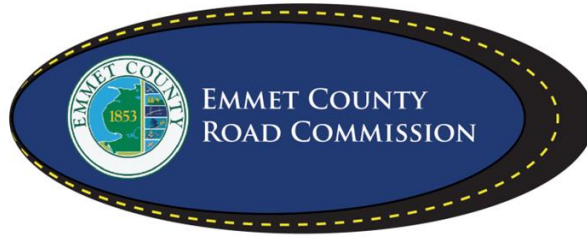


Wade Williams
Mark W. Hoffman
Frank Zulski Jr.
Brian A. Gutowski, P.E.
Engineer-Manager
Lisa Kleeman
Finance Director -
Clerk of the Board



2265 E. Hathaway Road
Harbor Springs, MI 49740
Office: 231-347-8142
Fax: 231-347-5787
www.emmetcrc.org

INVITATION TO BID

The Emmet County Road Commission will receive sealed bids until 10:00 a.m., Monday March 28, 2022, at which time they will be publicly opened and read aloud at their offices located at 2265 E. Hathaway Road, Harbor Springs, Michigan 49740, for

Two (2) Hydraulic Systems, & Underbody Scrapers & Two (2) 9' Patrol Wings. It is the intent of this specification to provide new equipment necessary to complete (2) Sander Plow trucks for Emmet County Road Commission; that shall include Hydraulic Systems Underbody Scrapers, and 9' Patrol Wings. This shall include the installation of (1) 14' Monroe RDS-168-96-56, Radius Dump Spreaders, Serial #'s, 05-07-7255 with pre-wet systems, as supplied by the Emmet County Road Commission.

(1) 14' Monroe Duz Mor DM-168-86-54-304, Serial # 06-03-7177 with pre-wet system, as supplied by the Emmet County Road Commission.

Bids shall be on forms furnished by the Road Commission and shall be submitted in a sealed envelope clearly marked as to its contents. Forms can be obtained by contacting the Road Commission at (231) 347-8142.

The right is reserved to reject any and or all bids, to waive irregularities in the bid procedure and to award bids in the best interest of the Emmet County Road Commission.

EMMET COUNTY ROAD COMMISSION

Frank Zulski, Jr. – Chairman
Wade Williams – Vice-Chairman
Mark W. Hoffman - Member

Bids due 10:00A.M., Monday March 28, 2022, Bid # EQ.4-2022
At which time they will be opened and read aloud

**EMMET COUNTY ROAD COMMISSION
HARBOR SPRINGS, MICHIGAN**

Bid for:

Two (2) Hydraulic Systems, & Underbody Scrapers & Two (2) 9' Patrol Wings. It is the intent of this specification to provide new equipment necessary to complete (2) Sander Plow trucks for Emmet County Road Commission; that shall include Hydraulic Systems Underbody Scrapers, and 9' Patrol Wings. This shall include the installation of (1) 14' Monroe RDS-168-96-56, Radius Dump Spreaders, Serial #'s, 05-07-7255 with pre-wet systems, as supplied by the Emmet County Road Commission.

(1) 14' Monroe Duz Mor DM-168-86-54-304, Serial # 06-03-7177 with pre-wet system, as supplied by the Emmet County Road Commission.

Board of Emmet County Road Commissioners
2265 E. Hathaway Road
Harbor Springs, Michigan 49740

Gentlemen:

We agree to furnish the Emmet County Road Commission the Following:

Two (2) Hydraulic Systems, Underbody Scrapers & Two (2) 9' Patrol Wings

Make _____ Model _____

Make _____ Model _____

Make _____ Model _____

Make _____ Model _____

That will meet the minimum requirements of the attached specification sheet.
Bidder's factory specification sheet shall be considered part of the bid requirements.
Bids not supplied on Emmet County Road Commission forms will not be considered.
Bids not received by specified time will not be considered.

Two (2) Hydraulic Systems, & Underbody Scrapers & Two (2) 9' Patrol Wings.
It is the intent of this specification to provide new equipment necessary to complete (2) Sander Plow trucks for Emmet County Road Commission; that shall include Hydraulic Systems Underbody Scrapers, and 9' Patrol Wings. This shall include the installation of (1) 14' Monroe RDS-168-96-56, Radius Dump Spreaders, Serial #'s, 05-07-7255 with pre-wet systems, as supplied by the Emmet County Road Commission.
(1) 14' Monroe Duz Mor DM-168-86-54-304, Serial # 06-03-7177 with pre-wet system, as supplied by the Emmet County Road Commission.

\$ _____
F.O.B. Conway garage – no tax

Terms: _____

Delivery in _____ days after award of bid.

Company _____
Address _____

Phone # _____
Signature & Title _____

EMMET COUNTY ROAD COMMISSION
MINIMUM SPECIFICATIONS FOR

Bid # EQ.4-2022

Two (2) Hydraulic Systems, & Underbody Scrapers & Two (2) 9' Patrol Wings.

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(1) 14' Monroe Duz Mor DM-168-86-54-304, Serial # 06-03-7177 with pre-wet system, as supplied by the Emmet County Road Commission.

Hydraulic & Fuel Tanks:

Note: Truck emission system will dictate tank design

COMPLY
YES ___ NO ___

Tanks shall be designed to be installed in conjunction with a vertically mounted DPF/SCR exhaust system. The fuel/hydraulic tank shall be min. 7ga. 201 SS construction. Fuel/hydraulic tank shall be 110-gallon fuel & 40-gallon hydraulic.

Solid state fuel sending unit and guarded hydraulic oil sight/ temperature gauge, fuel tank will have a water sump and petcock type drain, and ball type shut off valves on supply & return. The fuel tank vent shall conform to engine manufactures specifications. Tanks shall integrated into a single, integrally constructed unit. The mounting of the tank shall include four (4) rubber bushing type mounting points. Supports for the tank shall be constructed of 4" 7.25 structural channel. The mounting brackets shall extent from the right frame rail and shall cantilever to the outside of the left frame rail. A serrated step shall be installed on the left side.

Hydraulic oil, low-level sensor* with in-cab light & alarm integrated with an electric solenoid shut-off valve at main hydraulic pump outlet, with dash mounted over-ride switches for low-level alarm & pump shut-off. *Low oil sensor will be a solid-state non-float type sensor, mounted in top of oil tank. Hydraulic return filter to be in-tank style. The proper fuel gauge sending unit shall be installed.

Hydraulic System:

COMPLY
YES ___ NO ___

8.9 cubic-inch load sensing hydraulic-pump (model series 45-E147), front-mounted and driven by engine crankshaft to operate the following: Underbody scraper (up, down & reverse), Plow (up & down), two (2) double function wings, Dump Box with double-acting lift cylinders, RDS rear discharge conveyor chain, bi-directional cross auger & spinner assembly, and pre-wet system functions shall be electronic proportional controlled using Rexroth Bosch CS160 joystick controller. All capable of simultaneous operation.

Direct mount 12-volt automatic low oil shut-down system, with in cab manual override.

Rexroth M4-12, 9-Bank valve, EPC. With mid inlet feature, **NO Exceptions.**
Valves shall be mounted outside of cab in a Stainless-Steel weather-tight enclosure.
Cross auger to be ground speed triggered to start and stop with main conveyor.
Hydraulic hoses and lines to be enclosed in nylon covers at all chafing points.
All ridged hydraulic lines shall be of Stainless-Steel construction. Routing of pressure hoses shall be on left side of engine as to stay away from turbo heat. Us all stainless-steel hangers and leave room for service of engine.
System to be approved by Emmet County Road Commission prior to installation

Material Spreader, Sander, Dump Box & Pre-Wet Controls:

COMPLY
YES ___ NO ___

Rexroth Bosch CS-160/660 System consisting of six basic components.

- (1.) Joy-Stick Control Console
- (2.) Switch module
- (3.) Ground Speed Sensor
- (4.) Feed-back devices
- (5.) Actuator devices
- (6.) Wiring harness to interconnect all components including,
Road Watch wiring & sensor

Controls shall be mounted to an armrest pedestal, designed to also house tarp switch, air-gate control, low oil light and momentary over-ride switch.

* Hands on training to be supplied and conducted @ E.C.R.C. Garage*

Material Spreader & Sander:

Two (2) Hydraulic Systems, & Underbody Scrapers & Two (2) 9’Patrol Wings.
It is the intent of this specification to provide new equipment necessary to complete (2) Sander Plow trucks for Emmet County Road Commission; that shall include Hydraulic Systems Underbody Scrapers, and 9’ Patrol Wings. This shall include the installation of (1) 14’ Monroe RDS-168-96-56, Radius Dump Spreaders, Serial #'s, 05-07-7255 with pre-wet systems, as supplied by the Emmet County Road Commission.
(1) 14’ Monroe Duz Mor DM-168-86-54-304, Serial # 06-03-7177 with pre-wet system, as supplied by the Emmet County Road Commission.

COMPLY
YES ___ NO ___

Toolbox:

One (1) 18”x18”x18” Stainless Steel, mounted on drivers’ side in steel saddle, with S/S hardware and neoprene isolation strips for corrosion resistance.
Per unit

Tarp System:

COMPLY
YES ___ NO ___

Roll Right 6416 Electric Tarp system (to include spool & housing, tarp tension bows, and 20' asphalt tarp). Shall be installed, complete and tested.

Per unit

Chipper Hitch:

COMPLY
YES ___ NO ___

To be incorporated into rear wing cross tube support as per ECRC Specifications

Per unit

Lighting:

COMPLY
YES ___ NO ___

Auxiliary plow lights and turn signals shall be Buyers LED heated model 131200 hood mounted, custom built aluminum brackets, as approved by Emmet County Road Commission, with approved reinforcements on underside of hood for extra rigidity.

One (1) roof mounted remotely controlled articulating halogen Spotlight with protective dome.

Five (5) LED work lights for Underbody blade and sander discharge areas, locations to be determined at time of installation.

Quad flash LED Strobe lights with 4 strobe heads (1 A/G cab mounted, 3 spreaders mounted),

with Amber LED indicator light mounted outside cab near driver's door for OEM supplied Master Electrical Disconnect Switch.

As approved by Emmet County Road Commission.

Per unit

Underbody Scraper:

COMPLY
YES ___ NO ___

Monroe 12" HD4500 to be installed.

Moldboard shall be 1" thick x 20" high x 12" long made of heat-treated high-carbon steel.

Circle shall be 1" thick solid steel (no notches)

Circle clamp shall be heavy-duty with poly shim.

Two (2) Actuating Cylinders with Socatri shafts enclosed in shock spring housing and trunnion mounted.

Dual power-reverse cylinders with Socatri shafts & crossover relief.

Shall include a manifold bracket for a Grease line Kit, (1) each installed on each side of Hanger Board.

Wing Plow:

COMPLY
YES___ NO___

Two (2) Wing plows

Shall be a Monroe Snow & Ice, Model 9D FWMB Para-Glide design with Ottawa wing bracket. Two (2) installed and complete on the right rearward frame aft of the underbody scraper in accordance with Monroe Snow & Ice installation procedures. An adjustable hydraulic sequencing valve shall be provided to allow bi-directional sequencing for the up & down functions of the wing assembly. Lock valves shall be installed to prevent drift when in stored position.

An adjustable metering valve will be installed to control articulation speeds. (3) three LED Strobe lights and a LED ICC light shall be installed on top edge of wing nearest to the discharge end in Stainless Steel light boxes with cab mounted switch.

Wing assembly will be removed seasonally; to expedite removal, quick disconnect provisions shall be provided for both hydraulic and electrical connections.

As approved by Emmet County Road Commission.

Hydraulic for front mount broom:

COMPLY
YES___ NO___

Two (2) hydraulic systems to control a front mounted Sweepster model WLA10'.

Unit shall be controlled by Rexroth Bosch CS-160/660 System

Unit shall have quick couple connection for hydraulic hoses.

System to be approved by Emmet County Road Commission prior to installation.

Plow Hitch:

COMPLY
YES___ NO___

Hustings style heavy duty 34" wide Quick Hitch with 3" double acting cylinder And lift arm. Plunger pins shall be a Monroe p/n# 05022221 with grease zerks, and secondary locking tabs, with reinforcements.

Plow hitch shall be bolted to 12" min. heavy duty structural channel front bumper flared back with boxed ends.

Per unit

Tow Hooks:

COMPLY
YES___ NO___

Four (4) Heavy-Duty Drop Forged Frame mounted on front and rear frame or Wing support structures (as approved by County) with a minimum rating of 44,600 lbs. each.
Per unit

Pre-Wet System:

COMPLY
YES___ NO___

Note: Pre-wet systems will be supplied by the E.C.R.C. as is with units; the up-fitter will supply and install any parts necessary to provide serviceable working systems. To include controls and relocation of poly tanks & spray nozzles as necessary.

Note: Pre-wet system supplied with the 14' Monroe Duz Mor-DM-168-86-54-304, Serial # 06-03-7177 with need to be replaced due to accident. Up-fitter will supply new system to reuse tank saddles and mounts.
System to be approved by Emmet County Road Commission prior to installation.

COMPLY
YES___ NO___

Remote Camera System:

A Voyager Model VCCS150B Remote Camera Systems with M.S. Foster & Associates, Inc. Model MSF8470038000 Washer System shall be installed to monitor the Rear and Right-side blind spots of Material Spreaders.
Both Remote Camera Heads shall be installed in a protective Stainless-Steel enclosure. Exact location and mounting option will be approved by E.C.R.C.
Per unit

RDS Hoist:

Dump body hoist shall be manufactured by Mailhot, telescopic design with trunnion mounting, trunnion collar shall be oscillating, all pivots, pins, and hinges to be grease-able, cylinder to have a nitride surface for wear and corrosion resistance, cylinder shall be rated 2,500 PSI – double acting, top stage self-bleeding and to be operated off the crank shaft driven hydraulic system

Option:

One-Way Ridged Snowplow: Monroe 12' MPFA38-64-12RGD, 316, HH34 3" Off Set, Part #00176288

One-way, ridged mounted, no trip snowplow:

- 34" female plow side Husting's Hitch.
- Reinforced moldboard manufactured from 10-gauge steel.
- Boomerang style shoe rockers.
- Manually pinned shoe adjustments.
- Single ear standard cast plow shoes.
- 3/8" thick x 18" deep rubber snow deflector with 9 3/8" x 2" bar stock support on 18" centers attached to 2 1/2 "x 2 1/2" x 3/8" angle iron with a 3/16" x 2" backer support.
- Cutting edge to be 5/8" x 8" standard punch.
- Plow to be blasted powder coated.
- Snowplow to be finished in orange powder coat on the front side of the moldboard, and flat black powder coat on the push frame side of the moldboard.
- Anti-plow hang-up roller kit, part #00043300.
- Per unit

Option:

Heavy duty top grate system for RDS and Duz Mor material spreaders.
System to be approved by Emmet County Road Commission

I have read and understand the instructions in the bid specifications, and I certify that the above specifications will be met with the following exceptions*

* Differences in bid specifications must be Noted & Highlighted on page marked

Exception and Clarifications to Bid Specifications.

Signature & Title

EXCEPTIONS AND CLARIFICATIONS TO BID SPECIFICATIONS

Fuel & Hydraulic Tanks:

Hydraulic System:

Underbody Scraper:

Wing Plow:

Sander & Pre-Wet System & Controls:

Lighting:

Other
