

CITY OF BEL AIRE
STAFF REPORT

DATE: March 15, 2022
TO: Ty Lasher, City Manager
FROM: Dave Leiker, Public Works Director

RE: Compact Excavator Purchase Recommendation

Background

Public Works has two backhoes it uses to complete multiple tasks including excavation and loading materials. We have a 2004 Caterpillar and a 2016 John Deere and both of these machines are used frequently to perform many tasks such as; loading trucks, repairing water leaks, installing new water services, cleaning ditches, and performing street work. However, staff is recommending the addition of a new smaller compact excavator to work in tight spaces. A compact excavator would streamline our efforts to complete certain services currently accomplished with our backhoes and do so with added efficiency and safer operation. The growth of the city has offered us some new challenges and Public Works is now in need of a compact excavator to improve and provide additional services. In fact, we have rented a compact excavator to install playground equipment and install and move water services.



Discussion

Compact excavators perform similar tasks as a backhoe but offer many advantages over a backhoe. These machines are more compact and are on rubber tracks which causes less damage to yards and working surfaces. The 360 degree articulation improves visibility which increases safety for the operator and workers. Increased rotation of the bucket allow for spoils to be placed further from the trench or excavation which prevents cave-ins. This machine has a smaller footprint and the rubber tracks distribute the weight across a much larger area. This puts less pressure per square foot on the working surface which minimizes rutting and the destruction of property. On soft or wet ground, which happens during water leaks, the backhoe tires and outriggers sink into the ground causing stability issues and damage property. In addition, projects such as irrigation repairs or playground equipment installations can be completed without causing ruts and damaging turf and landscaping. Smaller bucket

sizes allow us to work in tight areas and stay further away from underground utilities such as gas, electric, and fiber optic cables. Also, a mechanical thumb is included on this machine for handling brush and secondary hydraulics allow for attachments such as a concrete breaker or plate compactor. This excavator needs to be trailered and we already own a trailer that is rated to haul the machine safely. We would appreciate adding this



machine to our equipment inventory to improve quality, increase efficiency, and provide a safer work environment. Thank you for your consideration for this purchase.

Recommendation

Public Works has received quotes from Komatsu and John Deere, both have similar specifications as the Bobcat E35. Several other local cities have purchased this same machine so it's been made available for purchase on the *Kansas State Purchasing Contract*.

Staff recommends the purchase of the Bobcat R2-Series Compact Excavator from White Star Equipment in the amount of \$59,924.12.

COMPANY	MODEL	COST
White Star Equipment (Bobcat)	Bobcat R2-Series (With extendable arm)	\$ 59,924.12
Murphy Tractor (John Deere)	2022 John Deere 35 G (No extenable arm)	\$ 61,815.46
Berry Tractor (Komatsu)	Komatsu pc 35 mr-5 (No extendable arm)	\$ 74,000.00