



COUNTY OF McHENRY
McHENRY COUNTY ADMINISTRATION BUILDING
PURCHASING DEPARTMENT, ROOM 200
2200 N. SEMINARY AVENUE
WOODSTOCK, IL 60098

Sealed bids will be accepted in the above office until

May 14, 2019 by 2:00 P.M. (CST)

For:

BID #19-14

Parts & Labor to Upgrade Eight (8) Snow Plow Trucks' Control Systems

CONTACT PERSON

Djuana Leonard, C.P.M., Procurement Specialist

Phone - (815) 334-4605

Email – dleonard@mchenrycountyil.gov

MAILING ADDRESS: Purchasing Department, Room #200 2200 N Seminary Avenue Woodstock IL 60098	DROP OFF IN PERSON: Purchasing Department, Room #200 667 Ware Road Woodstock IL 60098
---	---

PLEASE PRINT

Company: _____ Date: _____

Contact Person: _____

Address: _____ City: _____

State: _____ Zip Code: _____

Email Address: _____

Telephone Number: _____

FEIN or SSN: _____

The attention of bidders is directed to the McHenry County Purchasing Ordinance, approved August 1, 2014, revised April 1, 2018. This Ordinance is incorporated by reference into this bid as if it were contained herein. If you have not received a copy of the above Ordinance and desire a copy, please contact the Purchasing office.

Any communication regarding this bid between the date of issue and date of award is required to go through the Procurement Specialist listed above (or the Purchasing Administrative Specialist). **Unauthorized contact with other McHenry County staff or officers is strictly forbidden.**

SCOPE OF WORK

The County of McHenry seeks qualified firms to provide parts & labor to upgrade eight (8) snow plow trucks' control systems. Subject to continuing need and availability of funds. All requirements are according to specifications enclosed herein.

SCHEDULE OF EVENTS

April 26, 2019	Bid Available on County Website
May 6, 2019	Vendors Questions and approval for equal/equivalents submitted via email to dmleonard@mchenrycountyil.gov by 12:00 P.M.(CST)
May 8, 2019	Vendors Questions Answered via Addendum; emailed and posted on County Website by 4:00 P.M.(CST)
May 14, 2019	BID DUE in Purchasing by 2:00 P.M.(CST) (No electronic bids accepted)

PAYMENT

Payment will be processed after receipt of delivery invoice and appropriate affidavit.

NON-DISCRIMINATION

Contractor shall comply with the Illinois Human Rights Act, 775 ILCS 5/1-101 et seq., as amended and any rules and regulations promulgated in accordance therewith, including, but not limited to the Equal Employment Opportunity Clause, Illinois Administrative Code, Title 44, Part 750 (Appendix A), 775 ILCS 5/1-102, which is incorporated herein by reference, and constituting of a written EEO Policy and a workforce profile that demonstrates its EEO practices. Furthermore, the Contractor shall comply the Public Works Employment Discrimination Act, 775 ILCS 10/0.01 et seq., as amended. The Contractor must have a written sexual harassment policy, which meets Illinois State Statutes, 775 ILCS, 15/3.

PREVAILING WAGE

The State of Illinois requires under Public Works Contracts that the general prevailing rate of wages in this locality be paid for each craft or type of worker hereunder. This requirement is in accordance with The Prevailing Wage Act, 820 ILCS 130/0.01 et seq., as amended. This shall include payment of the general prevailing rate for legal holiday and overtime work. It shall be mandatory upon the subcontractor under the Contractor. A copy of the prevailing wage rates is posted on the McHenry County website at www.co.mchenry.il.us under BIDS and RFP's. If wage rates change during the course of the project, the new rates will be available in the County of McHenry Purchasing Office. Contractors may access the Illinois Department of Labor website for updates at www.state.il.us/agency/idol.

It shall also be mandatory upon the Contractor to whom the Contract is awarded to insert into each subcontract and into the project Specifications for each subcontract a written stipulation to the effect that not less than the prevailing rate of wages shall be paid to all laborers, workers, and mechanics performing work under the Contract. It shall also be mandatory upon

each subcontractor to cause to be inserted into each lower tiered subcontract and into the project Specifications for each lower tiered subcontract a stipulation to the effect that not less than the prevailing rate of wages shall be paid to all laborers, workers, and mechanics performing work under the Contract. A Contractor or subcontractor who fails to comply is in violation of the Act.

CERTIFIED PAYROLL REQUIREMENTS ([Public Act 94-0515](#))

Effective August 10, 2005 contractors and subcontractors on public works projects must submit certified payroll records on a monthly basis to the public body in charge of the construction project, along with a statement affirming that such records are true and accurate, that the wages paid to each worker are not less than the required prevailing rate and that the contractor is aware that filing records he or she knows to be false is a Class B misdemeanor.

The certified payroll records must include for every worker employed on the public works project the name, address, telephone number, social security number, job classification, hourly wages paid in each pay period, number of hours worked each day, and starting and ending time of work each day. These certified payroll records are considered public records and public bodies must make these records available to the public under the Freedom of Information Act, with the exception of the employee's address, telephone number and social security number. Any contractor who fails to submit a certified payroll or knowingly files a false certified payroll is guilty of a Class B misdemeanor.

INCREASED PENALTIES FOR PREVAILING WAGE VIOLATIONS ([Public Act 94-0488](#))

Effective January 1, 2006, penalties for violations of the Prevailing Wage Act will increase from 20% to 50% of the underpaid amounts for second or subsequent violations. An additional penalty of 5% of the underpayment penalty must be paid to workers for each month the wages remain unpaid (up from the current 2% penalty).

For violations that occur after January 1, 2006, the debarment period --during which contractors are ineligible for public works contracts --increases from 2 years to 4 years if two notices of violation are issued/serious violations occur within a 5-year period. In addition, a new monetary penalty of \$5,000 may be assessed against contractors who retaliate against employees who report violations or file complaints under the Prevailing Wage Act.

OSHA REQUIREMENTS

The Occupational Safety and Health Act of 1970 (OSHA) "guarantees workers the right to a safe and healthful workplace". Under Section 5(a) (1) of the OSHA Act, the employer must "furnish to each of his employees' employment and a place of employment which are free from recognized hazards that are causing or likely to cause death or serious physical harm to his employees."

There are times when the County must hire entities and individuals (contractors) to perform services. To this end, contractors hired by the County of McHenry must perform their duties in a manner that is complaint with all state and federal health and safety laws and industry guidelines. It is the responsibility of the contractor to ensure that their personnel and subcontractors comply with all state and federal health and safety laws and regulations and industry guidelines, including, but not limited to those set forth by: OSHA and related regulations, the Safety Inspection and Education Act, the Health and Safety Act, the National Institute of Occupational Safety and Health, the National Fire Protection Association, the Centers for Disease Control, American Industrial Hygiene Association, the American Council of Governmental Industrial Hygienists, the Environmental Protection Agency, and the Department of Transportation.

SUBSTANCE ABUSE PREVENTION ON PUBLIC WORKS PROJECTS ACT

The successful bidder must be in compliance with State of Illinois HB-1855 (Public Act 095-0635), which amends the Prevailing Wage Act. Before an employer commences work on a public works project, the employer shall have in place a written program, which meets or exceeds the program requirements in this Act, to be filed with the public body engaged in the construction of the public works and made available to the general public, for the prevention of substance abuse among its employees. The testing must be performed by a laboratory that is certified for Federal Workplace Drug Testing

Programs by the Substance Abuse and Mental Health Service Administration of the U.S. Department of Health and Human Services.

PROCUREMENT OF GREEN PRODUCTS AND TECHNOLOGIES

As approved by the McHenry County Board in April 2008, it is in the interest of public health, safety and welfare and the conservation of energy and natural resources to use and promote environmentally responsible products. The County should strive to influence private purchases through the example of using government specifications and standards that are green or environmentally friendly when making its purchases.

Whenever available and cost-justified, the County should purchase those materials including the purchase of recycled products containing post-consumer materials rather than residual materials resulting from the processing or manufacturing from another product. To the extent practicable, all products standards shall emphasize functional or performance criteria, which do not discriminate against the use of, recycled materials.

McHenry County should cooperate to the greatest extent feasible with other governments and organizations to develop a comprehensive, consistent, and effective procurement effort intended to stimulate the market for recycled products, reusable products, products designed to be recycled, and other environmentally responsible products.

McHenry County shall continue to participate in and shall encourage other public jurisdictions to participate with the County in the purchase of products containing recycled content. Participation in such cooperative systems shall be aimed at obtaining maximum practical recycled content in County purchases, to obtain best available price for products with recycled content, to facilitate or encourage lower prices industry-wide and to encourage development of industries and markets dealing with recycled content products.

PROCUREMENT OF PRODUCTS THAT ARE ENERGY STAR QUALIFIED

McHenry County shall select, where life cycle and cost-effective, ENERGY STAR and other energy efficient products, when acquiring energy-using products. This information will be required by the bidder in their bid submittal.

SECURITY

The contractor represents and warrants to the County of McHenry that neither it nor any of its principals, shareholders, members, partners or affiliates, as applicable, is a person or entity named as a Specially Designated National and Blocked Person (as defined in Presidential Executive Order 13224) and that it is not acting, directly or indirectly, for or on behalf of a Specially Designated National and Blocked Person. The Contractor further represents and warrants to the County of McHenry that the Contractor and its principals, shareholders, members, partners, or affiliates, as applicable, are not directly or indirectly, engaged in, and are not facilitating, the transactions contemplated by this Agreement on behalf of any person or entity named as Specially Designated National and Blocked Person. The Contractor hereby agrees to defend, indemnify and hold harmless the County of McHenry, the Corporate Authorities, and all County of McHenry elected or appointed officials, officers, employees, agents, representatives, engineers and attorneys, from and against any and all claims, damages, losses, risks, liabilities, and expenses (including reasonable attorneys' fees and costs) arising from or related to any breach of the foregoing representation and warranties.

PURCHASE EXTENSION

This contract shall be offered for purchases to be made by other counties and governmental units within the State of Illinois as authorized by the Government Joint Purchasing Act. All purchases and payments made under this authority shall be made directly by the governmental unit to the Vendor. The County of McHenry shall not be responsible in any way for such purchase orders or payments. All terms and conditions of this contract shall apply to all orders placed by another governmental unit.

ADDENDUM

Should the Vendor require any additional information about this Bid, please fax to Purchasing (815-334-4680) any questions by the deadline as outlined in the schedule of events. ANY AND ALL changes to these specifications are valid only if they are included by Written Addendum to All Bidders. NO interpretation of the meaning of the plans, specifications, or other contract documents will be made orally. If required, all addenda will be faxed to bidder if a Notice of Intent to Bid has been completed and faxed to the Purchasing Office. In addition, all addenda are posted on the County of McHenry's website. Failure of the bidder to receive any such addendum or interpretation shall not relieve the bidder from obligation under this Bid as submitted. All addenda so issued shall become part of the bid documents. Failure to request an interpretation constitutes a waiver to later claim that ambiguities or misunderstandings caused by a bidder to improperly submit a bid.

Response to these questions will be made by means of an addendum. Only the Director of Purchasing has the authority to issue an addendum.

Addenda are written instruments issued by the County prior to the date for receipt of proposals, which modify or interpret the Bid by addition, deletions, clarifications or corrections.

Prior to the receipt of bids, addenda will be faxed or delivered to all who are known to have received a Notice to Bid. Each vendor shall ascertain prior to submitting a bid that all addenda issued have been received and, by submission of a bid, such act shall be taken to mean that such vendor has received all addenda and that the vendor is familiar with the terms thereof and understands fully the contents of the addenda.

TAXES

The County of McHenry is exempt from paying Illinois Use Tax, Illinois Retailers Occupation Tax, and Federal Excise Tax. The bidder's attention is directed to the McHenry County Purchasing Ordinance {S3-10, (9), (10), and (11)}.

INSURANCE

(1) GENERAL

The successful bidder shall maintain for the duration of the contract and any extensions thereof, at bidder's expense, insurance that includes "Occurrence" basis wording and is issued by a company or companies qualified to do business in the State of Illinois that are acceptable to the County, which generally requires that the company(ies) be assigned a Best's Rating of A or higher with a Best's financial size category of Class XIV or higher, in the following types and amounts:

(a) Commercial General Liability in a broad form, to include, but not limited to, coverage for the following where exposure exists: Bodily Injury and Property Damage, Premises/Operations, Independent contractors, Products/Completed Operations, Personal Injury and Contractual Liability; limits of liability not less than:

\$1,000,000 per occurrence and \$2,000,000 in the aggregate;

(b) Business Auto Liability to include, but not be limited to, coverage for the following where exposure exists: Owned Vehicles, Hired and Non-Owned Vehicles and Employee Non-Ownership; limits of liability not less than:

\$1,000,000 per occurrence, combined single limit for:
Bodily Injury Liability and Property Damage Liability;

(c) Workers' Compensation Insurance to cover all employees and meet statutory limits in compliance with applicable state and federal laws. The coverage must also include Employer's Liability with minimum limits of \$100,000 for each incident.

(2) EVIDENCE OF INSURANCE

The successful bidder agrees that with respect to the above required insurance that:

- (a) The County of McHenry shall be provided with Certificates of Insurance evidencing the above required insurance, prior to commencement of the contract and thereafter with certificates evidencing renewals or replacements of said policies of insurance at least fifteen (15) days prior to the expiration or cancellation of any such policies;
- (b) The contractual liability arising out of the contract shall be acknowledged on the Certificate of Insurance by the insurance company;
- (c) The County of McHenry shall be provided with thirty (30) days prior notice, in writing, of Notice of Cancellation or material change and said notification requirement shall be stated on the Certificate of Insurance;
- (d) Subcontractors, if any, comply with the same insurance requirements. In addition to being named as an additional insured on the Certificate of Insurance, each liability policy shall contain an endorsement naming the County of McHenry as an additional insured. A copy of the endorsement shall be provided to McHenry County along with the Certificate of Insurance; and,
- (e) Have McHenry County named as an additional insured and the address for certificate holder must read exactly as:

County of McHenry, **a body politic**
2200 N. Seminary Avenue
Woodstock, IL 60098

- (f) Insurance Notices and Certificates of Insurance shall be provided to:

McHenry County, Purchasing Department
2200 N. Seminary Avenue, Room 200
Woodstock, Illinois 60098

HOLD HARMLESS CLAUSE

The successful bidder will agree to indemnify, save harmless and defend the County of McHenry, its agents, servants, and employees, and each of them against and hold it and them harmless from any and all lawsuits, claims, demands, liabilities, losses and expenses, including court costs and attorney's fees, for or on account of any injury to any person, or any death at any time resulting from such injury, or any damage to property, which may arise or which may be alleged to have arisen out of or in connection with the work covered by this contract upon award. The foregoing indemnity shall apply except if such injury, death or damage is caused directly by the willful and wanton conduct of the County of McHenry, its agents, servants, or employees or any other person indemnified hereunder.

BID RESPONSE

It is highly recommended that the vendor completely read the bid prior to filling out to become acquainted with terms and conditions of the bid document and merchandise requirements. No relief will be allowed from the bid conditions unless you take written exception to that condition on your bid.

BIDS must be submitted by mail or in person (One Original, no electronic submission).

BIDS are due by 2:00 P.M. (CST) on May 14, 2019.

Sealed Bid envelopes are to be clearly marked with the Bid Number, title, time & date of opening.

Bidders are urged to respond to this bid request in every case to insure being maintained on current bid lists. Explanations of the reasons for not bidding will assist in maintaining the bidder on the correct bid list(s).

SUBMITTAL

Submit one (1) bid, multiple bids will not be accepted.

GENERAL CONDITIONS

This bid shall be firm for at least 120 days after the latest time specified for submission for bids and thereafter until written notice is received from the bidder.

AWARD OF ORDER

The County will award a purchase order to the lowest responsive, responsible bidder meeting the County's requirements as listed in this document. The County will be the sole judge of acceptability of any products offered.

WORKMANSHIP

Items shall be manufactured according to the highest traditions of the industry and shall meet all commercial standards of quality. The County shall be the sole judge of acceptable products. Unacceptable products will be rejected and suitable price adjustments made.

MISCELLANEOUS

It is the bidder's task to be familiar with the referenced items and to offer only products of equal or greater quality. Any questions on specifications should be directed to the Purchasing Department.

EXCEPTIONS

The bid speaks for itself. Bidders taking exception to any terms, conditions or specifications of this bid must clearly state in writing such exception(s) either on or with their bid. The County will be the sole judge of the acceptability of any exception noted, and is not bound to consider any bid submitted with exceptions.

ALTERNATES

Trade names are used solely for the purpose of setting minimum standards of quality and performance and are not to be construed as exclusionary. Bidders are encouraged to contact the Purchasing Department prior to the bid opening for the purpose of clarifying specifications.

FULL PRICING AND CONTINGENCIES

The County shall hold the successful bidder to bid pricing. Additional charges for contingencies discovered by the vendor at any time after the date of opening of this bid will not be considered for payment by the County.

RECOURSE FOR UNSATISFACTORY MATERIALS

Payment shall be contingent upon the County's inspection of and satisfaction with completed work. Any defective work or materials, non-conformance to bid specifications, damaged materials, or unsatisfactory installation shall be corrected to the County's satisfaction by the successful bidder at no additional charge.

TERMINATION

Failure to comply with the terms and conditions as herein stated shall be cause for cancellation of the contract. The County will give written notice of unsatisfactory performance and the contractor will be allowed thirty (30) days to take corrective action and accomplish satisfactory control. If at the end of the thirty days, the County deems the contractor's performance

still unsatisfactory, the contract shall be canceled. The exercise of its right of cancellations shall not limit the County's right to seek any other remedies allowed by law.

The successful bidder will agree that the resulting contract is made subject to available budgetary appropriations and shall not create any obligation on behalf of the County in excess of such appropriations. In the event that no funds or insufficient funds are appropriated and budgeted, this Contract shall terminate without penalty or expense to the County thirty (30) days after written notification of termination from the County.

The successful bidder will agree that pursuant to requirements imposed under Illinois law, the County shall have 120 days after each election of county board members to terminate this Agreement, without cause and without penalty.

CHOICE OF LAW AND VENUE

The bidder agrees that this bid has been executed and delivered in Illinois and that their relationship and any and all disputes, controversies or claims arising under this bid or any resulting contract shall be governed by the laws of the State of Illinois, without regard to conflicts of laws principles. The bidder further agrees that the exclusive venue for all such disputes shall be the Circuit Court of the 22nd Judicial Circuit of McHenry County, Illinois, and the bidder hereby consent to the personal jurisdiction thereof.

COMPLIANCE WITH LAWS

The bidder hereto covenants and agrees to comply with all applicable federal, state, and local laws, codes, ordinances, rules and regulations. Failure to comply with the terms of this provision shall constitute a breach of contract and permit the County to terminate this (Request for Sealed Proposal/Bid) in accordance with the termination provisions stated herein.

REJECTION OF BIDS, WAIVER OF IRREGULARITIES

McHenry County reserves the right to reject any or all bids, to waive irregularities, and to accept that bid which is considered to be in the best interest of the County. Any such decision shall be considered final.

PROTEST PROCEDURES

Any actual or prospective bidder or Contractor who is aggrieved in connection with the solicitation or award of a Contract may protest to the Director of Purchasing. Any protest must be submitted in writing within ten (10) calendar days from the issuance of the solicitation, addendum, and notice of award or other decision by the Purchasing Department.

BIDDER'S ATTACHMENT TO THE BID

Any attachment to this bid, as required by the bid conditions, or made at the bidder's option, must reference on their face the bid title, opening date, and time.

DELIVERY

Delivery will be considered in making the award and the bidders shall state, in the spaces provided, expected delivery after receipt of Purchase Order. Failure to meet said delivery promises without prior consent of the Director of Purchasing will be considered a breach of faith.

FREIGHT

Freight is all inclusive unless otherwise stated.

FUEL SURCHARGE

The County of McHenry does NOT accept any fuel surcharges.

SPECIFICATIONS

The McHenry County Division of Transportation is soliciting qualified bidders to provide parts and labor to upgrade eight (8) snow plow trucks' control systems from the Monroe 840 to the Force America 6100 or equivalent. Completion of upgrade shall be completed by October 1st 2019.

CONTROL CENTER: (MPJC Ultra 6100 or equivalent)

Controls for all valve functions and electronic spreader control will be integrated into a single, self-contained control center. The control center shall be a padded armrest style that is ergonomically designed. Control center shall be modular in design for ease of installation and service, and wiring and connectors shall be keyed and color-coded throughout. All components must be durable for long life and trouble free operation.

The electronic controller shall be a fully proportional multi-stick controller to operate all cylinder functions. Multi-stick PWM driver electronics shall include as standard the capability to control at least 9 proportional outputs simultaneously. The control is available in a 3-stick, 4-stick, or 5-stick configuration. Controls for spreader must be located on armrest at the operator's fingertips. There shall also be four auxiliary rocker switches available with an additional fifth switch being the main power switch for the spreader control. The switches shall be located between the joysticks and spreader control interface and each shall be rated for 15 amps continuous current minimum. Console options shall be capable of supplying full rated power to switch outputs when all four auxiliary switches are at full 15 amp load.

For ease of operation the multi-stick control shall include the following features: LED-backlit nomenclature for all joystick functions and a momentary push-button at the top of the hoist stick to provide hoist-interlock. The "Hoist" decal shall be illuminated amber while disabled, and change to green backlighting when the driver engages the hoist interlock button. The green "Hoist" LEDs shall remain illuminated while the hoist is under operation and shall time-out after a period of hoist inactivity that is selectable from 0 to 15 seconds.

The plow, wing, scraper, or other joysticks shall have the option to include a momentary pushbutton for activation of remote spreader standby, remote spreader blast, or electric joystick interlock. The multi-stick communication hardware/software shall include 4 integral float options. The use of add-on float modules is unacceptable. For flexibility of use the integral float programming shall have the following standard features:

- (4) axis functional float on any or all of the outputs with selectable forward/back, right/left functionality
- 3-way or 4-way functionality
- Selectable (3) second float delay timer
- Optional float enable switch inputs.
- When float output for a given joystick function is active, the LED-backlit nomenclature shall blink ON/OFF to provide visual feedback to the operator that the float function is engaged.

To ensure longevity of performance all lighting must be solid-state LED technology. The use of incandescent lamps or EL backlighting is unacceptable.

All function joysticks shall be of contact-less Hall-effect design and offer up to a 5-Million cycle life. The use of potentiometers is unacceptable. To increase safety of operation, joystick communication hardware/software shall include the following standard features:

- Input power monitor circuitry with power quality diagnostics,
- Redundant dual-reference joystick signals for each joystick axis
- Joystick input off-center checking on all axes and output shutdown on system power-up
- Joystick out-of-range fault condition checking and output shutdown
- True outputs off with joystick centered
- LED-backlit nomenclature shall illuminate and flash RED when any error condition exists and an audible alarm shall sound.

- LED-backlit nomenclature shall blink ON/OFF with increasing frequency as the corresponding function is increased in speed to give the operator visual feedback of each joystick output.

Multi-stick control shall communicate all joystick data over the spreader control CAN bus. For ease of service and diagnostics the multi-stick control must have the following easily accessible through the spreader control calibration menus:

- Unique MIN/MAX adjustments for each joystick function (forward, back, left and right)
- On-screen output status indicator's for each PWM output
- Audible and visible output error status indicators with flashing error codes for each joystick function

The multi-stick control joystick outputs shall be communicated over the spreader control CAN bus to the Valve Module. Spreader control outputs and joystick control outputs shall be operated on the same Valve Module, or multiple modules as necessary.

The electronic spreader control shall be designed for precise, closed-loop control of granular and prewet liquid applications and operate on a CAN Bus protocol. The Central Processing Unit (CPU) shall have keyed and color coded connections to prevent incorrect installation. The CPU must be mounted in the cab with visual access to diagnostic LED's. Mounting of the CPU unit outside of the cab is unacceptable. The unit shall have USB connectivity for file and data transfer, Ethernet connection, a J1939 communication port for connection to the vehicle bus, a second CAN bus communication port for spreader-only data use, a J1708 connection for a road and air temperature sensor, and a RS-232 connection for AVL communication. The CPU shall have on-board diagnostics, which provide real-time status of CAN bus communication, processor activity, and power status. The CPU shall have a built-in audible alarm for diagnostic purposes. The CPU operating system shall NOT be Windows-based.

The spreader control interface shall have two, color-coded, continuous rotation encoders for granular and spinner control. These encoders shall have integrated push buttons for blast mode and stand-by. The controller shall have a third multifunction 4-way joystick that has an integrated rotary encoder and push button, that can be used for menu navigation, prewet liquid control, or an additional conveyor function. There shall be four, two-way soft keys included in the interface that are generically-labeled and user-configurable for different functions depending on the equipment needs. The controller shall also utilize USB technology that is capable of using a Supervisor key to provide access to the calibration parameters without the access code. The entire operator interface shall be backlit and encased in flexible silicone material with wear-limiting coating applied to the base silicone material. The operator interface shall communicate on the spreader control system CAN bus. The use of an LCD touch screen to change spreader function settings while driving is unacceptable.

The spreader control display shall be a remotely-mounted, 10" diagonal color TFT LCD with captive touch and a low-profile 16:9 widescreen format and minimum of 1024X600 pixel resolution. LCD shall have variable LED backlighting. CCFL backlighting is unacceptable. The display shall include a scratch-resistant polycarbonate lens with anti-glare coating. A power status LED shall be immediately visible on the front of the display and shall report display diagnostics including loss of CAN communication. Display unit shall have a built-in audible alarm. To avoid driver distraction, the display shall have no integrated dials or pushbuttons, and shall not be touch screen. Display shall communicate on the spreader control system CAN bus.

The operator menus shall be color-coded to match the encoder knobs on the operator interface. The display shall be capable of displaying the following on-screen simultaneously: Granular material name, granular material set point and actual application rate including units of measure, prewet liquid name, prewet liquid set point and actual application rate including units of measure, spread width, road temperature, air temperature, material usage total, liquid usage total, vehicle speed, and current date and time. The operator shall have the option of selecting five data items to be displayed onscreen during operation. The display will also provide four warning light indicators for low oil level, body up, oil temp, and filter bypass. These warning lights are to be functional regardless of spreader operation or status.

The display shall have integrated antennas for GPS and cellular communication. Cab mounted antennas are unacceptable. The display shall be capable of communicating wirelessly with road and air temperature sensors. The screen shall provide visual indication that the spreader control is connected to a compatible AVL device, if equipped. The spreader control shall warn operator if communication with the AVL device fails at power-up.

A proportional PWM driver and input module (Valve Module) shall be remotely-mounted inside the hydraulic valve enclosure for control of both spreader control and joystick control outputs. The entire Valve Module shall be of rugged design for the mobile environment, and must meet IP68 requirements for dust and water ingress. The Valve Module shall include a minimum of ten proportional PWM outputs with potted valve output connections. All outputs shall be protected against short-circuits. Outputs shall be current-compensated and have adjustable PWM frequency. There shall be a minimum of five switch-to-ground type inputs for monitoring hydraulic system inputs such as oil level, body up, High and Low filter bypass, and oil temperature warnings. A minimum of two switch-to-ground type pulse train inputs shall be included in the Valve Module for connection of feedback sensors such as auger feedback and prewet liquid flowmeter feedback. A keyed and color-coded connection shall be provided for CAN bus connection to the CPU module inside the cab. A second CAN bus connection must be provided for daisy-chaining of multiple Valve Modules within the valve enclosure. Diagnostic LED's shall be included for every input and output on the Valve Module, as well as a power status LED and CAN bus activity LED's. The Valve Module shall be potted.

The integrated spreader control and joystick control system shall be equipped with a qualified ESTOP device that immediately disconnects battery power from all outputs. All spreader control and joystick-operated outputs shall immediately cease to function and the system display shall inform the operator that the ESTOP device has been activated. The ESTOP device must remove power from all output devices, while maintaining power to the display and CPU for diagnostic purposes. Resetting of the ESTOP device shall not result in spreader control and joystick-operated outputs returning to an ON state without operator acknowledgement.

The Control Center shall be a FORCE America Patrol Commander MPJC Ultra series with a 6100 model spreader control or equivalent.

ADJUSTABLE PLOW POWER FLOAT:

The control center shall have the ability adjust the plow power float pressure through the operator interface panel. The operator shall be able to adjust the plow up pressure on the fly via two softkeys. The up pressure being applied to the cylinder shall be display on the LCD screen as a percentage. Once properly calibrated, this percentage shall indicate the amount of the total weight of the plow being removed from the road surface. Each press of the up or down softkey will change this percentage by 1%, 5%, 10% or 25% increments as selected in calibration.

ISOBUS CONNECTION:

A rugged, easy-to-use connector system shall be provided for connection of various slide-in spreader bodies and trailers (hereby implements) to the vehicle. The system shall conform to ISO 11783-2 standards, and consist of a chassis-mounted bulkhead connector, an implement connector plug and cable assembly. The mated connection shall be rated to a minimum environmental rating of IP67 and shall be largely constructed of high grade plastic material that will not break if dropped or impacted. All power supply wiring (rated for up to 60A) and CAN bus wiring between the vehicle and the implement shall pass through this connection.

The chassis-mounted bulkhead connector shall provide a break-away feature to prevent damage to the connector or cable in the event the operator dismounts/parks the implement and does not disconnect the cable before driving away from the implement. The bulkhead shall be designed to withstand multiple breakaway cycles. To ensure CAN bus signal integrity, the bulkhead shall employ a self-terminating circuit to automatically terminate the CAN bus when the implement is disconnected.

The implement connector shall be a modular design to allow for cleaning and maintenance, and shall incorporate a circumferential cable seal and strain relief. A single jacketed cable shall be provided from the implement connector to

the electronic devices on the implement. Sufficient length of jacketed cable shall be provided to allow for strain relief of the cable, over the cable jacket, on the implement. The use of multiple cables or individual wires in split loom or woven mesh coverings shall not be accepted. A tethered dust cap shall be provided to protect the implement connector when the implement is disconnected.

DIRECT LIQUID MODULE:

The 6100 spreader control shall include an ISOBUS connection mounted at the rear of the chassis. A CAN BUS and input/output module shall be mounted on the direct liquid system and connect to the chassis through the ISOBUS connection. The input/output module shall have 2-inputs for flowmeter feedback and low liquid. There shall be 4-outputs rated at 5 amp each for multi lane ball valves and anti-drip valve.

SPREADER CONTROL: (Stand-Alone SSC6100 or equivalent)

The electronic spreader control shall be designed for precise, closed-loop control of granular and prewet liquid applications and operate on a CAN Bus protocol. The Central Processing Unit (CPU) shall have keyed and color coded connections to prevent incorrect installation. The CPU shall be mounted in the cab with visual access to diagnostic LED's. Mounting of the CPU unit outside of the cab is unacceptable. The unit shall have USB connectivity for file and data transfer, Ethernet connection, a J1939 communication port for connection to the vehicle CAN bus, a second CAN bus communication port for spreader-only data use, a J1708 connection for a road and air temperature sensor, and a RS-232 connection for AVL communication. The CPU shall have on-board diagnostics, which provide real-time status of CAN bus communication, processor activity, and power status. The CPU shall have a built-in audible alarm for diagnostic purposes. The CPU operating system shall NOT be Windows-based.

The spreader control interface shall have two, color-coded, continuous rotation encoders for granular and spinner control. These encoders shall have integrated push buttons for blast mode and stand-by. The controller shall have a third multifunction 4-way joystick that has an integrated rotary encoder and push button, that can be used for menu navigation, prewet liquid control, or an additional conveyor function. There shall be four, two-way soft keys included in the interface that are generically-labeled and user-configurable for different functions depending on the equipment needs. The controller shall also utilize USB technology that is capable of using a Supervisor key to provide access to the calibration parameters without the access code. The entire operator interface shall be backlit and encased in flexible silicone material with wear-limiting coating applied to the base silicone material. The operator interface shall communicate on the spreader control system CAN bus. The use of an LCD touch screen to change spreader function settings while driving is unacceptable.

The spreader control display shall be a remotely-mounted, 10" diagonal color TFT LCD with capacitive touch and a low-profile 16:9 widescreen format and minimum of 800X480 pixel resolution. LCD shall have variable LED backlighting. CCFL backlighting is unacceptable. The display shall include a scratch-resistant polycarbonate lens with anti-glare coating. A power status LED shall be immediately visible on the front of the display and shall report display diagnostics including loss of CAN communication. Display unit shall have a built-in audible alarm. To avoid driver distraction, the display shall have no integrated dials or pushbuttons, and shall not be touch screen. LCD shall communicate on the spreader control system CAN bus.

The operator menus shall be color-coded to match the encoder knobs on the operator interface. The display shall be capable of displaying the following on-screen simultaneously: Granular material name, granular material set point and actual application rate including units of measure, prewet liquid name, prewet liquid set point and actual application rate including units of measure, spread width, road temperature, air temperature, material usage total, liquid usage total, vehicle speed, and current date and time. The operator shall have the option of selecting five data items to be displayed onscreen during operation. The display will also provide four warning light indicators for low oil level, body up, oil temp, and filter bypass. These warning lights are to be functional regardless of spreader operation or status.

The display shall have integrated antennas for GPS and cellular communication. Cab mounted antennas are unacceptable. The display shall be capable of communicating wirelessly with road and air temperature sensors. The screen shall provide visual indication that the spreader control is connected to a compatible AVL device, if equipped. The spreader control shall warn operator if communication with the AVL device fails at power-up.

A proportional PWM driver and input module (Valve Module) shall be remotely-mounted inside the hydraulic valve enclosure for the spreader control outputs. The entire Valve Module shall be of rugged design for the mobile environment, and must meet IP68 requirements for dust and water ingress. The Valve Module shall include a minimum of eight proportional PWM outputs with potted valve output connections. All outputs shall be protected against short-circuits. Outputs shall be current-compensated and have adjustable PWM frequency. There shall be a minimum of five switch-to-ground type inputs for monitoring hydraulic system inputs such as oil level, body up, Hi and Low filter bypass, and oil temperature warnings. A minimum of two switch-to-ground type pulse train inputs shall be included in the Valve Module for connection of feedback sensors such as auger feedback and prewet liquid flowmeter feedback. A keyed and color-coded connection shall be provided for CAN bus connection to the CPU module inside the cab. A second CAN bus connection must be provided for daisy-chaining of multiple Valve Modules within the valve enclosure. Diagnostic LED's shall be included for every input and output on the Valve Module, as well as a power status LED and CAN bus activity LED's. The Valve Module shall be potted. The Valve Module shall include a stainless steel legend plate with engraved text for easy cleaning and identification of Valve Module connections.

The spreader control system shall be equipped with a qualified ESTOP device that immediately disconnects battery power from all outputs. All spreader control outputs shall immediately cease to function and the system display shall inform the operator that the ESTOP device has been activated. The ESTOP device must remove power from all output devices, while maintaining power to the display and CPU for diagnostic purposes. Resetting of the ESTOP device shall not result in spreader control outputs returning to an ON state without operator acknowledgement.

The spreader control shall be a FORCE America model SSC6100 (Gen5) or prior approved equal. Bidders shall submit questions and approval for equal/equivalents via email no later than May 7, 2019.

Vehicles included in plow control upgrade:

Vehicles 16 & 30

- Plow with 3-function wing and auger, spinner, prewet

Vehicles 29 & 32

- Plow with 2 function wing and auger, spinner, prewet

Vehicles 14 & 27

- Hooklift with plow & 2 function wing with auger, spinner, prewet, & direct

Vehicle 15

- Hooklift with plow & 3 function wing with auger, spinner, prewet, & direct

Vehicle 26

- Plow with 3 function wing and auger, spinner, & prewet

Bid Page

Vehicles 16 & 30

- Plow with 3-function wing and auger, spinner, prewet

Per Vehicle Upgrade cost: \$ _____

Vehicles 29 & 32

- Plow with 2 function wing and auger, spinner, prewet

Per Vehicle Upgrade cost: \$ _____

Vehicles 14 & 27

- Hooklift with plow & 2 function wing with auger, spinner, prewet, & direct

Per Vehicle Upgrade cost: \$ _____

Vehicle 15

- Hooklift with plow & 3 function wing with auger, spinner, prewet, & direct

Per Vehicle Upgrade cost: \$ _____

Vehicle 26

- Plow with 3 function wing and auger, spinner, & prewet

Per Vehicle Upgrade cost: \$ _____

Hourly labor rate for additional services which may be requested: \$ _____

Notes or Exceptions to this Bid: _____

REFERENCES

List three (3) references that you have done similar work, service or supplied similar products to within the last twelve (12) months (Only correct contact names and phone numbers will be acceptable).

Entity: _____

Address: _____

City, State, Zip Code: _____

Telephone Number: _____

Contact Person: _____

Email Address: _____

Entity: _____

Address: _____

City, State, Zip Code: _____

Telephone Number: _____

Contact Person: _____

Email Address: _____

Entity: _____

Address: _____

City, State, Zip Code: _____

Telephone Number: _____

Contact Person: _____

Email Address: _____

THIS PAGE IS MANDATORY

SIGNATURE PAGE

PROPOSER'S CERTIFICATION

I have carefully examined the Bid, Scope of Work, Specifications, and any other documents accompanying or made a part of this Bid.

I hereby propose to furnish the goods or services specified in the Bid. I agree that my proposal will remain firm for a period of up to 120 days in order to allow the County adequate time to evaluate the qualifications submitted.

I verify that all information contained in this proposal is truthful to the best of my knowledge and belief. I further certify that I am duly authorized to submit this Bid on behalf of the firm as its act and deed, and that the firm is ready, willing, and able to perform if awarded the contract.

I further certify, under oath, that this proposal is made without prior understanding, agreement, connection, discussion, or collusion with any other person, firm or corporation submitting a proposal for the same product or service. No officer, employee or agent of the County of McHenry or any other proposer is interested in said proposal and that the undersigned executed this Proposer's Certification with full knowledge and understanding of the matters therein contained and was duly authorized to do so.

**State of Incorporation _____

(Individual - Partnership - Company - Corporation)

(Business Address)

(City, State and Zip Code)

(By Printed Name and **Original Signature in Ink**)

(Title)

(Witness Signature)

(Title)

(Telephone No)

(Fax No.)

(Date)

End of Document