purpose.
4. Weld-in bucket edges which have not been installed with the recommended preheat and welding procedure.
5. Immediate, special, indirect or consequential damage resulting from breakage.
6. Any downtime or loss of revenue attributed to breakage of our product.
7. This warranty is limited to "Through Hardened" parts and does not include any products manufactured from high carbon "as rolled" steel.
8. This warranty does not cover product that is requested less than OEM thickness.

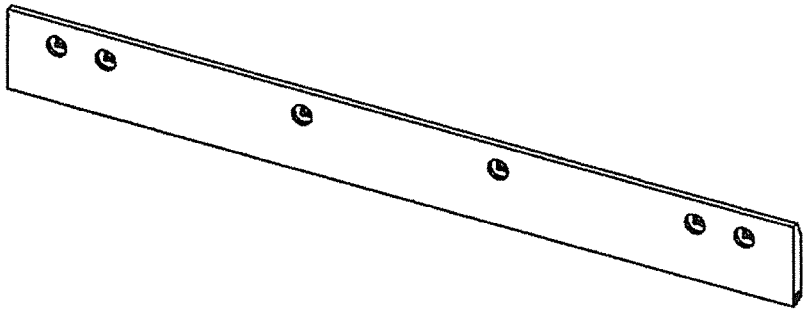
REV	DESCRIPTION	DATE	DWN	APP
A	REDREW IN SW	JUN. 17/16	CB	LC

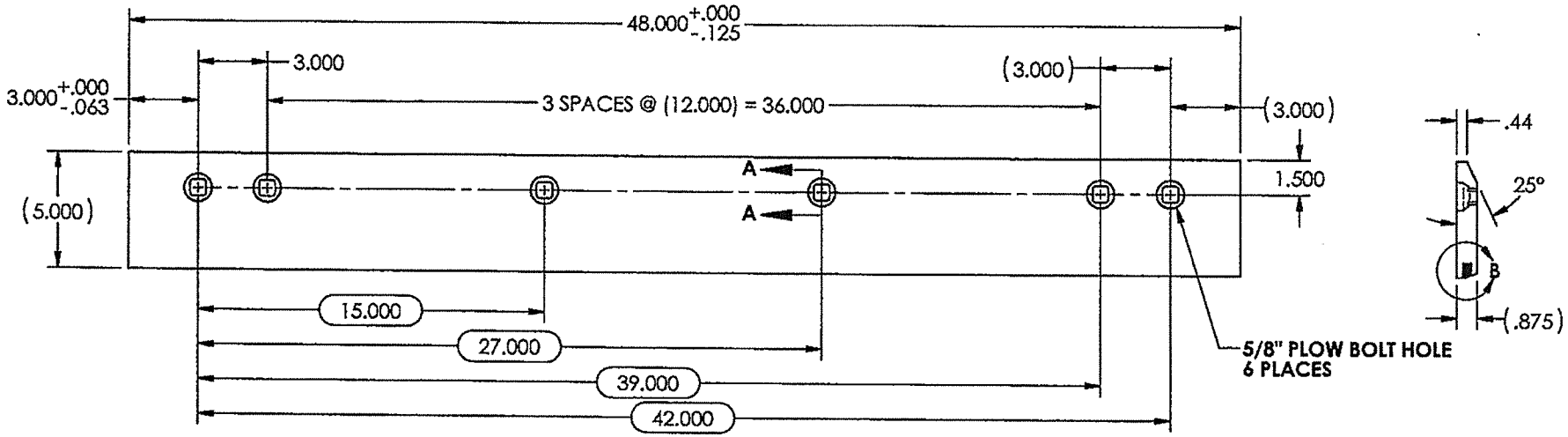


SECTION A-A
5/8" PLOW BOLT HOLE AS PER SAE J740
OR SEE NOTE



DETAIL B
25° TRAP INSERT





NOTE(S):
1. BCB SELKIRK: FOLLOW PLOW BOLT HOLE PROCEDURE

MAT: SEFC 7/8" [22MM] 1045					
FABRICATION TOLERANCES (UNLESS NOTED): X.XX = ±0.13 in. X.XXX = ±0.063 in. X.XXXX = ±0.0313 in. X° = ±2° X.X° = ±1.0° PLEASE ASK IF IN DOUBT	WT: 57.0 lb.				
	UNITS: IN		SCALE: NTS	THIRD ANGLE PROJECTION	
	DATE: SEP. 25/96				
	DWN: -	CHK'D: -	OEM REV: -	PART REV: A	PART #: CICT754844

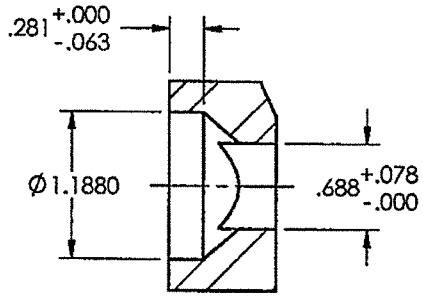
COPYRIGHT AND DESIGN RIGHTS ARISING FROM THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF BLACK CAT BLADES LTD. REPRODUCTION OF ALL OR PART OF THIS DRAWING, EITHER DIRECTLY OR INDIRECTLY, OR ITS DISCLOSURE TO ANY THIRD PARTY IS PROHIBITED.

BLACK CAT

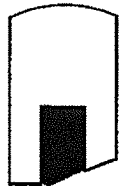
CARBIDE INSERT BLADE

DWG #: 05885

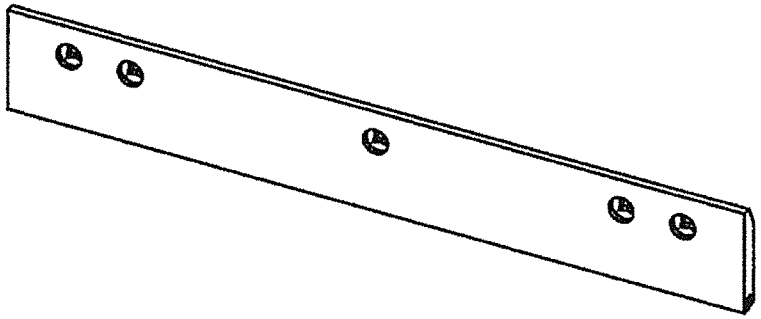
REV	DESCRIPTION	DATE	DWN	APP
A	REDREW IN SW	SEP. 30/16	LC	RF

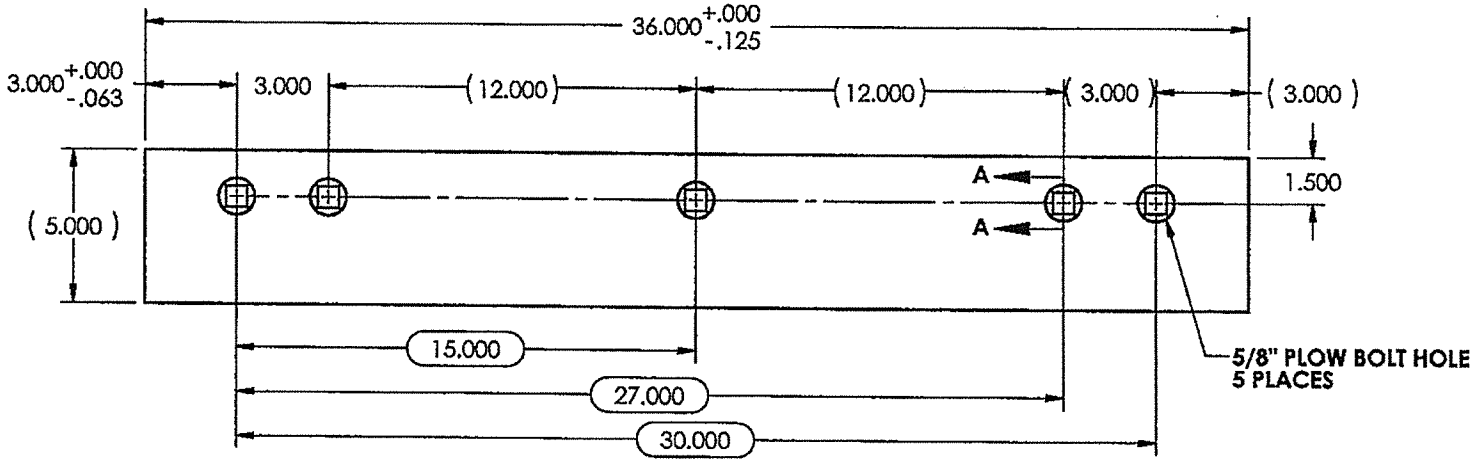


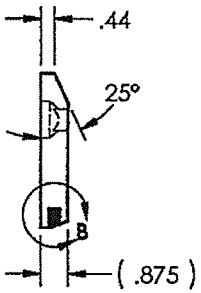
SECTION A-A
5/8" PLOW BOLT HOLE PER SAE J740
OR SEE NOTE



DETAIL B
25° TRAP INSERT





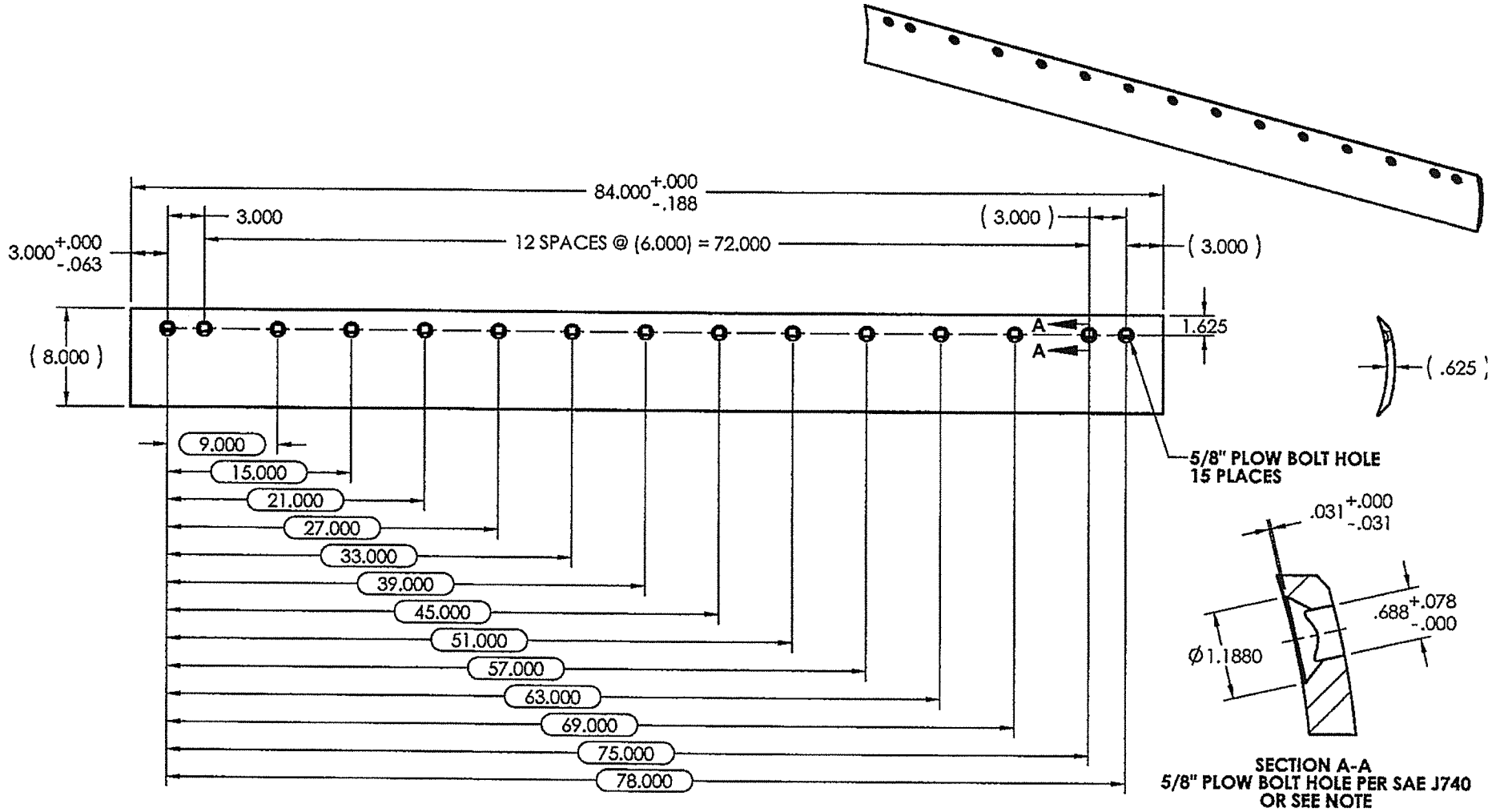


NOTE(S):
1. BCB SELKIRK: FOLLOW PLOW BOLT HOLE PROCEDURE

MAT: SEFC 7/8" [22MM] 1045					
FABRICATION TOLERANCES (UNLESS NOTED): X.XX = ±0.13 in. X.XXX = ±0.063 in. X.XXXX = ±0.0313 in. X° = ±2° X.X° = ±1.0° PLEASE ASK IF IN DOUBT	WT: 42.6 lb. UNITS: IN DATE: SEPT. 25/96	SCALE: NTS	THIRD ANGLE PROJECTION	CARBIDE INSERT BLADE	
	DWN: LC	CHK'D: RF	OEM REV: -	PART REV: A	PART #: CICT753644 / DWG #: 05884

COPYRIGHT AND DESIGN RIGHTS ARISING FROM THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF BLACK CAT BLADES LTD. REPRODUCTION OF ALL OR PART OF THIS DRAWING, EITHER DIRECTLY OR INDIRECTLY, OR ITS DISCLOSURE TO ANY THIRD PARTY IS PROHIBITED.

BLACK CAT



NOTE(S):
1. ALL DIMENSIONS ARE IN INCHES

BLACK CAT BLADES ONLY:
1. BCB SELKIRK: FOLLOW PLOW BOLT HOLE PROCEDURE

REV.	DESCRIPTION	DATE	DWN	A
B	REV TO NEW TEMPLATE	AUG. 15/08	SI	C
A	REDRAWN IN SW	JUL. 12/06	JT	N

FABRICATION

TOLERANCES (UNLESS NOTED):
X.XX = ±0.13 in.
X.XXX = ±0.063 in.
X.XXXX = ±0.0313 in.
X° = ±2°
X.X° = ±0.5°
PLEASE ASK IF IN DOUBT

MAKE: CAT
MODEL:
MAT: DBCB 5/8 X 8

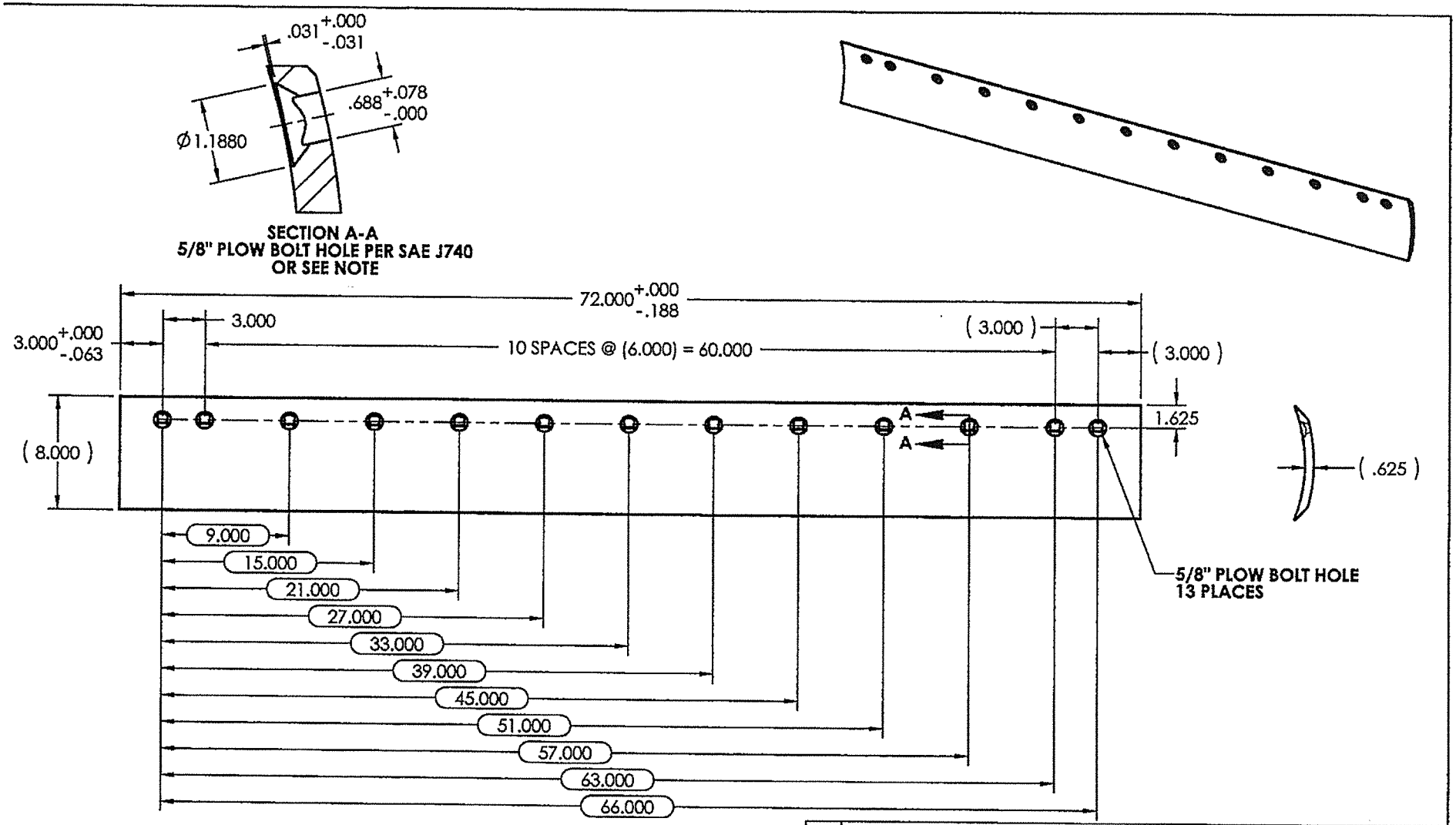
BLACK CAT BLADES 1-780-465-6666

HEAT TREATED GRADER BLADE

THIS DRAWING CONTAINS BLACK CAT BLADES LTD. PROPRIETARY AND TRADE SECRET INFORMATION. COPYRIGHT AND DESIGN RIGHTS ARISING FROM THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF BLACK CAT BLADES LTD. REPRODUCTION OF ALL OR PART OF THIS DRAWING, EITHER DIRECTLY OR INDIRECTLY, OR ITS DISCLOSURE TO ANY THIRD PARTY WITHOUT THE PRIOR WRITTEN CONSENT OF BLACK CAT BLADES LTD. IS PROHIBITED.

DATE: SEP. 23/97
THIRD ANGLE PROJECTION
DWN: JT
CHK'D: NM
SCALE: NTS

PART #: CAT 5D9561
DWG #: 09017
OEM REV
REV: B
WT: 106.7 lb.



NOTE(S):
1. ALL DIMENSIONS ARE IN INCHES

BLACK CAT BLADES ONLY:
1.BCB SELKIRK: FOLLOW PLOW BOLT HOLE PROCEDURE

REV.	DESCRIPTION	DATE	DWN	APP
B	NEW TTL BLK	AUG. 25/08	SI	CE
A	REDRAWN IN SW	JUL. 12/06	JT	NM

FABRICATION

TOLERANCES (UNLESS NOTED):
X.XX = ±0.13 in.
X.XXX = ±0.063 in.
X.XXXX = ±0.0313 in.
X° = ±2°
X.X° = ±0.5°
PLEASE ASK IF IN DOUBT

MAKE: CAT
MODEL:
MAT: DBCB 5/8 X 8

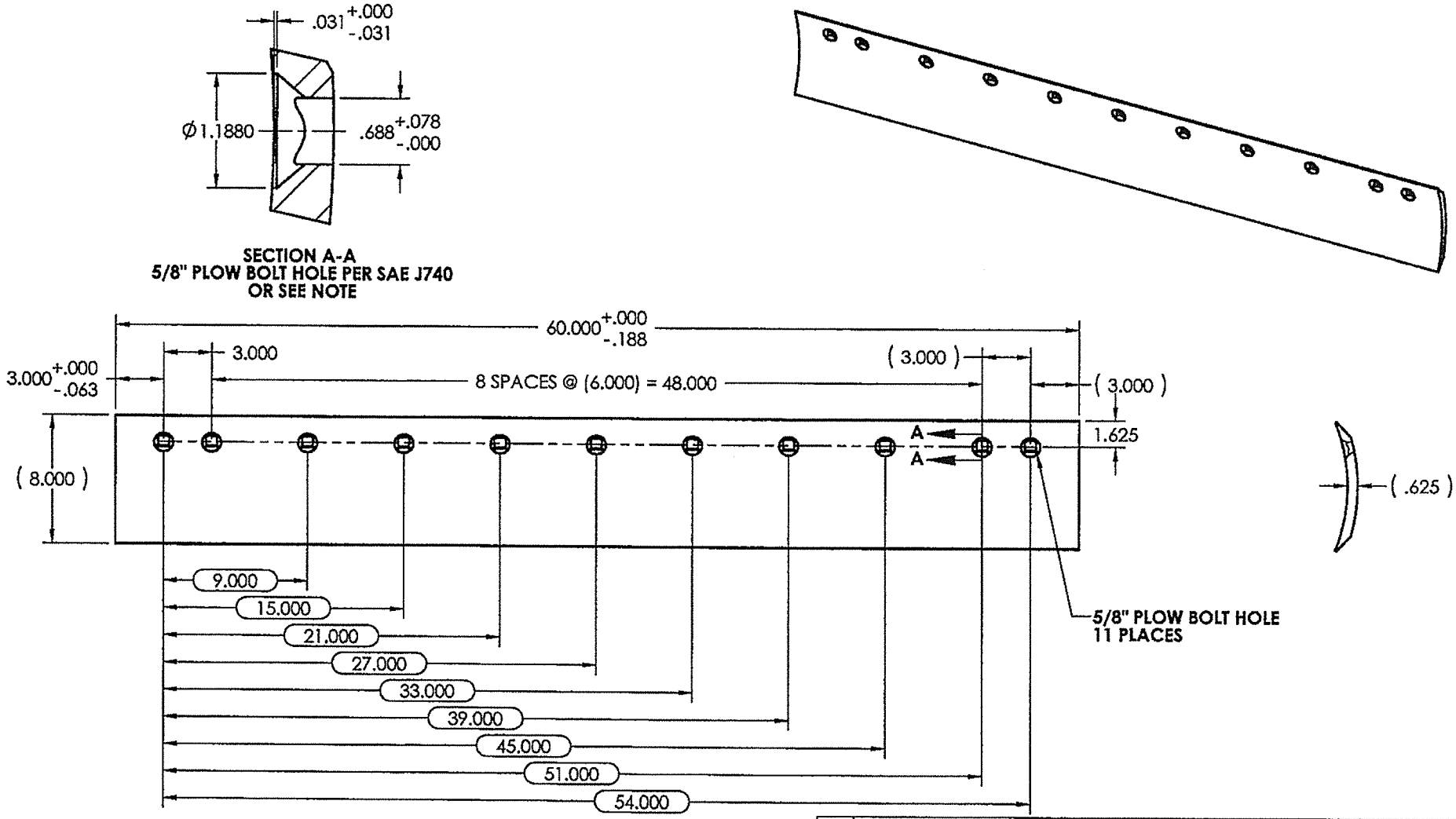
BLACK CAT BLADES 1-780-465-6666

HEAT TREATED GRADER BLADE

THIS DRAWING CONTAINS BLACK CAT BLADES LTD. PROPRIETARY AND TRADE SECRET INFORMATION. COPYRIGHT AND DESIGN RIGHTS ARISING FROM THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF BLACK CAT BLADES LTD. REPRODUCTION OF ALL OR PART OF THIS DRAWING, EITHER DIRECTLY OR INDIRECTLY, OR ITS DISCLOSURE TO ANY THIRD PARTY WITHOUT THE PRIOR WRITTEN CONSENT OF BLACK CAT BLADES LTD. IS PROHIBITED.

DATE: APR. 01/97 | THIRD ANGLE PROJECTION
DWN: JT | CHK'D: NM | SCALE: NTS

PART #: CAT 5D9562
DWG # 07863 | OEM REV | REV B
WT: 91.4 lb.



NOTE(S):
1. ALL DIMENSIONS ARE IN INCHES

BLACK CAT BLADES ONLY:
1. BCB SELKIRK: FOLLOW PLOW BOLT HOLE PROCEDURE

REV.	DESCRIPTION	DATE	DWN	APP
B	CONVERTED TO NEW TEMPLATE	OCT. 02/08	SI	CE
A	REDREW IN SOLIDWORKS	SEP. 14/08	SI	CE

FABRICATION

TOLERANCES (UNLESS NOTED):
X.XX = ±0.13 in.
X.XXX = ±0.063 in.
X.XXXX = ±0.0313 in.
X° = ±2°
X.X° = ±0.5°
PLEASE ASK IF IN DOUBT

MAKE: CAT
MODEL:
MAT: DBCB 5/8 X 8

BLACK CAT BLADES 1-780-465-6666

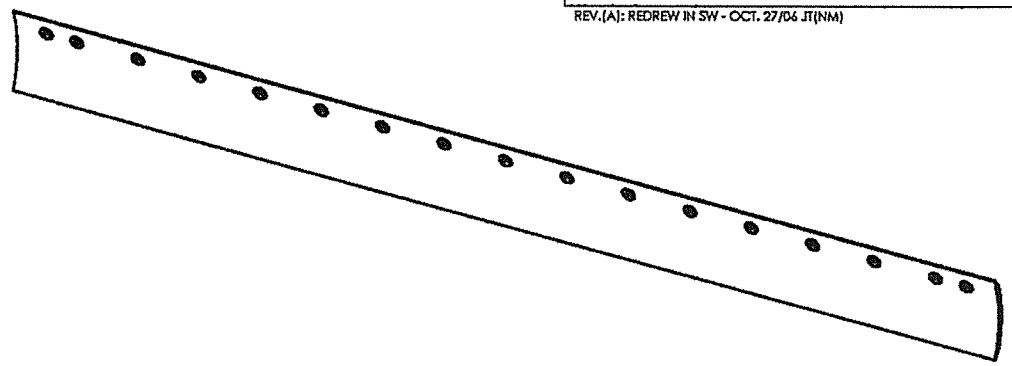
HEAT TREATED GRADER BLADE

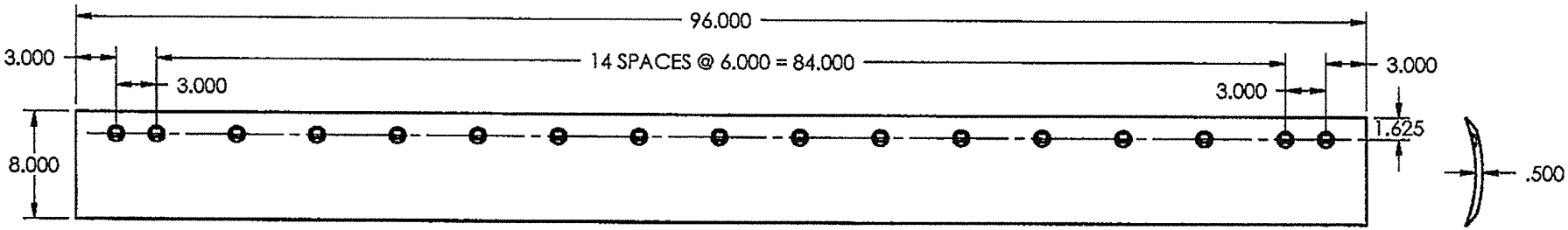
THIS DRAWING CONTAINS BLACK CAT BLADES LTD. PROPRIETARY AND TRADE SECRET INFORMATION. COPYRIGHT AND DESIGN RIGHTS ARISING FROM THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF BLACK CAT BLADES LTD. REPRODUCTION OF ALL OR PART OF THIS DRAWING, EITHER DIRECTLY OR INDIRECTLY, OR ITS DISCLOSURE TO ANY THIRD PARTY WITHOUT THE PRIOR WRITTEN CONSENT OF BLACK CAT BLADES LTD. IS PROHIBITED.

PART #: CAT 7D4509
DWG #: 11827
OEM REV:
REV: B
DATE: JUL. 10/98
THIRD ANGLE PROJECTION
DWN: JT
CHK'D: NM
SCALE: NTS
WT: 76.1 lb.

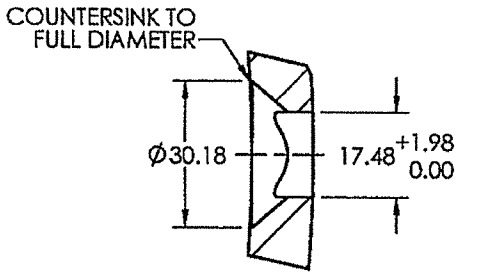
ALL DIMENSIONS ARE IN INCHES	**BLACK CAT BLADES**		**DWN BY:** JT	**CHK'D BY:** NM
	CUSTOMER:	**DESIGNATION:** CARBON GRADER BLADE		
	PART NUMBER: CAT 8J8980		**DRAW DATE:** OCT. 17/02	
	DWG NUMBER: 26107	**MAKE:** CAT / **MODEL:**	**REV. DATE:** OCT. 27/06	
	MAT. TYPE: DBCB 1/2 X 8	**SIZE AND TYPE OF BOLTS:** 5/8" PLOW BOLTS	**# OF BOLT HOLES:** 17	
			SHIP WEIGHT: 98.6 **LBS**	

REV.(A): REDREW IN SW - OCT. 27/06 JT(NM)

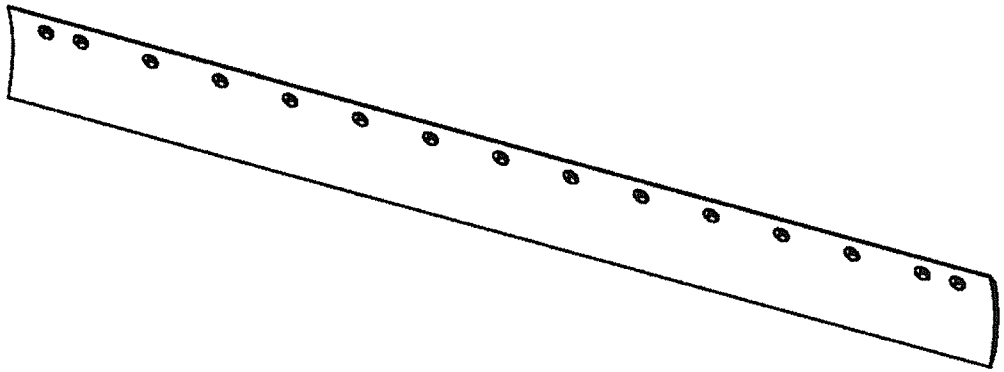


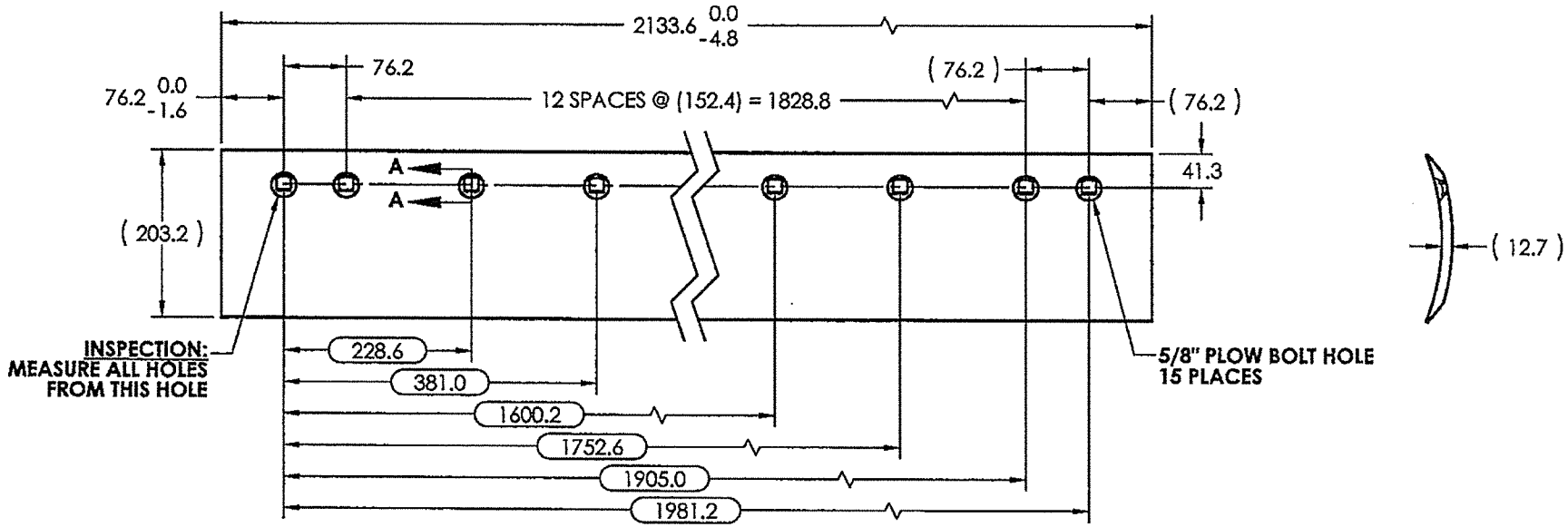


BCB STANDARD TOLERANCES



SECTION A-A
5/8" PLOW BOLT HOLE PER SAE J740
OR SEE NOTE





NOTE(S):
1. ALL DIMENSIONS ARE IN MILLIMETERS

BLACK CAT BLADES ONLY:
1. BCB SELKIRK: FOLLOW PLOW BOLT HOLE PROCEDURE

REV.	DESCRIPTION	DATE	DWN	APP
B	REVISED TO NEW TEMPLATE	AUG. 27/10	LC	CE
A	REDREW IN SW	OCT. 16/06	JT	NM

FABRICATION

TOLERANCES (UNLESS NOTED):
X = ±3 mm
X.X = ±1.6 mm
X.XX = ±0.79 mm
X° = ±2°
X.X° = ±0.5°
PLEASE ASK IF IN DOUBT

MAKE: CAT
MODEL:
MAT: DBCB 1/2 X 8

BLACK CAT BLADES 1-780-465-6666

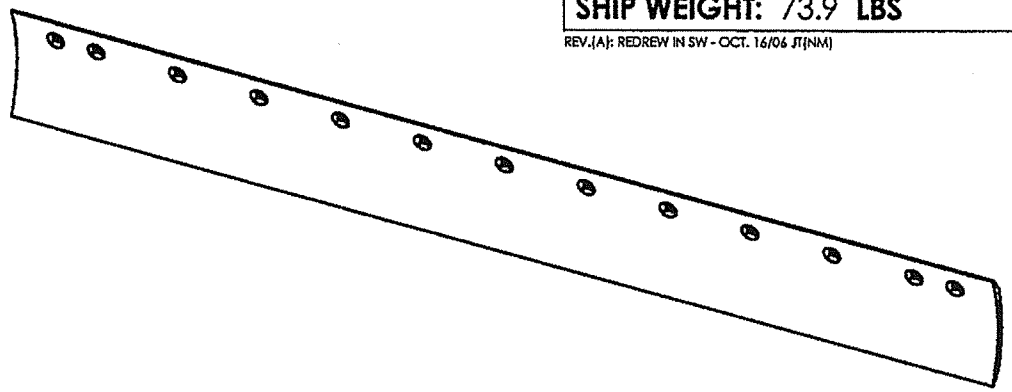
CARBON GRADER BLADE

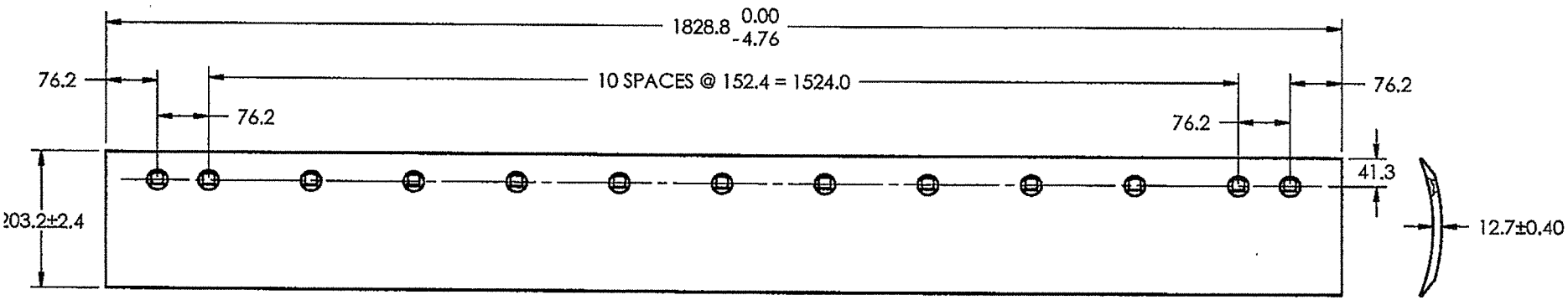
THIS DRAWING CONTAINS BLACK CAT BLADES LTD. PROPRIETARY AND TRADE SECRET INFORMATION. COPYRIGHT AND DESIGN RIGHTS ARISING FROM THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF BLACK CAT BLADES LTD. REPRODUCTION OF ALL OR PART OF THIS DRAWING, EITHER DIRECTLY OR INDIRECTLY, OR ITS DISCLOSURE TO ANY THIRD PARTY WITHOUT THE PRIOR WRITTEN CONSENT OF BLACK CAT BLADES LTD. IS PROHIBITED.

PART #: CAT 8D2789
DWG #: 07989
OEM REV:
REV: B
DATE: APR. 15/97
THIRD ANGLE PROJECTION
DWN: JT
CHK'D: NM
SCALE: NTS
WT: 86.2 lb.

ISO 9002 Certified	**BLACK CAT BLADES**		**DWN BY:** JT	**CHK'D BY:** NM
	CUSTOMER:	**DESIGNATION:** CARBON GRADER BLADE		
	PART NUMBER: CAT 8D2788		**DRAW DATE:** APR. 15/97	
ALL DIMENSIONS ARE IN MILLIMETERS	**DWG NUMBER: 07988**	**MAKE:** CAT	**MODEL:**	**REV. DATE:** OCT. 16/06
	MAT. TYPE: DBCB 1/2 X 8	**SIZE AND TYPE OF BOLTS:** 5/8" PLOW BOLTS		**# OF BOLT HOLES:** 13
				SHIP WEIGHT: 73.9 **LBS**

REV.(A): REDREW IN SW - OCT. 16/06 JT(NM)

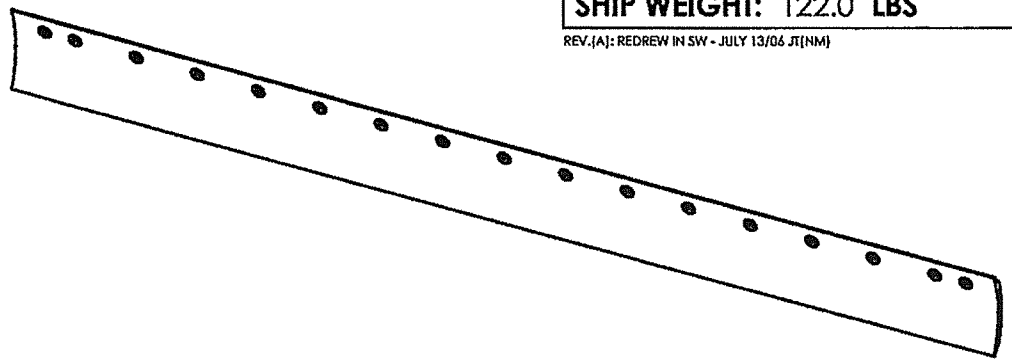


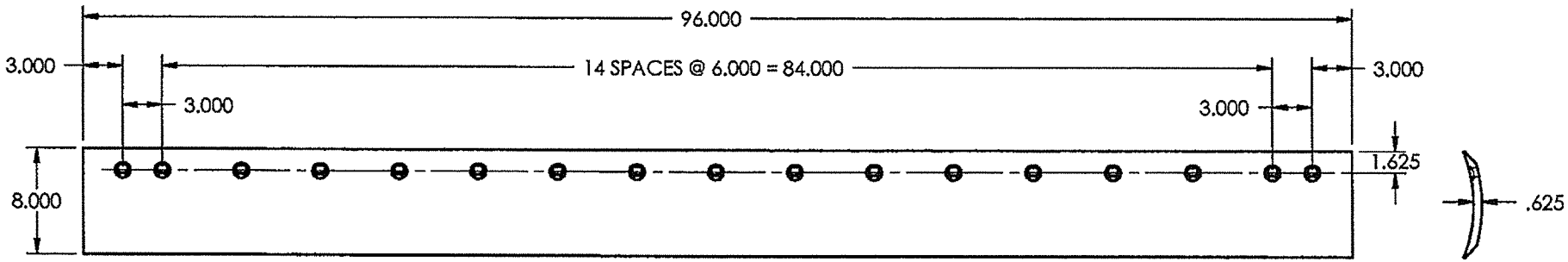


BCB STANDARD TOLERANCES

ISO 9002 Certified	**BLACK CAT BLADES**		**DWN BY:** JT	**CHK'D BY:** NM
	CUSTOMER:	**DESIGNATION:** BOLT ON GRADER BLADE		
	PART NUMBER: CAT 5D9731		**DRAW DATE:** SEPT. 11/97	
ALL DIMENSIONS ARE IN INCHES	**DWG NUMBER: 08886**	**MAKE:**	**MODEL:**	**REV. DATE:** JULY 13/06
	MAT. TYPE: DBCB 5/8 X 8	**SIZE AND TYPE OF BOLTS:** 5/8" PLOW BOLTS		**# OF BOLT HOLES:** 17
				SHIP WEIGHT: 122.0 **LBS**

REV.(A): REDREW IN SW - JULY 13/06 JT(NM)





BCB STANDARD TOLERANCES