



City of Waterville
DEPARTMENT OF PUBLIC WORKS
6 Wentworth Court
Waterville, Maine 04901-4892

TEL (207) 680-4744 FAX (207) 877-7532

REQUEST FOR BIDS
Compact Track Excavator

DATE: May 3, 2016

INSTRUCTIONS TO BIDDERS

- 1. GENERAL:** The City of Waterville is accepting bids for a **Compact Track Excavator** meeting the specifications accompanying this document.
- 2. BID SUBMITTAL:** **Sealed bids** will be accepted by the Office of the Director of Public Works, 6 Wentworth Court, Waterville, Maine 04901 up to and including **11:30 A.M. local time, Thursday, May 26, 2016** at which time they will be publicly opened and read.

All bids will be placed in a sealed envelope clearly marked "**Bid – Compact Track Excavator**" in the center with the bidder's name and address in the upper left hand corner. Facsimile bids will not be accepted.

- 3. WITHDRAWAL OR REVISION OF BID:** A bidder may withdraw or revise a bid after it has been received by the Office of the Director of Public Works, provided the request is made in writing or in person before the time set for bid opening.
- 4. BID AWARD:** Bid award, if the City determines to award, will be made within thirty (30) calendar days after bid opening, to the lowest responsible bidder whose bid fully complies with the requirements specified contingent upon approval by the City Council. The City reserves the right to reject any and/or all bids without absorbing any liability against the City.
- 5. Evaluation of Bids:** For purposes of evaluating the bids, in the event of any discrepancies on a proposal between an amount written out in words versus the same amount expressed in numbers, the amount written in words shall govern (if applicable). Similarly, unit prices shall prevail over extended totals. In the event of Additive Bid Items, the "low bid" shall be based upon the least total for the highest combination of bid items

which may be awarded within the Control Amount (i.e. a predetermined budget amount to be disclosed at the time of bid opening). In the event that all Base Bids exceed the Control Amount, the "low bid" shall be based solely upon the lowest Base Bid submitted. Bidders shall examine and familiarize themselves with the Specifications and Bid Documents. The bidder shall in no way be relieved of any obligation to provide the product, service and/or equipment specified through error, mistake or omission.

6. INTERPRETATION OF ADDENDA: It shall be the bidder's responsibility to make inquiry as to any interpretation of the specifications or requirements of the participants. Any changes in the specifications shall be by written addenda.

7. SPECIFIED QUANTITY: One (1) Unit

8. INVOICES AND PAYMENT: Invoices shall be transmitted to the City of Waterville, 1 Common Street, Waterville, Maine 04901-6699. It is the practice of the City of Waterville to pay invoices within thirty (30) days of receipt. The City is exempt from State of Maine Sales Tax.

9. PENALTY CLAUSE: N/A

10. INSURANCE: N/A

11. PERFORMANCE BOND: N/A

12. CANCELLATION: The City reserves the right to cancel any unfulfilled portion of the Contract if, in the opinion of the City, the services or materials supplied are unsatisfactory or are not in compliance with the terms and conditions of the specifications. Cancellation shall be effective following ten (10) calendar days written notice to the Bidder.

13. EXCEPTIONS TO SPECIFICATIONS: These instructions to Bidders and General Paragraphs are an integral part of the Specifications for a **Compact Track Excavator** and will be binding on the Bidder. Bidders are advised that they shall be bound to the requirements of the Specifications, Instructions to Bidders and General Paragraphs unless exceptions are otherwise clearly noted in the Proposal. Any exceptions shall be considered, however, in determining the most acceptable proposal.

14. INQUIRIES: Any questions concerning this bid request should be directed to Frederick Dechaine, Fleet Maintenance Supervisor, 6 Wentworth Court, Waterville, Maine 04901. Telephone inquiries can be made by calling (207) 680-4746 between the hours of 7:00 AM & 3:00 PM Monday thru Friday.

15. GENERAL PARAGRAPHS: See attached **Bid Specification**

GENERAL INFORMATION

The Compact Excavator shall be new and current production model year. Any item omitted either directly or indirectly, which is clearly necessary for the satisfactory performance of the proposed Compact Excavator, shall be considered a part of the bid, even though not specified. All items furnished shall be new and unused, and shall meet the minimum requirements contained herein. Used or demo units are not acceptable.

The fact that a manufacturer does not produce equipment to meet these specifications will not be considered cause to adjudge the product as meeting these specifications and will, therefore, be subject to non-consideration and rejection. All bids must comply with basic specifications and any special

The bidder's proposal shall be submitted on the forms provided in this request for bid. Failure of the bidder to complete the attached bid form may be grounds for rejection of the bidder's proposal. Any exception to the minimum specifications shall be noted on a separate piece of paper and attached to the City's bid form. Bidder must furnish with his bid a full detailed list of manufacturer's specifications and descriptive literature of the unit offered which could become an essential part of the bid.

BID ITEMS

Compact Excavator - Track Drive

Bid Option #1	7 – 8 Metric Ton Unit
Bid Option #2	12 – 14 Metric Ton Unit

**Note – Bidders may submit proposals for one or both options.

Must be a current production year model. Demonstration units are not acceptable.

MINIMUM SPECIFICATIONS – BID OPTION #1

75 X3 Spin Ace HYDRAULICALLY-OPERATED TRACK MOUNTED EXCAVATOR

- 1. Operating Weight** – 17,400 lbs. (7 900 kg)
- 2. Engine**
 - A. EPA certified FINAL Tier (Tier 4b) diesel with electronic fuel control.
 - B. SAE net horsepower – 50 - 60 HP.
 - C. Water cooled, 4-cylinder, 4-cycle.
 - D. Displacement – 2.2 Liter.
 - E. Turbocharger with intercooler.
 - F. EGR cooler (Exhaust Gas Recirculation).
 - G. Diesel Oxidation Catalyst.
 - H. Spark Arrestor Muffler.
 - I. Common rail fuel injection.
 - J. Electrical system – 24 volts, 50 amp alternator.
 - K. Battery Disconnect Switch.
 - L. Double element air cleaner with in cab restriction indicator.
 - M. Lubrication – Pressurized system with remote access full flow filter.
 - N. Fuel tank – 31.7 gallon (120 L) w/ digital gauge in cab, site gauge on tank, and locking cap.
 - O. Remote access dual stage fuel filtration with water separators.
 - P. Glow plug pre-heat.
 - Q. One-touch decelerator, auto idle, idle stop.
 - R. Idle-Start.
 - S. Neutral Safety Start.
 - T. Auto Engine Warm-Up.
 - U. EPF engine protection.
 - V. Engine “kill” switch.
- 3. Cab**
 - A. ROPS certified steel cab mounted on 4 fluid mounts.
 - B. SCM sliding/reclining cloth upholstered suspension seat with adjustable 4-inch armrests, lumbar support and retractable seat belt.
 - C. Tiltable, low effort SAE controls pre-wired for auxiliary hydraulics. Machine equipped with control pattern changer to switch between SAE and ISO patterns.
 - D. Safety glass all around, two-piece front window with auto lock. Sliding front, side and pop-up roof window for ventilation.
 - E. Climate control heating and cooling with a 21,030 BTU heater and a 20,080 BTU air-conditioner.
 - F. Interior light.
 - G. Horn.

H. Hi-Def LED 7" Color monitor with the following:

1. Fuel level gauge
2. Fuel consumption gauge
3. ECO gauge
4. Engine temperature gauge
5. Hydraulic oil temperature gauge
6. Work mode selection
7. Rear camera view **(Optional)**
8. Machine error codes
9. Hour meter and trip meter
10. Audio and visual warning for:
 - a. Low fuel level
 - b. Low coolant level
 - c. Alternator
 - d. Engine coolant overheat
 - e. Hydraulic oil overheat
 - f. Low engine oil pressure
 - g. Electrical problem
 - h. Service due
 - i. Engine idling
 - j. Power boost
 - k. Auto engine warm-up
 - l. Improper shutdown
 - m. Idle shutdown
 - n. Fuel filter
 - o. Check camera

I. **Auxiliary function to change ditching bucket to thumb. On board self-diagnostic system with memory.**

J. On board self-diagnostic system with memory.

K. Intermittent windshield wiper and washer with quick clean function on right joystick trigger.

L. AM/FM radio with auxiliary input jack for mp3 player, iPod, etc.

M. 12-volt accessory outlet.

4. Travel Steering

A. Controlled by foot pedals or hand levers.

B. Pushing one pedal/lever forward and the other backwards will make the machine counter rotate.

5. Undercarriage

A. X-Pattern carbody for strength and durability.

B. Grease cylinder with shock absorbing springs to adjust track tension.

C. Integral relief valves to provide shock protection for track components.

D. Greased and sealed track reinforced with struts.

E. Synthetic oil filled lower rollers with outer flanges to ensure long track life.

- F. 17.7-inch (450 mm) triple grouser track shoes.
- G. Ground pressure not to exceed 5.08 psi (0.35 Bar)
- H. Each track independently powered. All hydraulic components mounted within the width of the side frame.

I. Steel track with 18” Rubber Pads (Bolt on).

- J. Travel brake – spring applied hydraulic released disc parking brake built into each motor.
- K. Two speed travel – 2.0/3.2 mph (3.2/5.1 km/h).
- L. Automatic downshift between high and low speed.
- M. Gradeability – 70%.
- N. Minimum Drawbar Pull of 13,400 lbf (59.5 kN).
- O. Protective steel plate for bottom of rotating joint.
- P. 7’7” (2.32 m) hydraulically controlled dozer blade.
- Q. 4 Lashing Points (Tie-Downs)

6. Swing

- A. Planetary reduction powered by an axial piston motor. Internal ring gear with grease cavity for swing pinion. Swing bearing is single-row shear type ball bearing.
- B. Minimum swing speed – 10.4 rpm.
- C. Swing system must be able to maintain side pressure on the ditch and use the arm at the same time so a straight wall can be excavated.

7. Hydraulic System

Pump automatically adjusts output to deliver only the amount of oil needed for the application. Three work mode selections: Speed Priority, Heavy, and Applied Power.

- A. Two variable displacement axial piston pumps provide power for attachment, travel and swing.
- B. Maximum flow – 2 x 19.6 GPM.
- C. Attachment relief valve setting – 4260 psi.
- D. Hydraulic tank w/ site gauge – Capacity 13.5 gallon (51.0 L).
- E. Control valve – One 4-spool valve and one 5-spool valve with auxiliary spool.
- F. Hydraulic stroke control for energy savings.
- G. Hydraulic cylinders – bore x rod x stroke
 - Boom – 4.5” x 2.9” x 33.5” (115 x 75 x 850 mm)
 - Arm – 3.9” x 2.5” x 29.7” (1400 x 65 x 755 mm)
 - Bucket – 3.3” x 2.2” x 26.2” (85 x 55 x 665 mm)
 - Blade – 4.3” x 2.8” x 7.1” (110 x 70 x 180 mm)
- H. Filtration:
 - Return filter – 6 micron
 - Pilot filter – 8 micron
 - Suction screen – 105 micron

- I. The hydraulic excavator must be able to perform all functions simultaneously: swing, travel and operate the attachment.
- J. Arm and boom cylinder oil regeneration.
- K. Oil cooler.
- L. O-ring face seals.

- M. 5,000 hour oil change interval

8. Attachment

- A. Boom – box type construction, 12' 4" (3.75 m) long, mounted in boom foot lugs in hardened brass bushings.
- B. Arm – mounted to boom in hardened brass bushings.
- C. Work ranges – arm length **7'2" Arm (2.19 m)**
 - 1.Required max dig depth 15'2" (4.63 m)
 - 2.Required max reach 22'7" (6.89 m)
 - 3.Required max dig height 25'6" (7.77 m)
 - 4.Required max dump height 18'7" (5.67 m)
 - 5.Required max depth for 8' level bottom 14'4" (4.36 m)
- D. Required max arm digging force 7,600 lbf (33.8 kN)
- E. Required max bucket dig force 12,800 lbf (56.9 kN)
- F. Lifting capacity with Blade Down
 - 1.5' height, 15' radius, over end 4,600 lb (2 130 kg)
 - 2.Ground level 15' radius over end 5,050 lb (2 340 kg)
 - 3.10' below, 10' radius, over end 6,150 lb (2 880 kg)
- G. Arm and boom hoist holding valve.
- H. Attachment cushion valve.

9. Overall Dimensions

- A. Arm Length **7'2" Arm (2.19)**
- B. Maximum travel height 9' 5" (2.86 m)
- C. Maximum travel length 20' 10" (6.34 m)
- D. Maximum width (17.7" shoes) 7' 7" (2.32 m)
- E. Minimum track length 9' 4" (2.85 m)
- F. Minimum track gauge 6' 2" (1.87 m)
- G. Maximum tail swing 4' 9" (1.29 m)
- H. Minimum distance drive sprocket to idler 7' 3" (2.21 m)
- I. Minimum ground clearance 14" (360 mm)

10. Equipped with the following safety features

- A. Password protected anti-theft start-up device.
- B. Non-slip pads on top of upperstructure.
- C. Engine fan guard.
- D. Center cover over swing motor.
- E. Two safety lockout devices de-activate hydraulic controls – gate lock lever and lifting console.
- F. Travel alarm.
- G. 4 ISO compliant mirrors.

- H. Rear view camera standard. **(Optional)**
- I. Safety glass windows.
- J. Emergency escape window.
- K. Handrails.

11. Buckets & Accessories

- A. 28" Craig severe duty class 4 bucket with esco ultra lock teeth.
- B. 48" Craig severe duty class 4 Ditching bucket with bolt on cutting edge.
- C. Craig heavy duty main pin 4 tine thumb.
- D. Hydraulic disconnect coupler for Craig bucket. **Screw on style.**
- E. Strobes to be LED

12. Options

- A. 12" Craig heavy duty class 4 bucket with esco ultra lock teeth.

MINIMUM SPECIFICATIONS – BID OPTION #2

130 X3 Hydraulically-Operated Track Mounted Excavator

1. Operating Weight – 28,660 lbs. (13 000 kg)

2. Engine

- A. EPA certified final tier 4 engine with no DPF diesel particulate filter.
- B. SAE net horsepower 85 – 100 hp.
- C. Water cooled, 4-cylinder, 4-cycle.
- D. Displacement – 3.0 Liter.
- E. Variable Geometry Turbocharger with intercooler.
- F. Dual EGR coolers (Exhaust Gas Recirculation).
- G. Common rail fuel injection.
- H. Electrical system – 24 volts, 50 amp alternator.
- I. Double element air cleaner with in cab restriction indicator.
- J. Lubrication – Pressurized system with remote access full flow filter.
- K. Fuel tank – 69.0 gallon (260 L) w/ digital gauge in cab, site gauge on tank, and locking cap.
- L. Remote access dual stage fuel filtration with water separators.
- M. Glow plug pre-heat.
- N. One-touch decelerator, auto idle, idle stop.
- O. Idle-Start.
- P. Neutral Safety Start.
- Q. Auto Engine Warm-Up.
- R. EPF engine protection.
- S. Engine “kill” switch.

3. Cab

- A. ROPS certified steel cab mounted on 4 fluid mounts.
- B. KAB 815 sliding/reclining cloth upholstered suspension seat with adjustable 4-inch armrests, lumbar support and retractable seat belt.
- C. Tilttable, low effort SAE controls pre-wired for auxiliary hydraulics. Machine equipped with control pattern changer to switch between SAE and ISO patterns.
- D. Safety glass all around, two-piece front window with auto lock. Sliding front, side and pop-up roof window for ventilation.
- E. Climate control heating and cooling with a 21,030 BTU heater and a 20,080 BTU air-conditioner.
- F. Interior light.
- G. Horn with selectable volume control.
- H. Hi-Def LED 7” Color monitor with the following:
 - 1. Fuel level gauge
 - 2. Fuel consumption gauge

3. ECO gauge
4. Engine temperature gauge
5. Hydraulic oil temperature gauge
6. Work mode selection
7. Machine error codes
8. Hour meter and trip meter
 - a. Audio and visual warning for: Low fuel level
 - b. Low coolant level
 - c. Alternator
 - d. Engine coolant overheat
 - e. Hydraulic oil overheat
 - f. Low engine oil pressure
 - g. Electrical problem
 - h. Service due
 - i. Engine idling
 - j. Power boost
 - k. Auto engine warm-up
 - l. Regeneration underway
 - m. Improper shutdown
 - n. Idle shutdown
 - o. Fuel filter

I. Auxiliary function to change ditching bucket to thumb. On board self-diagnostic system with memory.

- J. Intermittent windshield wiper and washer with quick clean function on right joystick trigger.
- K. AM/FM radio (with auxiliary input jack for mp3 player, IPod, etc.) **(Optional)**
- L. On board self-diagnostic system with memory.
- M. Intermittent windshield wiper and washer with quick clean function on right joystick trigger.
- N. AM/FM radio (with auxiliary input jack for mp3 player, IPod, etc.) **(Optional)**
- O. 12-volt accessory outlet.

4. Travel Steering

- A. Controlled by foot pedals or hand levers.
- B. Pushing one pedal/lever forward and the other backwards will make the machine counter rotate.

5. Undercarriage

- A. X-Pattern carbody for strength and durability.
- B. Grease cylinder with shock absorbing springs to adjust track tension.
- C. Integral relief valves to provide shock protection for track components.
- D. Greased and sealed track reinforced with struts.
- E. Synthetic oil filled lower rollers with outer flanges to ensure long track life.
- F. 23.6-inch (600 mm) triple grouser track shoes.

- G. Ground pressure not to exceed 4.79 psi (0.33 bar).
- H. Each track independently powered. All hydraulic components mounted within the width of the side frame.
- I. Travel brake – spring applied hydraulic released disc parking brake built into each motor.
- J. Two speed travel – 2.1 /3.5 mph (3.4/5.6 km/h).
- K. Automatic downshift between high and low speed.
- L. Gradeability -70%.
- M. Minimum Drawbar Pull of 26,100 ibf (116 kN).
- N. Protective steel plate for bottom of rotating joint.

6. Swing

- A. Planetary reduction powered by an axial piston motor. Internal ring gear with grease cavity for swing pinion. Swing bearing is single-row shear type ball bearing.
- B. Minimum swing speed – 14.3 rpm.
- C. Swing system must be able to maintain side pressure on the ditch and use the arm at the same time so a straight wall can be excavated.

7. Hydraulic System

Pump automatically adjusts output to deliver on the amount of oil needed for the application. Four working mode selections: Speed Priority, Heavy, Applied Power and Attachment modes.

- A. Two variable displacement axial piston pumps provide power for attachment, travel and swing.
- B. Maximum flow – 2 x 34.1 gpm.
- C. Attachment relief valve setting – 4970 psi.
- D. Automatic Power Boost mode increases attachment working pressure to 5260 psi.
- E. Hydraulic tank w/ site gauge – Capacity 21.7 gallon (82 L).
- F. Control valve – One 4-spool valve and one 5-spool valve with auxiliary spool.
- G. Hydraulic stroke control for energy savings.
- H. Hydraulic cylinders – bore x rod x stroke
 - Boom – 4.1" x 2.8" x 37.8" (105 x 70 x 961 mm)
 - Arm – 4.5" x 3.1" x 43.6" (115 x 80 x 1 108 mm)
 - Bucket – 3.7" x 2.6" x 34.7" (95 x 65 x 881 mm)
- I. Filtration:
 - Return filter – 6 micron
 - Pilot filter – 8 micron
 - Suction screen – 105 micron
- J. The hydraulic excavator must be able to perform all functions simultaneously: Swing, Travel and Operate the Attachment.
- K. Arm and boom cylinder oil regeneration.
- L. Oil Cooler
- M. O-ring face seals.

8. Attachment

- A. HD Boom – box type construction, 15' 2" (4.63 m) long, mounted in boom foot lugs in hardened brass bushings.
- B. HD Arm – mounted to boom in hardened brass bushings.
- C. Working ranges – arm length 9'11" Arm (3.01 m)
 - 1. Required max dig depth 19'10" (6.05 m)
 - 2. Required max reach 28'9" (8.77 m)
 - 3. Required max dig height 29'8" (9.05 m)
 - 4. Required max dump height 21'11" (6.68 m)
 - 5. Required max depth for 19'3" (5.87 m)
for 8' level bottom
- D. Required max arm digging force 13,490 lbf (60 kN)
- E. Required max bucket dig force 21,360 lbf (95 kN)
- F. Lifting capacity
 - 1. 5' height, 15' radius, over end 10,200 lb (4 720 kg)
 - 2. Ground level 15' radius over end 10,350 lb (4 830 kg)
 - 3. 10' below, 10' radius, over end 19,300 lb (8 920 kg)
- G. Arm and boom hoist holding valve.
- H. Attachment cushion valve.

9. Overall Dimensions

- Arm Length 9'11" Arm (3.01 m)
- A. Maximum travel height 8'8" (2.64 m)
- B. Maximum travel length 24'11" (7.61 m)
- C. Maximum width (23.6" shoes) 8'6" (2.59 m)
- D. Minimum track length 12'4" (3.76 m)
- E. Minimum track gauge 8'6" (2.59 m)
- F. Maximum tail swing 7'0" (2.13 m)
- G. Minimum distance drive sprocket to idler 9'11" (3.04 m)
- H. Minimum ground clearance 17" (440 mm)

10. Equipped with the following safety features

- A. Password protected anti-theft start-up device.
- B. Non-slip pads on top of upperstructure.
- C. Engine fan guard.
- D. Center cover over swing motor.
- E. Two safety lockout devices de-activate hydraulic controls – gate lock lever and lifting console.
- F. Travel alarm.
- G. 4 ISO compliant mirrors.
- H. Safety glass windows.
- I. Emergency escape window.

11. Buckets & Accessories

- A. 36" Craig severe duty class 4 bucket with esco ultra lock teeth.
- B. 48" Craig severe duty class 4 Ditching bucket with bolt on cutting edge.
- C. Craig heavy duty main pin 4 tine thumb.
- D. Hydraulic disconnect coupler for Craig bucket. **Screw on style.**

12. Options

- A. 24" Craig heavy duty class 4 bucket with esco ultra lock teeth.
- B. Bolt on rubber pads.
- C. Blade with bolt on cutting edge.
- D. Plum hydraulics for existing grapple hooks.

BID FORM

DATE: _____

To the Director of Public Works for the City of Waterville, Maine:

Please accept this bid submission from

(Hereinafter called "Bidder"), a corporation* organized under the laws of the
State of _____ or a partnership/individual** doing business
as _____

This bid is being submitted for a **Compact Track Excavator** in compliance with your invitation for bids, having examined the specifications and conditions contained therein. Alternatives/Substitutions are as follows:

(Attach Additional Comments, As Necessary)

The Bidder proposes to supply the following:

Bid Option #1:	Compact Track Excavator (7 – 8 Metric Tons)	\$ _____
Bid Option #2:	Compact Track Excavator (12 – 14 Metric Tons)	\$ _____

Trade In Allowance:

1989 Liebherr Model A-912 Wheeled Excavator /
And Attachments (Call for info) - \$ _____

Extended Warranty: Provide Description Summary \$ _____

Total: \$ _____

**Delivery Guaranteed within _____ days of contract award and not beyond sixty (60) days of contract award.

NAME OF BIDDER: _____

BY: _____
(Signature)

NAME AND TITLE: _____

ADDRESS: _____

TELEPHONE: _____ TAX ID# _____

* Affix seal if by Corporation

**Cross out word/phrases that do not apply