



REQUEST FOR PROPOSAL

BID NO. 020-0222-21A

MOWER ATTACHMENT FOR
5090M JOHN DEERE TRACTOR

BID DUE DATE: February 22, 2021 at 10:00am

I. GENERAL CONDITIONS

- 1. General Information** - The Public Works Department of the City of Antioch, California, will receive bid responses at its office located at [1201 W. 4th Street, Antioch, CA 94509](#) on February 22, 2021 at 10:00am.

Questions relating to specifications or technical questions must be submitted via email to craposo@antiochca.gov. Bidders are **NOT** to pursue City staff by telephone or in person.

- 2. Form of Bid** - The bid shall be made on the attached bidder's proposal form. If the form is deemed inadequate, additional information may be submitted with the proposal, via an attachment of catalogs, drawings, photographs, or a letter. Letters repeating prices and details from the City's specifications must be omitted.
- 3. Interpretation of Bids** - Should a bidder find discrepancies in, or omissions from the specifications, or should bidder be in doubt as to their true meaning, bidder shall submit a formal request to the Public Works Department for an interpretation thereof **prior** to the bid opening to the attention of Christine Raposo at craposo@antiochca.gov. The person submitting the request shall be responsible for its prompt delivery. Any interpretation of, or change in the proposed documents will be made only by an addendum published on the City's website, and shall become part of any contract awarded. The City will not be responsible for any other explanation or interpretations.
- 4. Addenda** - Any addenda issued by the City during the time of bidding shall be covered in the bid and shall be made a part of the contract. It is the bidder responsibility to check the City of Antioch website, for any addenda that may have been issued prior to the bid/proposal due date.
<http://www.antiochca.gov/rfps/>
- 5. Bid Opening** - Bids shall be delivered to the Public Works Department of the City of Antioch located at [1201 W. 4th St. Antioch, 94509](#) on or before the day and hour set for the opening of bids. A bidder may withdraw his bid, either personally or by written request, at any time prior to the scheduled time for opening of bids.
- 6. Late Bids** - Any bids received after the scheduled time of opening will be clocked in but will not be opened or considered.
- 7. No Bid** - If a bid is not made, the bid form must be returned and the reason for not bidding stated; otherwise the vendor's name will be removed from the bidders list. If a bid is submitted without an amount, it will not be considered.
- 8. Award or Rejection** - The bid will be awarded to the lowest responsive and responsible bidder offering the best value to the City and will be announced by way of publishing to the City's website ([Bid Documents](#)). Best value is based on all factors, including: cost (unit prices and total prices); contractor's ability, capacity and skill; ability to perform within the time required; character, integrity, reputation, judgment, experience and efficiency of contractor; quality of contractor's performance on previous purchases or contracts, if applicable; and the ability of the contractor to provide future maintenance, repair, parts and services, if applicable.

The City reserves the right to reject any or all bids, to accept or reject any one or more items of a bid, or to waive any minor irregularities or informalities in the bid. It is anticipated that all items will be purchased,

however the City reserves the right to change quantities prior to the award. Estimated quantities are no guarantee of a certain quantity to be ordered by City. The City reserves the right to make the award to the overall low bidder, or split the award amongst the bidders. If the bid is on an "all or nothing" basis, this must be stated on the bid form.

For the purpose of evaluating bids for multiple awards, the sum of \$175.00 is considered to be the administrative cost to the City for issuing and administering each contract awarded. Individual awards will be made for the items and combinations of items which result in the lowest aggregate price to the City, including such administrative cost.

- 9. Terms and Conditions** - The bidder shall not change the wording on the specifications or conditions. No words or comments shall be added to the general conditions or detailed specifications. Any explanation or alternative offered shall be set forth in a letter attached to the front cover of the specifications. Alternatives which do not substantially comply with the City's specifications cannot be considered. Conditional bids cannot be accepted.
- 10. Brand Names**- The make or brand and grade of the article on which the bid is submitted should be stated on the bid form.
- 11. Payment Terms** - Must be indicated by filling in the proper blanks on the bid form. Cash discounts of less than 20 days will be considered net. The standard terms at the City of Antioch are Net 30 days.
- 12. FOB Point** - It is understood that the bidder agrees to deliver FOB Destination, with no freight charges to the City. All costs for packing, delivery, drayage, postage, freight, express, or for any other purpose are to be borne by the bidder.
- 13. Approved Equal – Brand names and numbers, when used, are for reference to indicate the character or quality desired.** The use of the name of a manufacturer, or any special brand or make, in describing any item in the bid documents does not restrict bidders to that manufacturer or specific article. Unless otherwise noted, an equal of the named product will be given due consideration if literature is submitted with the bid showing that the product is of equal or better quality and utility to that specified by the City. Determination of acceptability of any product shall be solely at the City's discretion.
- 14. Tax** - No bid shall include federal excise tax, inasmuch as the City is exempt per published IRS regulations concerning state/local governments. The City is obligated to pay applicable state sales or use taxes.
- 15. Samples** - When requested, bidders shall submit properly marked samples of the article(s) on which bid is made to the City. Any sample submitted must be clearly marked in such a manner that the marking is fixed, so that the identification of the sample is assured. Such marking shall state (1) name of bidder, (2) number of bid, and (3) item number. Samples, when required, must be furnished free of expense to the City, and if not destroyed by tests, will upon request be returned at bidder's expense unless retained by City for future comparison.
- 16. Inspection** - All items furnished shall be subject to the inspection of the City, and unsuitable items may be rejected. Defective items shall be made good by the vendor in a manner satisfactory to the City.

- 17. Assignment** - No assignment by the contractor or any contract to be entered into hereunder or of any part thereof, except of funds to be received thereunder by the contractor, will be recognized by the City unless such assignment has had the prior written approval of the City.
- 18. Warranty** - Terms of any warranty offered by the manufacturer or the bidder shall be included with the bid. Contractor warrants all work done and goods provided under this Agreement shall at the minimum: a) meet all conditions of the Agreement; b) shall be free from all defects in design, material and workmanship; and 3) shall be fit for the purposes intended. If any defects occur within said 12 months following acceptance, Contractor shall be solely responsible for the correction of those defects.
- 19. Timely Delivery** – If indicated in the bid form, bidder shall indicate time of delivery as the number of calendar days following receipt of the order by the contractor to receipt of the goods or services by the City. Time of delivery may be a consideration in the award.

Time is of the essence, and the purchase order is subject to termination for failure to deliver on time. The acceptance by buyer of later performance with or without objection or reservation shall not waive the right to claim damage for such breach nor constitute a waiver of the requirements for the timely performance of any obligation remaining to be performed by the vendor.

- 20. Liquidated Damages** - If delivery does not occur on schedule it is understood that the City will suffer damage. It being impractical and infeasible to determine the amount of actual damage, it is agreed that the contractor shall pay to the City the sum of one hundred (\$100.00) dollars per day for each and every calendar days delay in finishing the contract.
- 21. Termination for Default** - The City may, by written notice of default to the vendor/contractor, terminate the contract in whole or in part should the vendor/contractor fail to make satisfactory progress, fail to deliver within time specified therein or fail to deliver in strict conformance to specifications and requirements set forth therein. In the event of such termination, the City reserves the right to purchase or obtain the supplies or services elsewhere, and the defaulting vendor/contractor shall be liable for the difference between the prices set forth in the terminated order and the actual cost thereof to the City. The prevailing market price shall be considered the fair repurchase price. If, after notice of termination of this contract under the provisions of this clause, it is determined for any reason that the Contractor was not in default under the provisions of this clause, the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to the Termination for Convenience clause. The rights and remedies of City provided in this article shall not be exclusive and are in addition to any other rights and remedies provided by law or under resulting order.
- 22. Termination for Convenience** - The City may, by written notice stating the extent and effective date, terminate any resulting order for convenience in whole or in part, at any time. The City shall pay the vendor as full compensation for performance until such termination the unit or pro rate price for the delivered and accepted portion, and a reasonable amount, as costs of termination, not otherwise recoverable from other sources by the contractor as approved by the City, with respect to the undelivered or unaccepted portion of the order, provided compensation hereunder shall in no event exceed the total price. In no event shall the City be liable for any loss of profits on the resulting order or portion thereof so terminated. The rights and remedies of City provided in this article shall not be exclusive and are in addition to any other rights and remedies provided by law or under resulting order.

23. Fiscal Year - Obligation for payment of any contract beyond the current fiscal year end is contingent upon the availability of funding from which payment can be made. No legal liability shall arise for payment beyond June 30 of the calendar year unless funds are made available for such performance.

24. Equal Opportunity - Contractor shall not discriminate, on the basis of a person's race, religion, color, national origin, age, physical or mental handicap or disability, medical condition, marital status, sex, or sexual orientation or any other prohibited basis under federal or state law, against any employee, applicant for employment, subcontractor, bidder for a subcontract, or participant in, recipient of, or applicant for any services or programs provided by Contractor under this Agreement. Contractor shall comply with all applicable federal, state, and local laws, policies, rules, and requirements related to equal opportunity and nondiscrimination in employment, contracting, and the provision of any services that are the subject of this Agreement, including but not limited to the satisfaction of any positive obligations required of Contractor thereby.

Contractor shall include the provisions of this Subsection in any subcontract approved by the Contract Administrator or this Agreement.

25. Business License – The City of Antioch requires that any contractor doing business within the city limits must hold a valid City of Antioch Business License prior to merchandise delivery (by vendor) or services provided.

26. Governing Law - This contract shall be construed and interpreted according to the laws of the State of California with venue for any action under this Agreement in Contra Costa County, California.

27. Liabilities -- Contractor shall indemnify, save and hold harmless from and defend the City, its officers, agents and employees, against any and all claims, costs, demands, causes of action, suits, losses, expense or liability arising from, or alleged to have arisen, from any acts or omissions of Contractor, its agents, subcontractors, officials or employees, in connection with the execution of the work covered by this Agreement, as it may be amended, except for the sole negligence or willful misconduct of City. This indemnification includes any claim that the materials or equipment provided under this Agreement, or any tool, article or process used in manufacture of such tools or equipment, constitutes an infringement of any patent issued by the United States. This entire indemnification provision shall survive termination or cancellation of this Agreement.

28. Right to Audit -- The City of Antioch reserves the right to verify, by examination of vendors' records, all invoiced amounts when firm prices are not set forth in the purchase agreement.

29. Assignment -- In submitting a bid to a public purchasing body, the bidder offers and agrees that if the bid is accepted, it will assign to the purchasing body all rights, title and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of part 2 of Division 7 of the Business and Professions Code), arising from the purchases of goods, materials, or services by the bidder for sale to the purchasing body pursuant to the bid. Such assignment shall be made and become effective at the time the purchasing body tenders final payment to the bidder.

30. Surety Bonds – The Bidder is required to submit a bidder's bond if included on the Bid Form. Unless stated to the contrary in the Detailed Specifications, Contractor is required to provide the following surety

bonds from an admitted and authorized surety in California in the full amount of the work to be performed: A Performance Bond and a Payment Bond.

- 31. Prevailing Wage** - Where labor is required for public work as part of this contract, pursuant to the provisions of the Labor Code of the State of California, contractors shall pay no less than the minimum wages established by the Director of the Department of Industrial Relations of the State of California.

To the extent applicable, Contractor shall comply with the requirements of the California Labor Code including but not limited to hours of labor, nondiscrimination, payroll records, apprentices, workers' compensation and prevailing wages.

No less than the general prevailing rate of per diem wages, and not less than the general prevailing rate of per diem wages for holidays and overtime work, for each craft, classification or type of worker needed to execute the work under this Agreement shall be paid to all workers, laborers and mechanics employed in the execution of the work by the Contractor or any subcontractor doing or contracting to do any part of the work. The appropriate determination of the Director of the California Department of Industrial Relations shall be filed with, and available for inspection, at the City offices. Contractor shall post, at each job site, a copy of the prevailing rate of per diem wages. The Contractor shall forfeit fifty dollars (\$50.00) for each calendar day or portion thereof for each worker paid less than the stipulated prevailing rates for any public work done under the Agreement by it or by any subcontractor under Contractor.

The City reserves the right to request and review the contractor's payroll records in the form of certified payroll records. In the event certified payroll records are requested, they are to be submitted via email to craposo@antiochca.gov. Furthermore, Contractor is to submit two sets: one complete and one redacted of private information [On the second copy the name, address and social security number of the individual employees must be redacted (blacked out)].

- 32. Appeals** -- Any actual or prospective bidder, or contractor that has a grievance in connection with any City solicitation or award of contract may protest in writing pursuant to the provisions in Antioch Municipal Code section 3-4.03. Protestors are urged to seek resolution of their complaints initially with the using department.

- 33. Contract Documents** - The work embraced herein shall be performed at the locations covered in this bid and in accordance with the current Standard Specifications of the State of California, Business and Transportation Agency, Department of Transportation. In addition to the State Specifications, the following will also apply: these Specifications; the Proposal; the Contract, required herein; any supplemental agreements amending or extending the work; working drawings or sketches clarifying or enlarging upon the work specified herein; and to pertinent portions of other documents included by reference thereto in these Specifications.

The Successful bidder shall be expected to agree to and comply with all terms addressed in the attached Sample Maintenance and Trade Services Agreement. The bidder shall not change the wording in the attached specifications or conditions. No words or comments shall be added to the general conditions or detailed specifications. Conditional bids cannot be accepted.

- 34. Insurance** -- Contractor shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees, or subcontractors.

All certificates and endorsements must be emailed to craposo@antiochca.gov, with the name of the contract clearly identified on the certificates and endorsements AND annual renewals automatically be generated and emailed as instructed.

Minimum Scope of Insurance: Coverage shall be at least as broad as:

1. Insurance Services Office Commercial General Liability coverage (occurrence Form CG 00 01), Owners and Contractors Protective Liability Coverage Form – Coverage for Operations of Designated Contractor).
2. Insurance Services Office Form Number CA 0001 covering Automobile Liability, Code 1.
3. Workers' Compensation insurance as required by the State of California and Employer's Liability Insurance.
4. Builder's Risk (Course of Construction) insurance covering all risks of loss less policy exclusions.

Minimum Limits of Insurance: Contractor shall maintain limits no less than:

1. Commercial General Liability (CGL): Insurance Services Office Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations, property damage, bodily injury, and personal & advertising injury with limits no less than **\$2,000,000** per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.
2. Automobile Liability: ISO Form Number CA 00 01 covering any auto (Code 1), or if Contractor has no owned autos, hired, (Code 8) and non-owned autos (Code 9), with limit no less than **\$1,000,000** per accident for bodily injury and property damage.
3. Workers' Compensation: As required by the State of California.
4. Employer's Liability: **\$1,000,000** per accident for bodily injury or disease.

Additional requirements if applicable:

5. Builder's Risk: Completed value of the project with no coinsurance penalty provisions for construction project.
6. Professional Liability: \$1,000,000 as needed for design/build and other professional services.
7. Contractor's Pollution Liability: \$1,000,000 per occurrence \$2,000,000 policy aggregate if hazardous materials are involved.

Deductibles and Self-Insured Retentions: Any deductibles or self-insured retentions must be declared to and approved by the City. At the option of the City, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the City, its officers, officials, employees and volunteers; or the Contractor shall provide a financial guarantee satisfactory to the City guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

Other Insurance Provisions: The general liability and automobile liability policies are to contain, or be endorsed to contain, the following provisions:

1. Additional Insured Status. The City, its officers, officials, employees, and volunteers are to be covered as additional insureds on the CGL policy with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts, or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an

endorsement to the Contractor's insurance (at least as broad as ISO Form CG 20 10 11 85 or if not available, through the addition of both CG 20 10 and CG 20 37 if a later edition is used).

2. *Primary Coverage.* For any claims related to this contract, the Contractor's insurance coverage shall be primary insurance as respects the City, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the City, its officers, officials, employees, or volunteers shall be excess of the Contractor's insurance and shall not contribute with it.
3. *Notice of Cancellation.* Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the City.
4. *Waiver of Subrogation.* Contractor hereby grants to City a waiver of any right to subrogation which any insurer of said Contractor may acquire against the City by virtue of the payment of any loss under such insurance. Contractor agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the City has received a waiver of subrogation endorsement from the insurer.
5. *Deductibles and Self-Insured Retentions.* Any deductibles or self-insured retentions must be declared to and approved by the City. The City may require the Contractor to purchase coverage with a lower deductible or retention or provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention.

Certificate of Insurance and Endorsements: Contractor shall furnish the City with original certificates and amendatory endorsements or copies of the applicable policy language effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the City before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the Contractor's obligation to provide them. The City reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

Acceptability of Insurers: Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII, unless otherwise acceptable by City.

Verification of Coverage: Contractor shall furnish the Entity with original certificates and amendatory **endorsements** affecting coverage required by this clause. All certificates and endorsements are to be received and approved by the Entity before work commences. However, failure to do so shall not operate as a waiver of these insurance requirements. The City reserves the right to require complete, certified copies of all required insurance policies, including endorsements affecting the coverage required by these specifications at any time.

Subcontractors: Contractor shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein.

II SPECIFICATIONS

It is the intent of these specifications to describe the minimum requirements to purchase Public Works equipment per the specifications listed in Section A of the Bid Submittal Documents for a Mower Attachment compatible with a 5090M John Deere Tractor.

The equipment covered by these specifications shall be supplied as specified and be manufactured new, unused, and latest model complete with all-necessary equipment and accessories. All separate units shall be installed, connected, and delivered in good working operating order.

The equipment specified shall comply with all environmental, health, and safety requirements of Federal, State, and local legislation and regulations in effect at time of delivery. All equipment installed shall be legal for use in the State of California.

The City has the right to permit exceptions to, and deviations from, the specifications, if an article offered substantially meets or exceeds the specifications, and is deemed, by the City, to be satisfactory for its intended use. The City shall be the sole judge in determining acceptable equals. All exceptions to specifications must be listed in the space provided. Notations in any other manner may result in rejection of the bid.

Bidder must provide in detail, in the column labeled 'Substitutions', the items bidders will supply in order to meet or exceed the City's minimum specifications. If the item the bidder is supplying does not meet the City's minimum specification, bidder must provide in detail the items they are supplying or excluding, in this bid.

Additional comments or details must be noted in the column provided on the specifications sheets and if additional space is needed may be added on blank paper. If additional documentation is added, then bidder must provide the line item number and description for each exception.

Bid line item specifications (per equipment) are included on the bid submittal forms.

Individual awards will be made for the items and combinations of items which result in the lowest aggregate price to the City, including such administrative cost. **Please note that the awarded bidder/s will be required to obtain a City of Antioch business license prior to issuance of the purchase order.**

III. BID SUBMITTAL WORK SHEET - BID NO. 020-0222-21A

Your Company Name: _____

Contact Name: _____

Contact Phone: _____

Contact Email: _____

Exceptions to City specifications must be noted in Section A of the Bid Submittal Documents. Cost includes tax, delivery, and installation.

Equipment	COST INCLUDING TAX , DELIVERY & INSTALLATION	QTY	TOTAL COST INCLUDING TAX, DELIVERY & INSTALLATION	SUBSTITUTIONS TO SPECS
Mower Attachment compatible with a 5090M John Deere Tractor	\$ _____	1	\$ _____	YES / NO
GRAND TOTAL:			\$ _____	

CITY OF ANTIOCH
MOWER ATTACHMENT FOR 5090M JOHN DEERE TRACTOR
Bid No. 020-0222-21A

The undersigned bidder declares that it has carefully examined the locations of the proposed work, plans and specifications, special provisions and read the accompanying instructions to bidders. The undersigned submitter certifies that he/she is, at the time of presenting this Proposal, and shall be, throughout the length of the contract, licensed by the state of California to do the type of work required under the terms of the contract documents. Submitter further certifies that he/she is skilled and regularly engaged in the general class of work called for in the contract documents.

In accordance with the requirements, the submitter represents that he/she is competent, knowledgeable and has special skills on the nature, extent and inherent conditions of the work to be preformed. Submitter further acknowledges that there are certain peculiar and inherent conditions which may create, during maintenance operations, unusual or peculiar unsafe conditions hazardous to persons and property. Submitter acknowledges that he/she is aware of such risks and that he/she has the skill and experience to foresee and to adopt protective measures to adequately and safely perform the maintenance services with respect to such hazards.

Does proposed bid conform to all requirements listed in this document and drawings? _____
If NO, explain non-conforming specifications in detail on separate sheet.

Terms or Cash Discount (if other than net 30 days) _____

Company Name _____

Contact Name _____

Title _____

Address _____

City/State/Zip _____

Telephone _____ FAX _____

Email Address _____

Contractor's License No. _____ Exp. Date _____

City of Antioch Business License No. _____ Exp. Date _____

Signature _____ Date _____

Bid must be in a sealed envelope with the bid number, closing date, and time on the outside envelope.

DELIVER BID SUBMITTAL TO:

CITY OF ANTIOCH
PUBLIC WORKS
BID NO. 020-0222-21A
1201 W 4TH STREET
ANTIOCH, CA 94509

NON COLLUSION AFFIDAVIT

THIS PAGE MUST BE NOTARIZED

CITY OF ANTIOCH

MOWER ATTACHMENT FOR 5090M JOHN DEERE TRACTOR

Bid No. 020-0222-21A

The Bidder, by its officers and agents or representatives present at the time of filing this bid, being duly sworn on their oaths say, that neither they nor any of them have in any way directly or indirectly entered into any arrangement or agreement with any other bidder, or with any public officer of the CITY OF ANTIOCH whereby such affiant or affiants or either of them has paid or is to pay to such bidder or public officer any sum of money, or has given or is to give to such other bidder or public officer anything of value whatever, or such affiant or affiants or either of them has not directly or indirectly entered into any arrangement or agreement with any other bidder or bidders, which tends to or does lessen or destroy free competition in the letting of the contract sought for on the attached bids; that no bid has been accepted from any subcontractor or supplier through any bid depository, the By-Laws, Rules or Regulations of which prohibit or prevent the Contractor from considering any bid from any subcontractor or supplier which is not processed through said bid depository, or which prevent any subcontractor or supplier from bidding to any Contractor who does not use the facilities or accept bids from or through such bid depository; that no inducement of any form or character other than that which appears upon the face of the bid will be suggested, offered, paid or delivered to any person of the contract, nor has this bidder any agreement or understanding of any kind whatsoever, with any person whomsoever to pay, deliver to, or share with any other person in any way or manner, any of the proceeds of the contracts sought by this bid.

NAME _____

SIGNATURE _____

TITLE _____

Subscribed and sworn to before me by:

This _____ day of _____, 20_____

Notary Public

SECTION A
BID NO. 020-0222-21A
PUBLIC WORKS – MOWER ATTACHMENT SPECIFICATIONS
COMPATIBILITY WITH A JOHN DEERE 5090M JOHN DEERE TRACTOR IS REQUIRED

General

It is the purpose of the following specifications to describe a hydraulic driven boom mower. Mowing is forward and right of the right rear tire and extended by means of an articulated two section boom with hydraulic break away. This unit shall be constructed to interchange with any of the following: 50" Rotary Cutting Head, 60" Rotary Cutting Head, 63" Flail cutting head, 50" Flail Cutting Head, 48" Saw Blade, 50" WetCut Sprayer, Boom Snow Blower, 22" Rotary Ditcher, 60" Side Rotary Mower or 75" Side Flail Mower.

The unit will be the manufacture's current production model with a minimum of (1) one year previous production, meeting or exceeding the terms of these specifications. Unit's shall be manufacturer's heaviest duty model available. The vendor shall guarantee that a stock of component parts be available at a location convenient to the user. For any offer to be considered, all items must be of a standard production model, not modified for bid purposes. It is a requirement of this bid that vendors submit the pertinent information requested in each section marked "(VENDOR REQUIREMENT)". **In the event the requested material and responses are not supplied, by the bidder, the bid submitted will be considered non-responsive and will automatically be rejected.**

Boom Mower

Line Number	SPECIFICATIONS REQUIRED	COMPLY YES / NO	EXCEPTIONS, DEVIATIONS, and ANSWERS
B1.0	<u>SAFETY AND TESTING</u>		
B1.1	Shall meet the following industry standards: SAE: J232(Rotary), J1001(Flail), J284, J990, J1065. ANSI/ASAE- 201.4, S203.13, S205.2, S279.12, S350, EP363.1, S483, S493. ASTM: A370. (VENDOR REQUIREMENT)Submit compliance report signed by a registered Professional Engineer(PE).		
B1.2	Unit shall be equipped with a 7 second brake valve on the cutting assembly.		
B1.3	Electric Solenoid control transport lock to be integrated into the mower control box.		

B2.0	MAIN FRAME		
B2.1	Main Frame shall be constructed to be supported on the front tractor bolster, center of tractor and rear axel housings, to absorb side torque and impact of severe applications.		
B2.2	Main Frame shall be constructed of fabricated 80,000 PSI steel, bolted directly to each side of tractor frame. An underbelly frame member, running under engine, shall be welded, box frame constructed, and connect the mainframe to each side of tractor(specifically excluding frames over hood designs). A bolt on mast assembly shall have an integral swing cylinder as a welded assembly with the mast assembly.		
B2.3	Main Frame shall have a bolt on mast assembly to allow easy change from Boom Mowers to Side Mower attachments. Weldment shall bolt face to face with tower and shall have a mounting surface with not less than 10, 3/4" grade 5 bolts. Mounting surface shall be constructed of 80,000 lbs. steel 1/2" thick. (VENDOR REQUIREMENT) Vendor shall submit diagram of mast mounting.		

B3.0	BOOM SWIVEL BRACKET		
B3.1	Swivel shall be box construction with a 100,000 PSI yield steel swivel cylinder tang with a vertical bearing boss, with steel backed, porous bronze inner structure, and acetal resin overlay bearings. Bearings shall have grease pockets built in and support a 2 1/2" vertical pin. Pin shall be constructed of 4140 cold drawn steel, prehardened(heat treated), to a minimum yield of 105,000 PSI, pin shall be zinc plated. (VENDOR REQUIREMENT) Submit manufacturer of bearing, model and size.		
B3.2	Swivel shall connect to inner boom cylinder with a greaseless spherical bearing. (VENDOR REQUIREMENT) Submit type of bearing and size.		

B3.3	Swivel shall be supported by a greaseless thrust washer to eliminate galling between swivel bracket and boom mounting bracket. (VENDOR REQUIREMENT) Submit ID and OD dimensions and thickness.		
B3.4	Hydraulic Hoses shall be routed thru hose clamp/guides with hose guards to prevent chaffing.		
B3.5	Base shall have integral boom swivel attachment fork and constructed of 3/4" and 1" thick 100,000 PSI steel. (VENDOR REQUIREMENT) Submit material and thickness of fork.		
B3.6	Horizontal swing cylinder shall have an internal cushion device to limit flow when boom is operated to the forward boom position.		

B4.0	PRIMARY BOOM		
B4.1	Primary boom shall have a minimum of 70,000 PSI 8" x 6" structural tube and reinforcement with 50,000 PSI steel.		
B4.2	Primary boom shall have a one piece reinforced cylinder attaching rib, with the end welds strategically welded around end of rib to boom upper surface. Inner reinforcement shall be a 1/4" x 5" anchor plate, saddle mounted to the top of boom. Anchor plate shall be structurally welded to main tube and have 2, 1" diameter core welds in the top center of plate. Outer reinforcement shall be 1/4" box sectioned, 100,000 PSI steel with 2, 1" x 6" core weldments on each side, and 1, 1 x 1 1/4" oblong core welds. Inner end of Primary boom shall have a 1 1/2" diameter 105,000 PSI yield, hardened, nitride surface pin, with a high-strength, steel backed, porous bronze inner structure, acetal resin overlay bearing installed. (VENDOR REQUIREMENT) Submit a complete description of boom, materials, and boom reinforcements.		
B4.3	Pressure and return lines will be preformed steel tubes, or hoses, with hoses at pivot points and mounted to back of boom. (Specifically excluding hoses and tubing inside or front of booms)		

B4.4	Top mounted double acting lift cylinder shall have a nitrogen accumulator.		
B4.5	Cylinder end attach points shall have replaceable bearings. Primary boom lift cylinder shall not be less than 5" in diameter.		

B5.0	<u>SECONDARY BOOM</u>		
B5.1	Secondary boom shall have a minimum of 50,000 PSI yield 6" x 4" tube and reinforced at all stress points.		
B5.2	Pressure and return lines are preformed steel tubes and hoses mounted to rear of boom.		
B5.3	Cylinders shall be welded, double acting and mounted to top of boom. Hydraulic cylinder mounted between primary and secondary boom shall have a spherical bearing rod end.		
B5.4	Outer end of secondary boom shall have an integrally designed mounting boss, box sectioned into the boom. (Specifically excluding external boom end reinforcements)		

B6.0	<u>HYDRAULICS</u>		
B6.1	Pump shall be direct drive from the tractor front crankshaft adapter. (rubber mounted engine design shall have a double u-joint pump drive shaft) (VENDOR REQUIREMENT) Submit type of shaft attachment supplied.		
B6.2	Reservoir shall be internally treated against corrosion with industry approved chemical agent at time of manufacture. Reservoir shall have a in tank filter rated at 75 GPM, 10 micron, 200 beta, element with bypass, restriction gauge, minimum (1) one PSI pressure at suction outlet and have ball valve at suction line. Tank pressurized to 3 PSI. (VENDOR REQUIREMENT) Submit material used to treat reservoir. Type, design and micron size of filter element.		

B6.3	Reservoir shall be mounted in tractors left hand rear wheel well. Reservoir shall have sufficient clearance for proper cooling and shall be a minimum 37 gallons of oil in an operating condition. Reservoir shall have a minimum of not less than 5" clearance (oil cold) from top of reservoir for expansion. Hydraulic fluid level and temperature gauge to be built-in reservoir.		
B6.4	Hydraulic pressure connections shall meet SAE O-ring and JIC standards.		
B6.5	Pump shall be front mount, cast steel housing, steel gears, rated at 3250 PSI, 45 GPM and 96 HP input. (specifically excluding piston type pumps and cast aluminum housing pumps)		
B6.6	Suction hose shall be unrestricted. (Specifically excluding suction filters and screens)		
B6.7	Hydraulic oil shall meet a cleanliness standard of ISO 46 rating, and the ISO Code 16/14/11 or better. (VENDOR REQUIREMENT) Submit report of oil sample.		
B6.8	Hydraulic hoses and tubes shall be cleaned with pneumatic, triple projectile cleaning, and shall maintain a JDS-G169, class 5.6. ISO cleanliness rating. (VENDOR REQUIREMENT) Submit method of cleaning and standard met.		
B6.9	Motor shall have cast steel housing with steel gears.		
B6.10	Mower control valve shall be an electrically controlled, pilot operated. Logic elements shall be used to control pressures and ramp up and down speed to prevent excessive pressure spikes to system. Valve shall stop mower from turning in the off position and will not cause a restriction to generate drift while in the off position.		
B6.11	Mower control valve shall stop cutter assembly in maximum of 7 seconds from full RPM. (VENDOR REQUIREMENT) State time to stop from full RPM.		

B7.0	<u>(OPTIONAL) JOY-STICK CONTROL LIFT VALVE</u>		
B7.1	Joy-Stick Valve Option: Shall be an electro-hydraulic, load sensing valve. Valve shall have interchangeable spools and shall have a manual over-ride for each section, and 12 volt electrical actuation.		
B7.2	Valve(Joy-Stick) shall have load-independent flow control, oil flow to individual function is independent of the load pressure of the function. Valve shall have built in pressure relief in pump side module(PVP), with system capabilities of pressures of not less than 4,350 psi continuous, and 4,640 psi intermittent. PVP shall have a pressure gauge connection for service and have an open center option for fixed displacement pumps.		
B7.3	Valve (Joy-Stick) body shall have interchangeable spools, integrated pressure compensator, check valves, and different spool variants. Valves shall be configured with manual over-ride levers on one end and an electronic actuation module on the other.		
B7.4	Electrohydraulic(Joy-Stick) actuation module shall integrate directly with proportional valve body. Module shall have integrated electronics, sensors, and actuators, and shall have a feedback transducer measuring spool movement in relation to input signal, module shall control the direction, velocity, and position of main valve spool. Module shall have automatic active fault monitoring, and directional indication and LED light indication. Module shall have low hysteresis and shall have attachment for a sealed Deutsch connector. (REQUIRED)Vendor shall provide module hysteresis value, brand of connector, and IP rating of connector.		

<p>B7.5</p>	<p>Joy-Stick controller shall be an ergonomic right hand control, with two proportional functions on X-Y mode, and a top grip to house two proportional rollers. Controller handle shall have a leather-like grained surface to allow hand to breathe during operation. Controller rollers shall have a spring centered potentiometer with a working range of + or - 42°. Controller shall be adjustable with dead band adjustment, independent voltage limiting potentiometers for each function, and integrated direction switches for each proportional module. Controller shall have integral cable plug in, and an RF shielded cable shall be supplied by the manufacturer. (VENDOR REQUIREMENT)Vendor shall state the manufacturer, model, and type of electronic module, joy-stick, and valve.</p>		
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<p>B8.0</p>	<p><u>COUNTERWEIGHT</u></p>		
<p>B8.1</p>	<p>Counter weight, with tractors having 30" minimum rear tires shall have a total ballasted weight (wheel weight and "Rim Gaurd" (Beat Juice)) of 2,087 lbs. Wheel weight shall be cast steel, mounted flush to outside of wheel, and shall weigh not less than 1,300 lbs. for 18' and 22' boom reaches. Counter weight, with tractors having 34" minimum rear tires shall have a total ballasted weight (wheel weight and Calcium Chloride solution) shall be a minimum of 2,781 lbs. Wheel weight shall be cast steel, mounted flush to outside of wheel, and shall weigh not less than 1,700 lbs.(specifically excluding flame cut steel and or frame mounted weights) (VENDOR REQUIREMENT) Vendor to state total ballast weight and describe and list wheel weight.</p>	<p>ONLY YES Acceptable</p>	<p>30" tire total ballast is 2087 lbs., with a 1,300lbs., solid cast iron, wheel weight. 34" tire total ballast is 2,781 lbs., with a 1,700lbs., solid cast iron, wheel weight</p>

B9.0	OPERATOR PROTECTION		
B9.1	Shall have 3/8" right side, hard surfaced, polycarbonate protection for operator. Installed into the original cab manufactured door and or side window. (VENDOR REQUIREMENT) State thickness, manufacturer, and type of hard surface to polycarbonate.		

B10.0	STOW SYSTEM		
B10.1	A double axle mounted boom stow system shall be attached directly to tractor with a frame member extending to the right-hand and left hand rear axle housing and further extend forward to mower main frame. 3 point hitch system shall function normally.		
B10.2	Stow system shall consist of an axle brace extending from the mower mainframe running and below and attached to the right and left rear axle housing. The axle brace shall attach directly to the upright posts behind each axle.		
B10.3	The axle brace shall be of the square tube design. Axle brace shall be provided of not less than A500 material 4" x 4" square tube with a minimum 1/4" wall. The tube shall attach to the mower mainframe and extend below and attach to the right rear axle. A similar brace shall be provided to the left side.		
B10.4	The upper stow assembly shall be constructed of 1/4" x 4" x 4" square tubing saddle mounted to axle brace extending above and behind the right rear axle.		
B10.5	The adjustable stow plate shall be attached to upper stow assembly and shall be adjustable up or down and side to side in 3" increments.		

FLAIL SPECIFICATIONS 96" SUPER DUTY REAR FLAIL MOWER

General

It is the purpose of the following specifications to describe a PTO powered, 3-point mounted, flail type mower, which shall mow behind and or offset to the right hand side of the tractor. The rear mounted unit shall be designed to work with a 63", 75" side mounted flail mower, a 60" or 72" side mounted rotary mower. The unit shall be of the manufacturer's current production model, meeting or exceeding the terms of these specifications. Unit(s) shall be the manufacturer's most heavy-duty model available. The manufacturer shall furnish parts and operation manuals for the unit(s) bid. The manufacturer shall also guarantee equipment against defects in workmanship and materials for a period of (1) year. For any offer to be considered, all items must be of a standard production model, "not" modified for bid purposes. It is a requirement of this bid that vendors submit the pertinent information requested in each section marked "(VENDOR REQUIREMENT)". In the event the requested material and responses are not supplied, by the bidder, the bid submitted will be considered non-responsive and will automatically be rejected.

Line Number	SPECIFICATIONS REQUIRED	COMPLY YES / NO	EXCEPTIONS, DEVIATIONS, and ANSWERS
F1.0	<u>SAFETY AND TESTING</u>		
F1.1	Shall meet the following industry standards: SAE: J1001, J284, J990, J1065. ANSI/ASAE- S201.4, S203.13, S205.2, S279.12, S350, EP363.1. ASTM: A370, . (VENDOR REQUIREMENT) Submit compliance report signed by a registered Professional Engineer(PE).		
F1.2	Safety Shielding must include Foot Probe guarding as described in SAE Standard J1001. A safety guard consisting of a horizontal bar that is welded to the front cross tube with a 3/8" thick styrene butadiene rubber attached to the bar shall be standard on all side and rear flails.		
F1.3	Rubber deflector shield shall be bolted to back of bonnet.		
F1.4	Standard rotation models shall have internal, bolt in, formed steel, baffle. Reverse rotation models shall be equipped with front deflector shield. (VENDOR REQUIREMENT) Vendor shall describe baffle system.		

F2.0	<u>FLAIL SPECIFICATIONS 96" Rear Flail Mower</u>		
F2.1	Cutting width shall be at least 96" of actual cut.		
F2.2	Cutting assembly shall be flail type, mechanically powered by tractor's PTO.		
F2.3	Flail mower assembly weight shall be a minimum weight of 1146 pounds.		
F2.4	Cutting height shall be infinitely adjustable from 1/2" to 7". (It shall not be necessary to remove the roller mounting brackets to adjust cutting height)		
F2.5	Tractor's 3 point hitch system shall be used for mower's lift system.		

F3.0	<u>MOUNTING SYSTEM</u>		
F3.1	Unit shall have 3 point hitch Category II mountings.		
F3.2	3 point A frame shall be welded fabricated construction of not less than 3/8" x 3" Steel.		
F3.3	A frame shall be welded and reinforced to the cutter bonnet. (specifically excluding bolt on A frames)		

F4.0	<u>DRIVE SYSTEM</u>		
F4.1	PTO shaft shall have a minimum rating of 65 horsepower.		
F4.2	Gearbox shall be reversible, rated at 90 HP constant & 135 HP intermittent.		
F4.3	Drive belt system shall have automatic belt tensioner. Rated at 81 HP. (Specifically excluding back bend belt tensioner)		

F5.0	<u>CUTTING HEAD</u>		
F5.1	Cutting head shall have replaceable skid shoes.		
F5.2	Cutting head shall be rated for 540 RPM PTO.		
F5.3	Cutter head shall have PTO shaft storage stand.		

F5.4	Cutting head bonnet thickness shall be 10 gauge, 80,000 lb yield steel with 1/2" drive side and 3/8" carrier side steel end plates.		
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F6.0	<u>CUTTER SHAFT</u>		
F6.1	Cutter head shall have 104 forged, hardened to 40-50Rc, self cleaning, reversible all purpose knives, or 48 smooth cut grass knives. (VENDOR REQUIREMENT) Vendor to indicate type material and hardness of cutter knives.		
F6.2	Cutter shaft shall have operating speed of 2,400 RPM at rated tractor RPM.		
F6.3	Cutter shaft shall be a minimum of 4 3/4" diameter and 3/8" wall with 1 15/16" diameter bearings manufactured in the US. Each Bearing race shall have 2, 3/8" set screws, counter-sunk 60° from each other into cutter shaft, end shaft to prevent movement. Bearings shall be attached to cutter housing end plate with not less than 4, 1/2" x 2", NC, L9 bolts. (VENDOR REQUIREMENT) Vendor shall indicate: Country of bearing manufacture, size, and design of bearing attachment and hardware to bearings to both the shaft and cutter end plates.		
F6.4	Cutter shaft shall have maximum clearance of 3/32" from bearing wrap protection.		
F6.5	Knife swing circumference shall be a minimum of 58 1/2".		
F6.6	Knife interchangeability shall not require change of cutter shaft.		

F7.0	<u>GROUND ROLLER</u>		
F7.1	Ground roller system shall be a horizontal tube with replaceable stub shafts located at each end. A bearing assembly shall be located in the roller adjustment bracket located at each end of the cutter housing, and connect to the roller through the stub shafts.		
F7.2	Ground roller shall be 8 5/8" outside diameter tube with .280" side wall with outer ends, constructed of A53 steel, heat tapered to reduce scalping. 5/8" thick stub shaft mounting plates shall be welded to the tube in both ends.		
F7.3	Stub shafts shall be of the replaceable, bolt in design, with a 3 5/8" x 1/2" piloted flange, and attached to roller with 4, 7/16" x 1 1/2", NC, Grade 8, internal hex cap screws. Stub shaft shall be solid 1 piece design, with 1 3/8" bearing surface, outer diameter of not less than 5 1/4", and machined of 36,000 PSI steel.		
F7.4	A 1 3/8" double row spherical bearing shall support roller shaft on each end. Inner bearing area shall be protected by a full double lipped seal. Bearing shall be secured to the stub shaft with 2, 5/16" x 1/2" piloted set screws, located 60° from each other. Outer bearing cap shall be O-ring sealed, piloted to bearing and attached with not less than 6, 8-32 x 1/2", stainless steel, internal hex screws. (VENDOR REQUIREMENT) Vendor shall describe attachment of bearing to stub shaft, and design of outer bearing cap.		

Medium Duty Flail Cutter Head

H1.0	CUTTING HEAD		
H1.1	Shall have 50" of actual cut.		
H1.2	Shall have replaceable skid shoes.		
H1.3	Rubber deflector shield shall be bolted to back of bonnet.		
H1.4	Head shall weigh not less than 808 lbs.		
H1.5	Head shall rotate 180° around outer boom.		
H1.6	Shall have minimum of 81 HP drive belt system.		

H2.0	CUTTER HOUSING		
H2.1	Bonnet shall be minimum of 3mm thick and shall be constructed of 100,000 PSI yield steel.		
H2.2	Shall have minimum of 5/16" solid steel side walls.		
H2.3	Cutter head pivot assembly shall be fully welded and integrated into the cutter head design. (specifically excluding cutter heads that bolt to pivot assembly) (VENDOR REQUIREMENT) Vendor shall provide line drawing of cutter head attachment.		

H3.0	CUTTER SHAFT		
H3.1	Cutter shaft shall be a minimum of 6" diameter and 1/2" wall, DOM 1-513 type 5 tubing, with 2 3/16" diameter bearings manufactured in the US. Each Bearing race shall have 2, 3/8" set screws, counter-sunk 60° from each other into cutter shaft, end shaft to prevent movement. Bearings shall be attached to cutter housing end plate with not less than 4, 1/2" x 2", NC, L9 bolts. (VENDOR REQUIREMENT) Vendor shall indicate: Country of bearing manufacture, size, and design of bearing attachment and hardware to bearings to both the shaft and cutter end plates.		

H3.2	Cutter shaft shall have a minimum of 48 double edged knives.		
H3.3	Knives shall weight not less than 3 lbs. (per pair), and attached to the shaft so as the knives do not have direct contact with bolt. A spacer on each side of knives shall keep the knives centered between the cutter shaft lugs.		
H3.4	Knife swing circumference shall be no less than 70 5/8".		
H3.5	Cutter shaft shall rotate at minimum of 2,300 RPM at rated tractor RPM.		
H3.6	Cutter shaft shall have wire wrap protection each end.		

H4.0	<u>GROUND ROLLER</u>		
H4.1	Cutter height shall be adjustable up to 6" and accomplished through a bolt on adjuster.		
H4.2	Ground roller shall not be less than 6" diameter, with 22/64" side wall, constructed of DOM A513 Type 5 tubing.		
H4.3	Ground roller shall have a 5/8" thick bearing carrier plate welded integral with the tube. The carrier shall have a pilot hole of 3 5/8" diameter. With 4 tapped holes with 7/16"-14 NC threads.		
H4.4	Ground roller bearings shall be a 1 3/8", flanged type, ball bearing, with double lipped sealing, attached with 4, 7/16" grade 5 cap screws.		
H4.5	Ground roller shall have a through shaft, with the bearings attached, and anchored at each end with a 1 1/8" NF loc-nut at each end.		