

 <p style="text-align: center;">Council Communication Office of the City Manager</p>	Date:	November 19, 2018
	Agenda Item No.	1111111
	Roll Call No.	[]
	Communication No.	<u>16 replacement truck chassis</u>
	Submitted by:	Bob Fagen, Finance Director

AGENDA HEADING:

Approving the purchase of 16 replacement truck chassis with specified components including snow and ice control equipment for use by the Street Maintenance Division of the Department of Public Works.

SYNOPSIS:

Recommend approval to purchase the following:

1. Twelve (12) single-axle and four (4) tandem-axle purpose built Cab Over Engine (COE) heavy duty diesel truck chassis including optional 7-year engine and emission system warranties, and a \$600 per Purchase Order contract processing fee for a total award in the amount of \$2,124,260 utilizing the Houston Galveston Area Council (HGACBuy) procurement process and assignment to Housby Mack, Inc. 4747 NE 14th Street, Des Moines, IA 50313 (Kelly Housby, President).
2. The purchase of snow and ice equipment for the 16 above referenced truck chassis in varying configurations including different types of snow plows, dump boxes, and anti-icing systems, with electronic and hydraulic control systems, in the amount of \$1,538,889.80, utilizing the Sourcewell Cooperative Purchasing contract, formerly National Joint Powers Alliance (NJPA) cooperative contract purchasing program contract terms, to Henderson Products Inc., 916 South 10th Street, Manchester, IA 52057 (John Sievert, President).

Though the purchase price of a COE truck chassis is higher than a conventional cab truck chassis, the COE trucks deliver greater operational and ownership benefits. COE trucks with heavy duty engines consumer less fuel, have a higher resale value, are safer to operate, safer to enter and exit, and will allow Public Works drivers to plow residential streets faster, with fewer accidents and fewer injuries.

FISCAL IMPACT:

Amount: \$3,663,149.80

Funding Source: 2018-2019 Operating Budget, page 42, I201, Equipment Replacement; Street Maintenance Equipment Replacement FN024882

ADDITIONAL INFORMATION:

The purchase of additional COE chassis for use outside of solid waste collection is an integral part of a program redesign for Street Maintenance Division of the Department of Public Works. The COE truck chassis configuration provides increased maneuverability, visibility, accessibility, and serviceability compared to traditional conventional cab chassis, especially when in use for residential neighborhood snow removal operations. COE chassis configurations have been used by the Solid Waste Division of the Public Works Department for collection of municipal solid waste, recycling, and yard waste since 2001. The replacement of 16 units for use by the Street Maintenance Division in this recommended purchase is in addition to 11 COE truck chassis on order that will be delivered in January 2019. The total of 27 COE trucks represents 29.7% of the Department of Public Works fleet.

Starting in the fall of 2018, the Fleet Services Division has installed telematics technology in 188 units in the Public Works vehicles. Those vehicles include refuse, sewer maintenance, and street maintenance/snow & ice control trucks. It is the intention of the Fleet Division to evaluate the idle times, compare the fuel efficiency of different engine sizes, and overall fleet needs. The remaining 47 trucks necessary to meet the 81% COE fleet inventory plan will be evaluated during the annual review of the five-year equipment replacement plan with the telematic analysis for appropriate equipment and right size fleet inventory.

The order of 16 additional COE trucks in will result in the replacement of equipment past its useful life sooner and will produce the most savings from repairs of existing units. The demands of a robust economy from the freight hauling and the trucking industry have resulted in extended lead times for orders of heavy duty trucks. The delivery of the 16 trucks is anticipated in January and February of 2020. Any delay in an ordering will result in an unknown delivery time and increase costs from repairs to existing trucks, model year price increases and additional tariffs. The calculated ongoing repair parts cost is \$25,000 per truck per year. The model year price increase is estimated to be \$3,000 and steel tariff charges of \$1,500 per truck. The total estimated cost from the delaying the purchase of 16 truck is over \$370,000.

Replacement COE trucks are powered by heavy duty diesel engines for warm weather construction use and cold weather emergency snow and ice control operations, achieving reduced fuel consumption, compared to a typical medium duty engine, resulting in reduced engine repair costs, and provides a longer life cycle and results in lower life cycle costs when compared to a conventional cab chassis with a medium duty engine used in municipal operations.

The City of Des Moines is a member of the HGACBuy, a national government-to-government cooperative purchasing program. HGACBuy establishes purchasing contracts nationwide on behalf of local governments, special districts and private non-profits providing a government service. The HGACBuy procurement process includes research, reparation of specifications, pre-bid and pre-proposal conferences, legal notice posting and advertising, bid/proposal review and contract execution.

Staff identified multiple HGAC contract holders for heavy duty tandem and single axle COE truck chassis. Staff solicited contract quotes for tandem-axle and single axle COE chassis from HGACBuy contract holders. The comparative results are shown in the table below:

HGAC BUY Contract Comparisons				
Purpose Built Heavy Duty Street Maintenance Application Truck Chassis				
Manufacturer	Type of Equipment	HGACBuy Contract Cost/Unit	*Residual Value	Net Cost of Ownership
Mack	Tandem-Axle	\$135,060	\$57,750	\$77,310
Peterbilt	Tandem-Axle	\$135,888	\$56,725	\$79,163
Autocar	Tandem-Axle	\$143,032	\$54,350	\$88,682
Mack	Single-Axle	\$123,635	\$46,125	\$77,510
Peterbilt	Single-Axle	\$125,177	\$46,700	\$78,447
Autocar	Single-Axle	\$133,152	\$44,775	\$88,377

*Residual value-based on calculations for “Rough Wholesale” values for 8-year-old 2011 model year used trucks from the City’s independent paid subscription services of Black Book-Division of Hearst Business Media Corporation. Black Book provides subscribers with residual values of medium and heavy-duty truck chassis independent from truck manufacturers and dealers. Black Book data is captured from truck dealer transactions, aftermarket sales, and auction results.

City staff also utilize the paid subscription services of J. D. Powers Valuation Services as provided in American Truck Dealers (ATD/NADA) commercial truck guides. There was insufficient data of truck dealer transactions for this class of purpose built COE truck chassis for ATD/NADA to publish residual values. Most of the aftermarket transactions for refuse trucks are from municipalities and private waste haulers; therefore, Black Book was the primary source used to calculate residual values.

Fuel Efficiency and Reduced Idling

The COE truck chassis are powered by clean burning heavy-duty (big bore) diesel engines, which results 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 results in lower life cycle costs when compared to medium duty engine used in municipal operations. The diesel engines can utilize up to 20% biodiesel fuel.

The recommended truck chassis are equipped 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. Idle time will also be monitored and reported using aftermarket installed telematics technology.

The recommended award for purpose built COE truck chassis is to the least cost purchase price and least cost of ownership when applying the projected residual value to the purchase price.

The City participates in the Sourcewell Cooperative Purchasing (formerly, National Joint Powers Alliance-NJPA) program and has utilized Sourcewell for equipment purchases previously. Henderson Products is a provider of emergency snow and ice control operations equipment and can provide the necessary equipment, control systems, and installation under Sourcewell contract terms. Henderson Products has consistently responded to previous competitive bids and was the single bidder with multiple responses to the last competitive bid solicitation. Henderson Products has specifically engineered an underbody scraper plow and rear mounted wing plow systems that can be installed on

COE chassis. Therefore, the recommended award is to Henderson Products for emergency snow and ice control operations equipment and installation.

PREVIOUS COUNCIL ACTION(S):

Date: March 19, 2018

Roll Call Number: [18-0485](#)

Action: [Bid](#) from Housby Mack, Inc., per the Houston-Galveston Area Council (HGAC) contract, for purchase of 11 replacement truck chassis, \$1,390,385; and bid from Henderson Products, per the National Joint Powers Alliance (NJPA) contract, for purchase of snow and ice control equipment to outfit 9 of the truck chassis, \$668,439.70, for use by the Street Maintenance and Sewers Divisions and the Park and Recreation Department. ([Council Communication No. 18-152](#)) Moved by Mandelbaum to adopt. The City Manager will provide the following information. 1. Annual comparison of accident and workers compensation. 2. Fuel efficiency. 3. Total resale value. 4. Information regarding future use of traditional trucks. 5. Use of these trucks for sand/salt operation after ice storms. 6. Amount of time the trucks spend idling. Motion Carried 5-2. Nays: Coleman and Gatto.

BOARD/COMMISSION ACTION(S): NONE

ANTICIPATED ACTIONS AND FUTURE COMMITMENTS: NONE

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