


## COUNCIL COMMUNICATION

	Number:	<b>21-008</b>	Meeting:	<b>January 11, 2021</b>
	Agenda Item:	<b>26D</b>	Roll Call:	<b>21-31</b>
	Submitted by:	<b>Nickolas Schaul, Finance Director</b>		

### AGENDA HEADING:

Approving the purchase of two (2) replacement refuse truck chassis with specified collection equipment bodies and one (1) replacement truck chassis with specified sewer cleaning and maintenance equipment for use by the Department of Public Works.

### SYNOPSIS:

Recommend approval of the purchase of two (2) replacement purpose-built refuse truck chassis with specified solid waste collection equipment installed and one (1) replacement truck chassis with specified sewer maintenance equipment installed utilizing Sourcewell purchasing contracts as follows:

- Three (3) truck chassis from Housby Mack Inc., (4747 NE 14th Street, Des Moines, IA 50313, Kelly Housby, President), in the amount of \$380,217. Two (2) chassis at a cost of \$139,871 each, and one (1) chassis at a cost of \$100,475, utilizing Sourcewell purchasing contract number 060920-MAK.
- Two (2) rear loading refuse collection equipment bodies for the above referenced truck chassis from McNeilus Truck and Manufacturing, (520 Highway, Suite E, Dodge Center, MN 55927, Brad Nelson, President), in the amount of \$186,780 utilizing Sourcewell purchasing contract number 091219-MCN.
- One (1) sewer cleaning and maintenance equipment body from Gradall Industries Inc., (9102 NE 27th Avenue, Vancouver, WA 98665, Mike Hoverman, President) in the amount \$187,352.32 utilizing the Sourcewell purchasing contract No. 122017-GRD.

### FISCAL IMPACT:

Amount: \$754,349.32

Funding Source: 2020-2021 Operating Budget, page 97, I201, Equipment Replacement

### ADDITIONAL INFORMATION:

- Use of the Sourcewell purchasing contract for heavy duty truck chassis resulted in a total cost savings of \$12,793 for the three (3) recommended chassis compared to previous purchases last year from a different procurement contract. Staff will continue to compare costs among contracts for the least cost options. All recommendations were approved by the Fleet Oversight Committee (FOC) and are budgeted within a multiple year vehicle and equipment replacement plan.

- The recommended purpose-built refuse truck chassis are powered by clean burning heavy-duty (big bore) diesel engines, which result in reduced fuel consumption compared to typical medium duty engines. Use of heavy-duty engines results in reduced engine repair costs and provides a longer life cycle and lower life cycle costs when compared to medium duty engines used in municipal operations. The diesel engines can utilize up to 20% renewable biodiesel fuel. A pilot study is under consideration to add dual fuel technology to selected refuse vehicles to burn B100 renewable fuel to further reduce greenhouse gas emissions.
- The recommended truck chassis are equipped with engine control modules (ECM) that constantly capture and report idle time along with over 100 other engine operating parameters. In addition to measuring idle time, the system allows programming a maximum idle time. If the maximum time is reached the engine shuts off to reduce fuel consumption. Initially, trucks will be programmed for a maximum idle time of 10 minutes.
- Fully electric heavy-duty truck chassis for refuse collection purposes are under evaluation with a single prototype unit being operated by the Department of Sanitation, New York City, NY; however, no proven heavy duty tandem axle semi-automated rear loading electric trucks are expected to be available until model year 2025. The New York City unit is a manual loading smaller capacity, 25 cubic yards (CY) rear load body, requiring a two-person crew for the collection process, that is not typical to the City of Des Moines fleet. Other identified prototype electric truck chassis are limited to medium duty smaller capacity single-axle rear loaders ranging from 10-20 CY. The City does not operate any vehicles in these smaller classes.
- Fleet staff recently discussed the operation of the heavy-duty tandem axle Battery Electric Vehicle (BEV) with New York City staff. Results to date after approximately six (6) weeks of operation confirm the unit has viable run time for an eight (8) hour shift at fully loaded capacity of 20,000-pound payload and total Gross Vehicle Weight Rating of 64,000 pounds. Typical battery use for a full day's operation is approximately 40-50% of capacity. Full battery recharge is accomplished with a 4-hour 50-amp 240-volt charger. A truck similar to this prototype may meet the needs of the City, if the rear loading collection system can be automated with an added hydraulic toter tipper.
- As future replacements or additions are considered, heavy duty electric trucks will be evaluated. The capacity for charging infrastructure for heavy duty trucks has been designed into Municipal Services Center Phase 2 plans. The replacement of two (2) rear loading collection trucks was approved by the FOC to maintain the City's current fleet of 38 solid waste collection trucks with the following types of collection equipment as follows:
  - 25 automated side loading (ASL)-scheduled replacement cycle, eight (8) years
  - Six (6) front loading-scheduled replacement cycle, 10 years
  - Six (6) rear loading-scheduled replacement cycle, 10 years
  - One (1) compact semi-automated dual side loading-scheduled replacement cycle, six (6) years.
- The replacement of an existing dual-purpose vacuum and jetting unit "Catch Basin Cleaner" combination truck, with a single purpose unit for "jetting" only of sewer lines was approved by the FOC and results in purchase cost savings of \$93,625 compared to a combination unit. This recommendation is consistent with the previous awards based on competitive comparisons of

multiple brands from multiple contracts. Gradall Industries can provide the Vacall brand equipment bodies under the Sourcewell contract that is similar to the existing units in use by the Sewers Division. The recommended purchase will enhance fleet consistency in repair, maintenance, and increase operational efficiencies.

**PREVIOUS COUNCIL ACTION(S):**

Date: September 14, 2020

Roll Call Number: [20-1466](#)

Action: Approving purchases from the following:

- (A) [Housby](#) Mack Inc. (Kelly Housby, President) for two additional refuse truck chassis with specified collection equipment bodies per Houston-Galveston Area Council contract for use by the Solid Waste Division of the Department of Public Works, \$580,418. ([Council Communication No. 20-396](#)) Moved by Gatto to adopt. Motion Carried 7-0.

Date: November 4, 2019

Roll Call Number: [19-1746](#)

Action: Purchases from the following:

- (D) [Gradall](#) Industries Inc. (Mike Hoverman, President) for purchase and installation of sewer cleaning and maintenance equipment bodies on three (3) heavy-duty truck chassis per Sourcewell Cooperative Purchasing Contract for use by the Public Works Department, which was approved by the Fleet Oversight Committee (FOC), \$841,216.08. ([Council Communication No. 19-480](#)) Moved by Gatto to adopt. Motion Carried 6-1. Nays: Coleman.

**BOARD/COMMISSION ACTION(S): NONE**

**ANTICIPATED ACTIONS AND FUTURE COMMITMENTS: NONE**

For more information on this and other agenda items, please call the City Clerk's Office at 515-283-4209 or visit the Clerk's Office on the first floor of City Hall, 400 Robert D Ray Drive. Council agendas are available to the public at the City Clerk's Office on Thursday afternoon preceding Monday's Council meeting. Citizens can also request to receive meeting notices and agendas by email by calling the Clerk's Office or sending their request via email to [cityclerk@dmgov.org](mailto:cityclerk@dmgov.org).