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OAKLAND

2019 MAR 28 PM 1:25

AGENDA REPORT

TO: Sabrina B. Landreth
City Administrator

FROM: Jason Mitchell
Director, Public Works

SUBJECT: Contract For Service: SmartPedal
Labs

DATE: March 18, 2019

City Administrator Approval

Date:

3/28/19

RECOMMENDATION

Staff Recommends That The City Council Adopt A Resolution Authorizing:

(1) A Two-Year Agreement With SmartPedal Labs For An Amount Not To Exceed Two Hundred Thousand Dollars (\$200,000.00) For The Period Of May 1, 2019, Through April 30, 2021 To Purchase 612 SmartPedals To Improve The Mileage And Reduce The Greenhouse-Gas Emissions Of Vehicles Operated By The City Of Oakland; And

(2) Waiving The Advertising, Competitive Bidding And Request For Proposal/Qualifications (RFP/Q) Requirements.

BACKGROUND / LEGISLATIVE HISTORY

The City of Oakland operates a fleet of more than six-hundred (600) non-emergency response vehicles; comprised of gasoline powered, natural gas powered and all-electric sedans, trucks and vans. Depending on the type of vehicle, fuel or electricity constitutes up to 85 percent of the operating cost, per asset, over the asset's lifetime. In addition to fiscal impact, both gasoline powered and all-electric vehicles generate Greenhouse Gas (GHG) emissions - either at the tailpipe or upstream at the electric power plant - which adversely affects the health of communities in Oakland.

Oakland Public Works' Bureau of Maintenance and Internal Services (BMIS), Equipment Services Division, routinely explores new solutions aimed at enhancing the operational efficiencies of our vehicles, while simultaneously seeking to continually reduce our fleet's adverse environmental impact(s).

Fleet Analysis and Use of SmartPedal Technology

In keeping with the primary goals of vehicular operational efficiency and environmental enhancements, the Equipment Services Division performed a seven-month test of the new SmartPedal technology. SmartPedal is a multi-patented, after-market vehicular upgrade, developed and manufactured in California, which uses a unique pedal signal correction

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technology. SmartPedal improves the mileage of electric, hybrid and gasoline powered vehicles by electronically correcting for unwanted changes in the (physical) power utilization of drivers.

The Equipment Services Division implemented field tests on forty-seven (47) of the City's Toyota Prius C Hybrids and a portion of the fleet's all-electric Nissan Leafs:

- ❖ For the Prius, the tests ran from May – December 2018, and encompassed over 130,000 miles driven. The mileage of the SmartPedal-upgraded Toyota Prius Cs increased by 5.6 percent when compared to the same time period and miles driven in 2017
- ❖ The SmartPedal-upgraded Nissan Leafs showed a 10.3 percent increase in distance in miles per Kilowatt hour (kWh) of charge; versus non-upgraded (stock) Nissan Leafs during the same period (**see Attachment A**). This resulted in noteworthy decreases in greenhouse gases emitted from each vehicles' energy (refueling and recharging) sources. Further as a direct result of increased range/mileage of the all-electric Nissan Leafs, overall power consumption was decreased, along with reductions in the total time required to recharge vehicles after continued use.

Based upon these findings, Oakland Public Works' Equipment Services Division recommends deploying SmartPedal technologies in fiscal years 2020-2021 on its fleet of non-emergency response sedans, trucks, sport utility vehicles and vans manufactured by Ford, Toyota, Honda and Nissan.

Vendor Justification: SmartPedal Labs

SmartPedal is developed and sold exclusively by SmartPedal Labs, which holds three U.S. patents on the technology referenced herein. The Company is based in the Bay Area and all supplies and equipment is manufactured locally.

ANALYSIS AND POLICY ALTERNATIVES

SmartPedal Labs provides an opportunity to immediately reduce the City fleet's energy consumption and emissions by up to ten-percent (10 percent) — and potentially more on some vehicle makes/models. From a fiscal perspective, this level of performance, combined with low, per-unit cost, will generate a swift return upon the investment. Based on preliminary testing of the SmartPedal, the Equipment Services Division estimates the annual quantity of fuel purchased to operate City Fleet Equipment will be reduced by 27,678 gallons (659 units x 42 gallons per year), resulting in an annual savings of \$83,034.00 at today's fuel pricing (averaged at \$3.00 per gallon).

Test results have shown a 5.6 percent miles-per-gallon (MPG) increase in the most fuel-efficient hybrid vehicles when tested on 47 vehicles with over 130,000 miles driven. If granted authorization to install these SmartPedal devices into 612 non-emergency response vehicles throughout the fleet, the Equipment Services Division expects to see a minimum of 5.6 percent MPG increase amongst all vehicles with the SmartPedal installed. The average truck is currently obtaining on average 15.0 MPG; and with the SmartPedal device installed, the MPG is

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expected to increase to 15.84, which will equate to saving 42 gallons of fuel annually assuming the truck drives 12,000 miles per year. Over the life cycle of these vehicles, (with the current average age of 11 years), this will result in total cost savings of \$913,374.00 at today's current fuel pricing. However, these are very conservative estimated savings; much greater savings are anticipated, with preliminary test results on non-fuel efficient vehicles obtaining much greater increases in MPG than 5.6 percent.

In addition to financial savings, staff anticipate positive environmental impacts for the Oakland community through sizable reductions in the emission of harmful Green House Gas emissions by an estimated 600,000 to 1,200,000 pounds of carbon dioxide equivalents over two years once installed in the entire fleet.

As an alternative to upgrading current assets, the City could pursue the purchase of newer, more fuel-efficient vehicles. However, the cost per vehicle starts in the tens of thousands of dollars. Moreover, average new vehicle fuel economy increased only 0.1 MPG between the 2015-2016 model years. For comparison, SmartPedal increased the combined average mileage of the City of Oakland's fleet of Toyota Prius C Hybrids by approximately *seventeen times* this amount. Therefore, the purchase and installation of SmartPedal represents the best and most prudent choice for improving the City of Oakland's fleet fuel mileage, reducing costs of vehicular operations, as well as mitigating the production of harmful greenhouse gases.

Waiver Request

Oakland Municipal Code (OMC) Title 2, Chapter 2, Article I, Section 2.04.050 requires the City to conduct advertising and competitive bidding for the procurement of goods, professional services, or a combination thereof. OMC Section 2.04.050.1.5 permits the Council to waive advertising and competitive bidding requirements upon a finding and determination that it is in the City's best interests to do so.

Based upon the fact that SmartPedal is patented, and that SmartPedal Labs is the sole manufacturer and distributor of SmartPedal, staff recommends that the Council finds and determines that it is in the best interests of the City to waive the advertising, competitive bidding and RFP/Q requirements as they pertain to the implementation of the proposed contract with SmartPedal Labs.

FISCAL IMPACT

While there is an upfront cost of \$200,000 over two fiscal years to implement the SmartPedal devices on 612 City vehicles, as detailed in the previous section of this report, staff anticipates savings in fuels costs over the life of these devices to far exceed the initial investment costs. The SmartPedal devices will be installed on each vehicle when the vehicle is brought to the equipment shop for regularly scheduled routine maintenance, and the devices will take only a few minutes to install, resulting in very little downtime for each vehicle.

Proposed Service Contract with the SmartPedal Labs

Project Year	Annual Number of SmartPedal Devices	Cumulative Contract Amount
2019-2020	306	\$100,000
2020-2021	306	\$100,000
Grand Total:	612	\$200,000

Source of Project Funding

Funding for the first year of the proposed contract is available in the Fiscal Year (FY) 2018-2019 Adopted Budget in the Equipment Services Fund, 4100; Equipment Services Administration, Organization 30541; Vehicle Accessories and Electrical Supplies, Account 52811; Administrative Project, 1000010; Fleet Management and Maintenance Program, IN01. For FY 2019-2020 and FY 2020-2021, contractual financial provisions shall be contingent upon the availability of funding.

PUBLIC OUTREACH / INTEREST

This item did not require additional public outreach other than the required posting on the City's website.

COORDINATION

Information that is the basis of this report was coordinated with Oakland Public Works' Bureau of Infrastructure & Operations, the Controller's Bureau and the Office of the City Attorney.

SUSTAINABLE OPPORTUNITIES

Economic: Improving the mileage of the gas- and natural gas-powered vehicles utilized by the City reduces operating (fuel) expenses significantly. The same technology used to improve mileage also reduces unnecessary combustion, potentially reducing long-term maintenance costs for the powertrain as the vehicle ages.

By improving the range of electric vehicles, SmartPedal reduces the amount of power that the City would otherwise need to purchase from PG&E. The increased efficiency also means shorter times at the charging station for each vehicle, potentially reducing the number of charging that the City will need to install and operate.

Environmental: SmartPedal presents an immediate opportunity to reduce emissions produced by gasoline and natural gas-powered vehicles operated by the City of Oakland.

Using the EPA Greenhouse-gas calculator (<https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>), staff estimates that the use of SmartPedal will reduce the CO2 and other GHG emissions produced by City vehicles by up to an estimated 1.2 million pounds over two years.

Social Equity: Increasing the operational efficiency of the City of Oakland's fleet while also reducing its production of harmful greenhouse gases helps keep Oakland and its neighborhoods safe and healthy environments.

ACTION REQUESTED OF THE CITY COUNCIL

Staff recommends that the City Council adopt a Resolution authorizing: (1) A two-year agreement with SmartPedal Labs for an amount not to exceed two hundred thousand dollars (\$200,000.00) for the period of May 1, 2019, through April 30, 2021 to purchase 612 SmartPedals to improve the mileage and reduce the greenhouse-gas emissions of vehicles operated by the City of Oakland; and (2) Waiving the advertising, competitive bidding and request for proposal/qualification (RFP/Q) requirements.

For questions regarding this report, please contact Joseph Williams, Interim Equipment Services Manager, Bureau of Maintenance and Internal Services, at 615-5489.

Respectfully submitted,



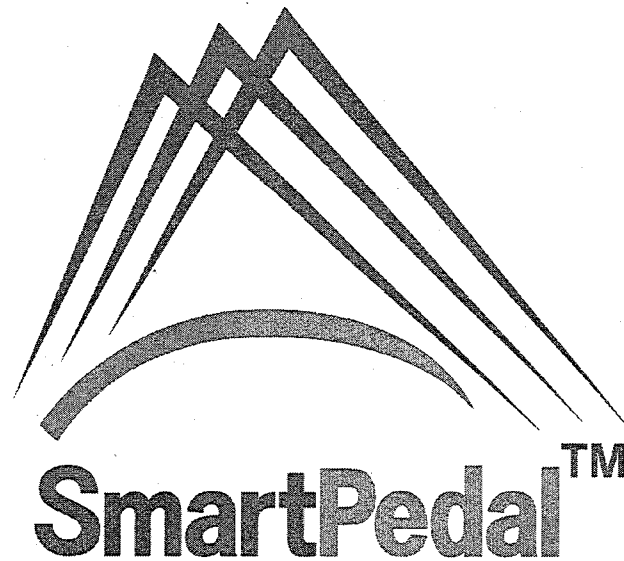
JASON MITCHELL
Director, Oakland Public Works

Reviewed by:
Richard Battersby, Assistant Director
Bureau of Maintenance and Internal Services

Prepared by:
Joseph Williams, Interim Equip. Svcs. Manager
Bureau of Maintenance and Internal Services

Attachments (1):

A - SmartPedal Pilot Test Results



LEAF AND PRIUS C FLEETS

Results from May to December 2018

PRIUS C RESULTS

Control - 5/24 to 12/31 2017						Pilot - 5/24 to 12/31 2018			
Unit	SmartPedal	Start	End	Fuel	MPG	Start	End	Fuel	MPG
3220	2310	25,880	27,530	66.1	25.0	31,557	34,900	107.8	31.0
3221	2297	14,765	16,029	48.3	26.2	17,930	20,151	71.5	31.1
3222	2302	17,004	19,917	104.2	28.0	21,764	22,957	47.2	25.3
3223	2264	25,082	27,600	75.0	33.6	31,100	33,700	77.5	33.5
3224	2276	25,020	26,923	60.2	31.6	27,468	28,322	29.0	29.4
3225	2287	37,599	42,830	149.3	35.0	44,183	47,148	90.3	32.8
3226	2299	22,029	24,100	74.0	28.0	25,700	26,581	24.7	35.7
3228	2289	31,063	34,592	94.4	37.4	37,500	41,300	96.1	39.5
3229	2305	33,185	37,271	110.3	37.0	40,613	44,193	101.3	35.3
3230	2281	31,059	34,844	102.1	37.1	37,468	40,872	104.7	32.5
3231	2293	23,223	26,007	84.4	33.0	28,184	30,255	63.6	32.6
3232	2307	10,120	11,504	80.9	17.1	12,838	14,130	65.3	19.8
3233	2296	20,923	21,959	34.4	30.1	23,071	26,507	101.8	33.8
3234	2294	11,498	12,743	61.4	20.3	14,017	15,124	50.8	21.8
3235	2266	26,900	29,300	62.3	38.5	32,100	34,900	74.7	37.5
3301	2298	14,070	16,124	82.6	24.9	17,970	20,393	91.2	26.6
3302	2277	23,573	26,753	96.2	33.1	28,482	31,238	73.1	37.7
3303	2291	17,533	19,657	85.1	25.0	21,353	23,969	86.6	30.2
3304	2306	3,305	3,699	12.0	32.8	4,308	4,417	2.9	37.6
3305	2279	20,680	24,200	111.7	31.5	27,500	31,000	92.7	37.8
3306	2312	27,048	27,947	26.2	34.3	31,906	32,810	20.3	44.5
3307	2271	15,344	15,556	7.1	29.9	16,556	18,855	75.2	30.6
3308	2270	17,552	21,083	110.0	32.1	23,479	26,257	82.7	33.6
3309	2278	19,300	21,300	66.6	30.0	23,400	26,300	78.2	37.1
3310	2301	14,416	17,956	108.7	32.6	21,009	23,728	84.1	32.3
3311	2262	7,900	8,100	7.2	27.8	9,400	10,037	18.1	35.2
3312	2267	19,500	24,079	127.9	35.8	27,100	31,600	121.8	36.9
3313	2272	16,276	20,567	131.5	32.6	23,639	26,298	86.9	30.6
3315	2284	16,400	20,143	122.2	30.6	22,600	26,000	113.5	30.0
3316	2285	24,900	28,400	112.9	31.0	30,615	34,900	124.1	34.5
3317	2275	20,500	23,300	103.6	27.0				
3318	2288	13,732	16,497	81.9	33.8	18,964	22,347	99.4	34.0
3319	2286	17,240	19,752	73.9	34.0	22,022	26,919	143.6	34.1
3320	2274	15,117	18,093	92.9	32.0	20,459	23,503	84.9	35.9
3323	2309	20,756	23,855	113.6	27.3	26,254	29,621	128.4	26.2
3324	2290	21,700	24,800	112.2	27.6	27,483	32,674	162.6	31.9
3325	2304	22,807	25,832	100.9	30.0	28,206	30,674	96.8	25.5
3326	2311	12,920	14,700	53.1	33.5	16,600	19,701	89.3	34.7
3328	2273	24,555	26,462	62.7	30.4	27,300	30,424	93.9	33.3
3329	2280	24,434	29,500	152.0	33.3	33,480	39,100	160.8	35.0
3330	2295	24,733	28,788	114.7	35.4	32,021	36,563	125.6	36.2
3331	2283	17,596	19,421	69.3	26.3	21,503	23,776	80.1	28.4
3332	2282	2,883	3,378	13.5	36.7	3,897	4,329	12.3	35.1
3335	2308	21,037	24,780	109.9	34.1	28,037	32,899	145.0	33.5
3336	2300	7,431	10,297	79.6	36.0	12,913	14,148	35.2	35.1
3337	2303	15,937	18,703	79.5	34.8	21,486	24,461	91.0	32.7
3338	2263	21,002	22,579	56.9	27.7	26,105	31,648	169.4	32.7
		917,527	1,039,450	3,885.4	31.1	1,121,540	1,251,629	3,976.0	32.8
								SmartPedal Difference	5.6%

PRIUS NOTES

- SmartPedal mileage increased 5.6% over historical mileage.
- Data comprised of:
 - 47 vehicles driven over 221 days with 568 fill ups.
 - 130,000 miles driven in 2018 and 122,000 in 2017)

LEAF RESULTS

	Pre-Install		Last Report		Change	
	mi/kWh	Odometer	mi/kWh	Odometer	Distance	%
3507	3.6	3210	4.1	4746	1536	13.9%
3508	3.7	2608	2.8	3804	1196	(24.3%)
3509	3.7	2648	4.1	3022	374	10.8%
3703	3.2	199	3.7	437	238	15.6%
3709	3.7	201	4.4	374	173	18.9%
3713	3.2	22	3.3	191	169	3.1%

STOCK LEAFS

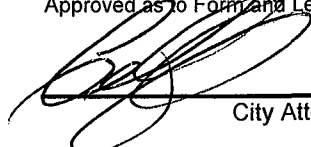
		mi/kWh	Odometer
3701		3.2	3,155
3710		3.5	734
3711		3.7	776
3714		3.1	816
3715		3.0	560
3718		3.5	1,150
3725		3.7	1,678

LEAF NOTES

- 6 SmartPedal Leafs outperformed 7 stock Leafs by 10.3% combined average in 2018.
- SmartPedal Leafs outperformed stock Leafs by 15.8% if outlier removed.
- Outlier is 3508 which shows very high rate of pedal-to-metal driving and is driven with cruise control enabled on highway—both of which cancel out SmartPedal.

FILED
OFFICE OF THE CITY CLERK
OAKLAND

OAKLAND CITY COUNCIL



City Attorney

2019 MAR 28 PM 1:26 RESOLUTION No. _____ C.M.S.

Introduced by Councilmember _____

RESOLUTION AUTHORIZING: (1) A TWO-YEAR AGREEMENT WITH SMARTPEDAL LABS FOR AN AMOUNT NOT TO EXCEED TWO HUNDRED THOUSAND DOLLARS (\$200,000.00) FOR THE PERIOD OF MAY 1, 2019, THROUGH APRIL 30, 2021, TO PURCHASE 612 SMARTPEDALS TO IMPROVE THE MILEAGE AND REDUCE THE GREENHOUSE-GAS EMISSIONS OF VEHICLES OPERATED BY THE CITY OF OAKLAND; AND (2) WAIVING THE ADVERTISING, COMPETITIVE BIDDING AND REQUEST FOR PROPOSAL/QUALIFICATIONS (RFP/Q) REQUIREMENTS

WHEREAS, Oakland Public Works' Bureau of Maintenance and Internal Services, Equipment Services Division, seeks to use new technologies and products to reduce the operating cost and greenhouse-gas (GHG) emissions associated with operation of its fleet vehicles; and

WHEREAS, in furtherance of that goal, from May through December 2018, Oakland Public Works' Bureau of Maintenance and Internal Services tested SmartPedal on the 47-vehicle parking enforcement fleet of Toyota Prius C Hybrids and an additional six Nissan Leaf motor pool vehicles; and

WHEREAS, with SmartPedal installed the mileage of the already highly fuel-efficient Prius Cs increased a combined average 5.6% versus the same period from the prior year; and

WHEREAS, the mileage of all-electric Nissan Leafs with SmartPedal increased a combined average 10.3% versus non-SmartPedal equipped Nissan Leaf vehicles during the same period; and

WHEREAS, SmartPedal is a unique and multi-patented technology that improves the mileage of electric, gasoline, natural gas, diesel and hybrid powered vehicles by electronically correcting for unwanted changes in power by drivers; and

WHEREAS, SmartPedal is developed and manufactured in California and sold exclusively by SmartPedal Labs a dba of Pedal Logic LP; and

WHEREAS, Oakland Public Works requests authorization to enter into an agreement with SmartPedal Labs for the period of May 1, 2019, through April 30, 2021, to purchase six hundred twelve (612) SmartPedals at two hundred ninety-nine dollars (\$299.00) each for use on its fleet of sedans, trucks, and SUVs for an amount not to exceed two hundred thousand dollars (\$200,000.00) inclusive of sales tax; and

WHEREAS, the grand total contract price for all products described above is one hundred ninety-nine thousand nine hundred fourteen dollars and thirty-nine cents (\$199,914.39); and

WHEREAS, Oakland Municipal Code (OMC) Title 2, Chapter 2, Article I, Section 2.04.051.A requires the City to conduct a competitive Request for Proposal/Qualifications (RFP/Q) selection process for the procurement of professional services; and

WHEREAS, OMC Title 2, Chapter 2, Article I, Section 2.04.050 requires the City to conduct advertising and competitive bidding when it purchases services, supplies or a combination thereof that exceeds \$50,000.00; and

WHEREAS, OMC Section 2.04.051.B and 2.04.050 I. 5 permit the Council to waive the RFP/Q and advertising and bidding requirements upon a finding and determination that it is in the best interests of the City to do so; and

WHEREAS, staff recommends that the City Council, pursuant to OMC Section 2.04.051.B and 2.04.050 I. 5 waives the RFP/Q and advertising and bidding requirements and authorize the City Administrator or designee to enter into a contract with SmartPedal Labs; and

WHEREAS, the proposed contractual arrangements between Oakland Public Works and SmartPedal Labs will assist the City of Oakland in reducing fuel costs and GHG emissions associated with operating its vehicles; now, therefore, be it

RESOLVED, That the City Council hereby authorizes the City Administrator or designee to enter into an agreement with SmartPedal Labs to purchase up to 612 SmartPedals and installation and data analytics support services for a grand total contract amount not to exceed \$199,914.39; and be it

FURTHER RESOLVED, That pursuant to OMC Sections and 2.04.050 I. 5 and 2.04.051.A, the City Council hereby finds and determines that it is in the best interests of the City to waive the advertising, competitive bidding and RFP/Q requirements based upon the reasons as set forth herein and in the attached report which accompanies this Resolution; and be it

FURTHER RESOLVED, That the City Administrator or designee is hereby authorized to complete all required negotiations, certifications, assurances and documentation required to accept, modify, extend and/or amend the proposed agreement(s) with SmartPedal Labs, except for any increase in the contract(s) costs; and be it

FURTHER RESOLVED, That all proposed contract expenditure allocations shall be expensed to the Oakland Public Works Equipment Services Fund 4100; Equipment Services Administration Organization 30541; Vehicle Accessories and Electrical Supplies Account 52811; Administrative Project 1000010, Fleet Management and Maintenance Program IN01; and be it

FURTHER RESOLVED, That proposed contract expenditure allocations for Fiscal Year 2019 through Fiscal Year 2021 will be contingent upon the availability of funding; and be it

FURTHER RESOLVED, That the City Attorney shall review and approve the proposed contract(s) as to form and legality, and copies of the agreement(s) shall be filed with the Office of the City Clerk.

IN COUNCIL, OAKLAND, CALIFORNIA,

PASSED BY THE FOLLOWING VOTE:

AYES - FORTUNATO BAS, GALLO, GIBSON MCELHANEY, KALB, REID, TAYLOR, THAO AND
PRESIDENT KAPLAN

NOES -

ABSENT -

ABSTENTION -

ATTEST: _____

LATONDA SIMMONS
City Clerk and Clerk of the Council of the
City of Oakland, California