FORM GEN. 160 (Rev. 6-80)

CITY OF LOS ANGELES

INTER-DEPARTMENTAL CORRESPONDENCE

DATE: August 9, 2016

TO: The Honorable City Council
c/o City Clerk, Room 395, City Hall
Attention: Honorable Mike Bonin, Chair, Transportation Committee

FROM: Nazario Sauceda, Director, Bureau of Street Services
Seleta Reynolds, General Manager, Department of Transportation

SUBJECT: **PARKING REFORM: USING TECHNOLOGY TO REDUCE STREET SWEEPING TICKETS (COUNCIL FILE 15-1449)**

SUMMARY

This is a follow up to Council File 15-1449, continued from the June 22, 2016 Transportation Committee meeting.

RECOMMENDATION

Instruct the Bureau of Street Services (BSS), Information Technology Agency (ITA), and Los Angeles Department of Transportation (LADOT) to report to the Committee in October 2016 with a detailed analysis, including any new resource needs, for the development of (i) a digital route mapping project, (ii) an accurate data transfer allowing direct communication between street sweepers and parking enforcement officers, and (iii) a notification system to inform residents of when they can park on the street after the street has been swept.

BACKGROUND

This joint report was prepared in response to direction from the Transportation Committee on June 22, 2016 regarding initiatives to utilize Global Positioning System (GPS) equipment on street sweepers to improve coordination between BSS and LADOT relative to the issuance of street sweeping parking citations. This effort was initiated by the Mayor's Los Angeles Parking Reform Working Group that recommended that the City reduce the overall number of street cleaning parking violations by better utilizing technology to improve the operational efficiency of and coordination between departments and the public.

Specifically, the Committee provided the following instructions:

- Provide the data from the new GPS street sweeper technology to LADOT to expedite the communication and coordination between the City's street sweepers and the parking enforcement officers;
- Report in 90 days with a proposed scope, schedule, and resources needed to create a digital notification system that will allow on-street parking immediately after a street has been

swept.

- Provide an update on the effort to inventory the City's street sweeping routes that includes a catalogue and map of all the City's street sweeping routes to reduce conflicts with other activities, such as school drop offs and trash pick-up.

GPS Hardware Initiative

The BSS was provided $150,000 in Fiscal Year (FY) 2015-16 to procure and install GPS location devices and operational sensors in all of the BSS Street Maintenance Division's one hundred motor sweepers. The purpose of these devices is to enable the BSS to optimize sweeping route efficiency and provide prompt emergency response to a Motor Sweeper Operator emergency. Operational sensors will also enable the BSS to measure sweeper water usage and identify opportunities to optimize water use as well as sweeper broom position, for example, up (in use) or down (out of use). The system will digitally capture the turn-by-turn information from the street sweepers and be used to redesign and consolidate routes, as necessary, to increase efficiency. The BSS only requires a rudimentary level of data accuracy to increase efficiencies.

The General Services Department (GSD) awarded the project contract to Orpak USA, Inc. (Orpak) in late 2015 and the GPS installation process was completed at the end of June 2016. At this point, ninety-nine motor sweepers have received the full set of operational sensors. The BSS and GSD anticipate that installation of all hardware components will be completed by the end of August 2016.

As part of the hardware initiative installation, the GPS and sensor hardware must undergo equipment calibration. The GSD is working with Orpak to ensure that the BSS has live citywide real-time location data access for all one hundred sweepers by September 2016. At this point, GSD reports that ninety-two of the one hundred installed devices have completed the calibration process and are now transmitting accurate location data. Over the next six months, the BSS will be analyzing the real-time sweeping route data to create routing efficiencies. It has not been determined if additional technical assistance or expertise, either by working with ITA and/or an outside consultant, will be necessary.

All of the initial project funding has been exhausted. Although BSS requested an additional $100,000 in FY 2016-17 for system maintenance and replacement parts, only $30,000 was provided for the monthly GPS subscription costs only.

DISCUSSION

Parking-Related Initiatives: Digital Route Maps

It is important to note that the BSS GPS hardware initiative did not include a deliverable pertaining to the communication of real-time data to LADOT traffic officers or the public. City staff met several times over the past few months to discuss the technical aspects of expanding the BSS' new GPS system. LADOT's vendor, Xerox, requires digital route maps in order to begin scoping and determining cost estimates of various parking-related initiatives. Orpak's existing web-based online mapping interface does not include a feature to export the turn-by-turn data in a standardized file

format.

Prior to collaborating with Xerox, Orpak required Xerox to sign a Non-Disclosure Agreement (NDA). This agreement was executed on July 15, 2016. With the NDA in place, Orpak and Xerox have begun working together. Orpak provided Xerox with the Application Program Interface (API) where the data for the GPS locations and street sweeper activity can be obtained. Orpak confirmed that the street sweeper vehicle sensors capture data when the main broom changes position. With main broom position data available through the API, the information can be utilized to determine if a motor sweeper is sweeping or travelling to/from the route. Additionally, BSS and Orpak will define the technical specifications and workflow for creation of the digital route maps. BSS proposes to report to the Committee in October 2016 with a full analysis, including any new resource needs, for the development of a digital route mapping project.

Parking-Related Initiatives: Future Concepts

ITA confirmed that it is technically feasible to develop a public notification system that would electronically inform residents when they can park on the street after the street has been swept. ITA plans to develop a pilot notification system, pending funding availability, for the Department of Public Works which may be able to integrate the parking notification feature. ITA offered another option of embedding on the City's website street sweeping information as it relates to swept streets available for parking. However, additional resources are needed (1) for ITA, in partnership with BSS and LADOT, to develop the notification system, (2) for BSS to collaborate with GSD to ensure that BSS GPS equipment and data are regularly maintained, monitored and calibrated to ensure high levels of data accuracy, reliability, and integrity and (3) for LADOT to develop a digital communication system for traffic officers. The high level of data accuracy and reliability from the GPS and vehicle sensor equipment is critical to the city for developing any type of real-time data communications for LADOT traffic officers and for the public. Once a system is in place verifying the accuracy of the motor sweeper data and any route cancellation information, a public notification system can be utilized. The technical details and associated costs are unknown at this time.

LADOT is in the early phases of developing a pilot project to test a digital communication system for traffic officers on sweeping routes. Both LADOT and BSS recommend an incremental approach to ensure operational and technical issues can be identified and resolved prior to the potential launch of a multi-neighborhood or even citywide system. LADOT, working with Xerox, will develop cost estimates and timelines of parking-related initiatives within 30 days once a pilot neighborhood has been selected and digital route maps for posted routes within the pilot neighborhood have been provided by BSS.

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