



CITY of NOVI CITY COUNCIL

Agenda Item: 1
October 20, 2014

SUBJECT: Approval to purchase a John Deere 6105D tractor outfitted with a Tiger LRS Bengal Brute roadside mower from Flint New Holland Inc., the low bidder, in the amount of \$102,961.

SUBMITTING DEPARTMENT: Department of Public Services – Field Operations Division

M.W.

CITY MANAGER APPROVAL:

[Signature]

EXPENDITURE REQUIRED	\$102,961
AMOUNT BUDGETED	\$113,335
APPROPRIATION REQUIRED	N/A
LINE ITEM NUMBER	210-211.00-982.000 (Drain Fund – Miscellaneous Equipment)

BACKGROUND INFORMATION:

The Novi City Council appropriated \$113,335 in the fiscal year 2014-2015 for the purchase of a replacement utility tractor equipped with a boom mower for detention basin and roadside mowing. The mower legally stows behind the tractor during transport to each mowing location and is extended once the job begins. This type of specialized mowing equipment provides the ability to properly manage vegetation along storm systems and keep roadways safe.

This new mowing equipment would replace an existing tractor and mower deck that is 37 years old and has no advanced technology to assist with vegetation clearing operations. The new tractor/mower would enhance service to the community by allowing operators the ability to guide a pivoting mower head up to 24 feet from the side of the tractor; as well as better clearing of storm water basins, ditch lines, and minimizing roadway sight distance concerns. The enclosed cab on the tractor would provide the operator a safe environment in which to work along the roadway, and the articulated boom negates the current need to travel along dangerously steep ditch cross-slopes.

Two bids were received on September 16, 2014 following a public bid solicitation period. Upon a thorough evaluation, DPS staff determined that Flint New Holland, Inc. met all specifications by providing a responsive bid on the John Deere 6105D, Four Wheel Drive (4WD) tractor; and on the Tiger Legal Rear Stow (LRS) Bengal Brute rotary mower.

The procurement of this mower results in a \$10,374 savings from the original allocated amount (\$113,335 budgeted from the \$102,961 expenditure). The equipment would be delivered to the City in the 3rd quarter.

RECOMMENDED ACTION: Approval to purchase a John Deere 6105D tractor outfitted with a Tiger LRS Bengal Brute roadside mower from Flint New Holland Inc., the low bidder, in the amount of \$102,961.

	1	2	Y	N
Mayor Gatt				
Mayor Pro Tem Staudt				
Council Member Casey				
Council Member Fischer				

	1	2	Y	N
Council Member Markham				
Council Member Mutch				
Council Member Wrobel				

Existing 1977 Roadside Mowing Equipment



Proposed Tractor and Mower



CITY OF NOVI
Roadside Mower
September 16, 2014 2:00 P.M.

	Flint New Holland	D & G Equipment
Roadside Mower, As specified (Lump Sum)	\$ 102,961.00	\$ 107,236.39
Cab Make/Model	John Deere 6105D	John Deere 6105D Cab, 4WD
Boom Mower Make/Model	Tiger LSR Bengal Bruit	Alamo Samurai 22' Boom
Delivery ARO	60-90 days	110 days or less
Exceptions	No Exceptions	Exceptions noted on separate sheet
Comments	No charge for on site calls for warranty issues. No charge for trucking for warranty issues.	Both the John Deere 6105 & Samurai are available through MiDeal. D&G can also suervice the tractor & boom unlike the Tiger Dealer.



CITY OF NOVI
ROADSIDE MOWER
SPECIFICATIONS

GENERAL

The City of Novi is accepting bids to purchase a new current production model boom type rotary tractor mower. The work consists of furnishing and delivering a fully assembled, operable unit in compliance with all specifications described herein. A full set of specifications for the mower shall be enclosed with the bid. The mower shall be assembled to operate in the mower's designed maximum parameters while mowing with the boom fully extended without any stress or deformation of the unit. All fluids and lubricants shall be at the manufacturer's recommended levels with no advertisement of any sort on the unit. The unit shall be delivered clean and free of defects.

These specifications reference specific makes and models in order to establish a minimum acceptable standard. Such references are not intended to eliminate any manufacturer from the bidding process. Compliance with the "spirit of the specification" is not acceptable. Deviations shall be clearly called out in writing and explained in an attachment to the bidder's submitted proposal. Failure to follow these instructions shall constitute grounds for elimination of the bidder's proposal from consideration. Deviations may be permitted if determined to be in the best interest of the City.

All equipment and components shall be mounted in such a manner to provide adequate clearance for maintenance and operation of the units while not affecting the integrity and performance of the equipment. All equipment shall comply with Federal, State, local and OSHA Standards. Payment for the unit shall not be approved until all specifications are fulfilled, including submittal of manuals, registration, and all warranties.

It is the intent of these specifications to describe a mower in sufficient detail to assure that product reliability, design integrity, technical soundness and mowing performance shall be accomplished. The unit provided shall be new, of current manufacture. All parts and specifications not specifically mentioned, which are necessary to provide a complete tractor mower, shall be included in the bid and shall conform in strength and quality of material and workmanship to what is normally provided to the City's expectations.

The unit shall be delivered completely assembled, serviced and road ready. The bidder shall have a qualified service representative in attendance with the mower during the startup operation to make any adjustments. The bidder shall supply a training session on the City's location upon delivery to assure proper operation of the mower.

LINE NUMBER	SPECIFICATIONS REQUIRED	COMPLY YES/NO
JOHN DEERE 6105D CAB, 4WD		
General		
	It is the intent of this specification to describe an industrial self-propelled mower tractor. The unit shall be the manufacturer's current production model meeting or exceeding the terms of this specification.	YES
	For any offer to be considered all items must be of a standard production model and not modified for bid purposes.	YES
Engine		
T1.0		
T1.1	105 (78 kW) 97/68/EC Engine horsepower @ 2200 RPM	YES
T1.2	87 (65 kW) PTO Horsepower @ 2100 RPM	YES
T1.3	John Deere PowerTech PWX Diesel In-line 4-Cylinder Wet-Sleeve with High Pressure Common Rail (HPCR) Fuel System and 16 Valve Head	YES
T1.4	276 CID (4.5 Liters)	YES
T1.5	Fixed Turbocharger and Exhaust Gas Recirculation	YES
T1.6	Closed Cooling System	YES
T1.7	PowerCore G2 Air Filtration System with Permanent Pre-Cleaning and Safety element	YES
T1.8	Variable Geometry Turbocharger and Exhaust Gas Recirculation	YES
T1.9	Underhood after treatment system with Deluxe corner post exhaust	YES
T1.10	Foot throttle control	YES
T1.11	Front auxiliary drive preparation kit	YES
Transmission		
T2.0		
T2.1	9 forward speeds, 9 reverse speeds, with power reverse	YES
T2.2	Neutral safety start system	YES
T2.3	Wet Clutch	YES
T2.4	Seat Activated PTO Warning	YES
Rear Axle and Tires		
T3.0		
T3.1	Planetary final drives	YES
T3.2	Flanged rear axle	YES
T3.3	8 position wheel with two (2) 18.4-34R tires	YES
Front Axle and Tires		
T4.0		
T4.1	MFWD Engagement, Mechanical	YES
T4.2	8 position wheel with two (2) 13.6-24R tires	YES
Steering and Brakes		
T5.0		
T5.1	Hydrostatic Power Steering	YES
T5.2	Sealed Wet Disk Brake	YES

LINE NUMBER	SPECIFICATIONS REQUIRED	COMPLY YES/NO
T5.3	Rear axle differential lock	YES
T6.0	Hydraulics	
T6.1	Open Center Hydraulic System	YES
T6.2	Load Sensing Constant Flow Pressure Compensated (PC) System 20.0 GPM (75.7 L/min) Pump Low @ rated speed (2200) 2 SCV's; Mechanical; ISO Breakaway Couplers	YES
T6.3	Dual selective control valve with couplers	YES
T6.4	Power beyond, allows hydraulic pump to power implements that have independent control valves	YES
T6.5	Hydraulic oil cooler	YES
T7.0	Power Take off Shaft	
T7.1	540/1000 RPM, 1-3/8 In. Independent Rear PTO, Reversible Shaft and PTO Master Shield	YES
T7.2	Electro-hydraulic Activation	YES
T7.3	Wet clutch	YES
T7.4	Neutral start Safety Switch	YES
T7.5	Operator presence safety PTO warning	YES
T8.0	Rock Shaft and Draw Bar	
T8.1	Mechanical Hitch	YES
T8.2	Telescopic draft links	YES
T8.3	Category 2 , 3-point hitch	YES
T8.4	5500 Lb. Lift capacity	YES
T8.5	Sway chain retainers	YES
T8.6	Category 2 drawbar, swinging	YES
T9.0	Instrumentation	
T9.1	Tachometer	YES
T9.2	Electronic fuel gauge	YES
T9.3	Oil pressure indicator light	YES
T9.4	Air Cleaner restriction indicator	YES
T9.5	Coolant temperature gauge	YES
T9.6	Turn Signal Indicator light	YES
T9.7	Alternator Indicator light	YES
T9.8	Hazard switch	YES
T9.9	Park brake indicator	YES
T9.10	MFWD engagement indicator light	YES
T9.11	Hour meter	YES
T10.0	Electrical	

LINE NUMBER	SPECIFICATIONS REQUIRED	COMPLY YES/NO
T10.1	12 volt electrical system	YES
T10.2	One 12-Volt Battery, 925 Cold Cranking Amps	YES
T10.3	7 terminal ASAE outlet socket	YES
T10.4	3 Pin Power Outlet	YES
T10.5	90 amp alternator	YES
T11.0 Lights		
T11.1	Four front grille headlights	YES
T11.2	Two Front Outer Roof Work lights	YES
T11.3	Roof Mounted Flashing Hazard Lights	YES
T11.4	Two Rear Fender Tail Lights with Brake Lights	YES
T12.0 Miscellaneous		
T12.1	SMV emblem	YES
T12.2	51.7 gallon fuel tank	YES
T12.3	Tilt-up hood	YES
T12.4	Backup Alarm	YES
T12.5	Manual, Parts, D Series	YES
T12.6	Manual, Service D Series	YES
T12.7	Radio, AM/FM	YES
T12.8	Pump and Grill Guard	YES
T12.9	License Plate Bracket with Light	YES
T12.10	Front and Rear Intermittent Wipers	YES
T13.0 Comfort Guard Cab		
T13.1	2 door cab	YES
T13.2	Air conditioning and heating	YES
T13.3	Air Ride Suspension Seat	YES
T13.4	Pre-Radio Wiring and Speaker Package	YES
T13.5	Tilt/Telescopic Steering Column	YES
T13.6	12v Outlet Inside Cab	YES
T13.7	Beverage Holder	YES
T13.8	RH & LH Fixed External Mirrors	YES
T13.9	Inside Rear View Mirror	YES
T13.10	8 lb. ABC Fire Extinguisher Mounted In the Cab	YES
T14.0 Mounting		
T14.1	Unit must be mounted at the mower manufacturers factory facility, no dealer mounting.	YES
T15.0 Warranty		
T15.1	24 months or 2000 hours whichever comes first	YES

LINE NUMBER	SPECIFICATIONS REQUIRED	COMPLY YES/NO
BOOM MOWER		
General (Bengal LRS-BB24. Conv)		
	<p>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 three section boom with double 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.</p> <p>The unit will be the manufacturer's current production model with a minimum of (1) one year previous production, meeting or exceeding the terms of these specifications. Units 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.</p>	
B1.0	SAFETY AND TESTING	
B1.1	Shall meet the following industry standards: SAE: J232, 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).	YES
B1.2	Unit shall be equipped with a 7 second brake valve on the cutting assembly.	YES
B1.3	Electric Solenoid control transport lock to be integrated into the mower control box.	YES
MAIN FRAME		
B2.0		
B2.1	Main Frame shall be constructed to be supported on the front tractor bolster, center of tractor and rear axle housing, to absorb side torque and impact of severe applications.	YES
B2.2	Boom mower to be mounted structurally to the tractor. Mower mounting and support system shall not be lower than the boom mounting bracket to provide optimum ground clearance.	YES
BOOM SWIVEL BRACKET		
B3.0		

LINE NUMBER	SPECIFICATIONS REQUIRED	COMPLY YES/NO
B3.1	Boom shall be supported by a swivel bracket with a single 100,000 PSI, vertical tang, and shall contain a spherical bearing (attached to primary boom lift cylinder). Boom shall swivel fore and aft with a 3"OD x 1 3/4" ID vertical boss, with a high-strength, Teflon, composite reinforced bearing installed. Vertical pin shall be a 105,800 PSI yield, hardened, nitride surface pin.	YES
B3.2	The swivel bracket weldment shall be completely boxed in and continuously welded.	YES
B3.3	Base shall have integral swing cylinder attachment clevis with a high-strength, Teflon, composite reinforced bearing installed and constructed of a minimum of 3/4" thick 100,000 PSI steel, and supported by a Non-metallic, thrust washer.	YES
B3.4	Hydraulic Hoses shall be routed thru hose clamp/guides with hose guards to prevent chaffing.	YES
B4.0	PRIMARY BOOM	
B4.1	Primary boom shall have a minimum of 100,000 PSI 8" x 6" structural tube and reinforcement with 50,000 PSI steel.	YES
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.	YES
B4.3	Pressure and return lines will be pre-formed 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)	YES
B4.4	Top mounted double acting lift cylinder shall have a nitrogen accumulator.	YES
B4.5	Cylinder end attach points shall have replaceable bearings.	YES
B5.0	KNUCKLE BOOM	
B5.1	Knuckle boom shall have a minimum construction and reinforcement with 100,000 PSI yield steel.	YES

LINE NUMBER	SPECIFICATIONS REQUIRED	COMPLY YES/NO
B5.2	Break-away feature shall allow secondary protection if obstruction is hit.	YES
B5.3	Knuckle boom shall pivot rearward 80° with limited relief protection and bumper stop. (VENDOR REQUIREMENT) Submit degrees of relief protection.	YES
B5.4	Hinge points shall have greaseless bearings with 105,800 PSI minimum yield, nitride surface pins. (VENDOR REQUIREMENT) Submit pin yield strength and surface treatment.	YES
B6.0	SECONDARY BOOM	
B6.1	Secondary boom shall have a minimum of 100,000 PSI yield 6" x 4" tube and reinforced at all stress points.	YES
B6.2	Pressure and return lines are preformed steel tubes and hoses mounted to rear of boom.	YES
B6.3	Cylinders shall be welded, double acting and mounted to top of boom.	YES
B6.4	Outer end of secondary boom shall have an integrally designed mounting boss, box sectioned into the boom (Specifically excluding external boom end reinforcements) (VENDOR REQUIREMENT) Provide line drawing of secondary boom.	YES
B7.0	HYDRAULICS	
B7.1	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 and number of u-joints supplied.	YES
B7.2	Pump driveshaft rated not less than 122 HP.	YES
B7.3	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 (include MSDS sheet). Type, design and micron size of filter element.	YES
B7.4	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.	YES

LINE NUMBER	SPECIFICATIONS REQUIRED	COMPLY YES/NO
B7.5	Hydraulic pressure connections shall meet SAE O-ring and JIC standards	YES
B7.6	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)	YES
B7.7	Suction hose shall be unrestricted (Specifically excluding suction filters and screens)	YES
B7.8	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.	YES
B7.9	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.	YES
B7.10	Motor shall have cast steel housing with steel gears.	YES
B7.11	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. (VENDOR REQUIREMENT) Submit engineering report signed by a Registered Professional Engineer(PE), the following: Ramp time to full stop, maximum operating pressure, maximum pressure to stop .	YES
B7.12	Mower control valve shall stop cutter assembly in maximum of 7 seconds from full RPM. (VENDOR REQUIREMENT) State time to stop from full RPM.	YES
B8.0	<u>JOY-STICK CONTROL LIFT VALVE</u>	
B8.1	Joy-Stick Valve Option: Shall be an electro-hydraulic, load sensing valve. Valve shall have interchangeable spools and shall have a manual override for each section, and 12 volt electrical actuation.	YES
B8.2	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.	YES

LINE NUMBER	SPECIFICATIONS REQUIRED	COMPLY YES/NO
B8.3	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.	YES
B8.4	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.	YES
B8.5	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.	YES
B9.0	COUNTERWEIGHT	
B9.1	Counter weight, total ballast 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.	YES
B10.0	OPERATOR PROTECTION	
B10.1	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.	YES
B11.0	STOW SYSTEM	

LINE NUMBER	SPECIFICATIONS REQUIRED	COMPLY YES/NO
B11.1	An integral boom rest shall be secured to right and left rear axle for travel and transport position. Boom shall be protected by bumper stops and not obstruct 3 point hitch. A hydraulic lock shall be provided to lock cutter head into transport position. (VENDOR REQUIREMENT) Vendor to provide line drawing of boom rest.	YES
B11.2	Complete unit shall travel and lock in a maximum of 8' 6" wide.	YES
60" ROTARY HEAD		
RT 60DG		
H1.0	CUTTING HEAD	
H1.1	Shall be constructed of 110,000 PSI yield Domex® steel 1/8" deck and 1/4" thick side walls and (4) four trapezoidal formed 50,000 PSI Domex steel reinforcements. Top to be continuously welded for strength and eliminate debris from collecting under reinforcements. (VENDOR REQUIREMENT) Vendor shall indicate manufacturer's material, PSI, and type of welding.	YES
H1.2	Shall have full length replaceable abrasion resistant skid shoes.	YES
H1.3	Rubber safety shield shall be bolted to back side of deck.	YES
H1.4	Safety shield shall be operated hydraulically from operators position and shall extend below the cutting plane. Safety door shall be constructed of 100,000 PSI Domex Steel and meets all ANSI / SAE tests for rotary mowers. (VENDOR REQUIREMENT) Vendor shall indicate door protection type and maximum hydraulic pressure required to maintain door placement.	YES
H1.5	Head shall weigh no less than 915 lbs.	YES
H1.6	Head shall rotate 180° around outer boom and cutter head shall have 50" of actual cut.	YES
H1.7	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.	YES
H1.8	Unit Shall Come With 1 Extra Set of Blades	YES
H2.0 SPINDLE		
H2.1	Spindle shall be (1) one piece forged and heat treated with integral 7	YES
H2.2	Spindle shall be attached to hydraulic motor by a flexible coupler and dust cover. (Specifically excluding direct drive motor/spindle assemblies) (VENDOR REQUIREMENT) Vendor to provide line drawing of motor/spindle drive.	YES

LINE NUMBER	SPECIFICATIONS REQUIRED	COMPLY YES/NO
H2.3	Spindle assembly shall have minimum torsional shear capacity of 4,174 ft-lb torque, 231,000 PSI yield rotational strength and distribute load over 169 sq. inch area. (VENDOR REQUIREMENT) Vendor shall provide size of attachment, number, grade, and size of bolts used to attach.	YES
H2.4	Spindle shall have stationary wire wrap protection. Wire wraps shall be a minimum of 4 3/8" x 4 3/4", 3/8" thick. The wraps will also act as reinforcements for spindle housing. Wraps shall be not less than 16" from the drive spindle. The top of spindle housing shall have 2" x 3 1/2", 3/8" thick welded reinforcements. (VENDOR REQUIREMENT) Vendor to provide line drawing of wire wraps.	YES
H2.5	Spindle shall be mounted in sealed, double tapered roller bearing, grease reservoir with a O-ring plug and port to drain old grease. Assembly shall be filled with synthetic grease. (Specifically excluding barrel and spherical bearings) (VENDOR REQUIREMENT) Vendor to indicate manufacture and type of bearing.	YES
H2.6	Spindle shall rotate 19,000 FPM blade tip speed at rated tractor RPM. (VENDOR REQUIREMENT) Vendor shall indicate speed.	YES
H2.7	Spindle drive area shall be enclosed and fully protected from outside debris entering into the drive coupler.	YES
H3.0	KNIFE CARRIER	
H3.1	Dish shall be one piece, dynamically balanced (per ISO quality G2.5 spec), formed 40° angle outer edge extending 3 1/2" beyond bend radius, 37 9/16" diameter x 1/2" thick 80,000 PSI yield steel and attached by (6) six 5/8" x 1 3/4", grade 8 bolts. (VENDOR REQUIREMENT) Vendor shall list any deviation to the above.	YES
H3.2	Dish shall have no structural welds.	YES
H3.3	Dish assembly shall accommodate 2 standard, or optional 3, 4 or 6 suction type knives.	YES
H3.4	Knives shall be attached by 1 3/4" x 3 3/8" shouldered and keyed bolts, backed by T-1 spacers and hex lock nuts.	YES
H3.5	Minimum clearance shall be 9" between deck and knife edge.	YES
H4.0	BOOM DIMENSIONS (Specify Dimensions)	
H4.1	Reach Out 24.3 feet	YES
H4.2	Reach Down 15.3 feet	YES
H4.3	Reach Up 20.8 feet	YES
H4.4	Reach In 5.6 feet	YES



CITY OF NOVI
ROADSIDE MOWER

BID FORM

We, the undersigned as bidder, propose to furnish to the City of Novi, according to the specifications, terms, conditions and instructions attached hereto and made a part thereof:

A. Roadside Mower, as specified \$ 102,961.00 Lump Sum

Cab Make/Model JOHN DEERE 6105D

Boom Mower Make/Model TIGEP LSR BENGAL BRUTE

Delivery Date after Receipt of Order 60 - 90 DAYS

We acknowledge receipt of the following Addenda: _____
(please indicate numbers)

EXCEPTIONS TO SPECIFICATIONS (all exceptions must be noted here or attached on a separate sheet):

NO EXCEPTIONS

COMMENTS: _____

NO CHARGE FOR ON SITE SERVICE CALLS FOR WARRANTY ISSUES.

NO CHARGE FOR TRUCKING FOR WARRANTY ISSUES.

NON-IRAN LINKED BUSINESS:

By signing below, I certify and agree on behalf of myself and the company submitting this proposal the following: (1) that I am duly authorized to legally bind the company submitting

this proposal; and (2) that the company submitting this proposal is not an "Iran linked business," as that term is defined in Section 2(e) of the Iran Economic Sanctions Act, being Michigan Public Act No. 517 of 2012; and (3) That I and the company submitting this proposal will immediately comply with any further certifications or information submissions requested by the City in this regard.

THIS BID SUBMITTED BY:

Company (Legal Registration) FLINT NEW HOLLAND, INC.

Address 3266 E. BRISTOL ROAD.

City BURTON State MI Zip 48529

Telephone (810) 744-2030 Fax (810) 744-0444

Representative's Name JOE M. CURTIS

Representative's Title SALES MANAGER

Authorized Signature 

E-mail fnhjoecurtis@hotmail.com

Date 09-03-2014