



Date: February 6, 2023

To: Wanda S. Page, City Manager
Through: Bertha T. Johnson, Deputy City Manager
From: Wayne Fenton, Acting Director, Solid Waste Management
Subject: First Amendment to The Contract Between the City of Durham and Rubicon Global, LLC for In-Vehicle Technology for Solid Waste Collection Vehicles

Executive Summary

The City conducted a no-cost pilot project with Rubicon Global, LLC's SmartCity™ software (SmartCity) from January 2020 through December 2020. The pilot was originally supposed to last six months but was extended due to the COVID-19 pandemic.

City Council approved the current contract with Rubicon in February 2021 so that 30 automated solid waste collection vehicles could be equipped with SmartCity access and GeoTab pod devices (Pods), which was a replacement for the in-truck route management system the Department of Solid Waste Management (SWM) had been using for those vehicles. SmartCity operates much the same way as the system that was in those trucks, but with enhanced capabilities.

SmartCity software access is provided through an application (app) available through the Apple or Google Play stores and can therefore be used with any current smartphone or tablet device capable of running apps. In 2021, Rubicon only offered an option to lease smartphones or devices. Since then, an option to use the City's own devices was developed. This option benefits both the City and Rubicon. The City will save money by using its own devices, and these savings allow the remaining vehicles in SWM's fleet to be outfitted with SmartCity and Pods so that all of SWM's vehicles are on this platform. Rubicon benefits because it is committed to the software as a service model, and letting its customers use their own devices is a long term strategy so Rubicon can move away from leasing hardware to its customers.

This proposed contract amendment allows for all 70 of SWM's collection vehicles to be outfitted with Pods, which is 40 more vehicles than provided for in the current contract. It also provides 50 user licenses, which is 20 more than provided for in the current contract, so that each supervisor and each garbage, recycling, and yard waste driver running a route on any given day will be able to use the SmartCity functions.

SWM is also asking to establish a contingency fund in the amount of \$59,629 for the contract, which will allow up to 15 more user licenses and 5 more vehicle pods to be added. These additional licenses and Pods will likely be needed before the proposed contract term ends.

Motion

To authorize the City Manager to execute the proposed First Amendment to the Contract Between the City of Durham and Rubicon Global, LLC for In-Vehicle Technology for Solid Waste Collection Vehicles for an amount not to exceed \$580,182;

To establish a contingency fund in the amount of \$59,629, which is approximately 10% of the not-to-exceed amount; and

To authorize the City Manager to negotiate and execute additional amendments to the contract with Rubicon Global, LLC, provided that the total cost of the contract, including all amendments, does not exceed \$639,811.

Background

SWM made contact with Rubicon in August 2019 and participated in an on-line demonstration to learn more about the capabilities of Rubicon's SmartCity technology. Following presentations and discussions, City staff and Rubicon agreed in November 2019 that the City would be provided a six-month, no cost trial of SmartCity. The pilot was launched in January 2020 and was extended until December 2020 due to challenges posed by the COVID 19 pandemic.

At the time, SWM was using a system that combined two products, Fusion and Navigator, to provide drivers with turn-by-turn routing and the ability to mark collection exceptions. The system provided a limited-use "breadcrumb trail" showing where specific trucks are and where they have been. Those products required the use of proprietary tablets in the vehicles that became quite expensive, and many were nearing the end of their useful lives. This had worked reasonably well for the years that it was the primary system and was a major improvement over the previous system that relied on something similar to Mapquest to provide routing on paper that was provided to drivers.

City Council approved a contract with Rubicon in February 2021 to equip 30 automated solid waste collection vehicles with GeoTab pod devices and SmartCity capabilities. Automated vehicles were chosen as they generally have higher maintenance costs and stood to benefit the most from some of the preventative maintenance reporting.

Some of the benefits and enhancements at the time included:

- Readily available and lower cost off-the-shelf technology (Apple iPhone/iPad)
- Ability for drivers/operators to take photos of issues/concerns/service needs.
- Time- and date-stamped photos become available in real time for access by customer service representatives, supervisors, etc., enabling them to see what the drivers see on the road.
- GeoTab pods provide information concerning vehicle location, driving habits, and problem/trouble codes. The Pods are supported by Fleet Services and are in use by other City departments.
- Information from the Pods allows for greater emphasis on preventive maintenance for vehicles
- Information from Pods provides important information regarding speeding, hard braking, hard turns, etc., that can be used to improve driver habits and to provide objective input for employee appraisals.

The use of SmartCity in those 30 vehicles has been a success for SWM, providing valuable data to be used in making operational decisions and providing customer service. SWM sees value in converting the remainder of its fleet to SmartCity.

In late 2021, Rubicon notified SWM that it was working out an option for customers to use their own devices as opposed to leasing them from Rubicon. SWM submitted a request to the

Technology Solutions Department's Solutions Development Committee to start using City-owned devices to connect to SmartCity. That request was initiated in November 2021 and was approved by the Committee in September 2022. The savings from using City-owned devices will allow the remainder of SWM's fleet to be converted to SmartCity, allowing for uniform management of daily collections operations.

Issues and Analysis

Pods are already installed and SmartCity is in use in all 30 automated collection vehicles. SWM has been using the combination of Fusion and Navigator for the other vehicles, including rear loaders, side loaders, and pup trucks. This system has worked reasonably well, but as with all technologies, capabilities change and new systems become available. The current in-vehicle tablets are due to start being replaced, but Rubicon uses less expensive iPhone / iPad options, which also offer greater capabilities than the existing tablets, so now is an excellent time to transition the remaining fleet to SmartCity.

With the addition of the option to use City-owned devices and stop leasing devices from Rubicon, the City will recognize sufficient savings to allow for the conversion of the remainder of SWM's fleet to SmartCity. SWM is working with AT&T / FirstNet to provide data plans and the smartphone devices. With rebates and device trade-ins, the City is not only getting devices for very little upfront cost, but is also getting service credits that more than offset those costs, as well as more than 4 months of service costs. The plans on the current tablet devices can be deactivated, and the ongoing costs of the AT&T FirstNet plan are less than the current provider's costs for the tablet plans.

SWM is also asking to establish a contingency fund in the amount of \$59,629 for the contract, which will allow up to 15 more user licenses and 5 more vehicle pods to be added. At least 2 more vehicles will be added to the fleet and are on order now. SWM has no need to begin paying for the Pods for those vehicles until they arrive. The Bulky Item crews and Carts Services crews will not immediately be using the SmartCity app, but after further internal processes are completed, it is likely that at least 10 more user licenses will be required. This contingency allows these changes to be incorporated into the contract without needing further action by City Council.

SmartCity will provide the same routing and collection exception reporting capabilities as the current system in the non-automated vehicles. The breadcrumb trail capabilities are more robust than Fusion and will provide better information for both customer service personnel and collections supervisors. Drivers can also use the smartphones to take pictures when carts are not out, are blocked, or are visibly contaminated, again to provide customer service personnel with more tools to educate residents and to reduce missed collection call-backs. There is also a relatively new Supervisor function that allows supervisors to actively manage their crews as they get real time information on position, status of the assigned route, and other vehicle diagnostics. Rubicon also includes Pods that Fusion and Navigator do not. These Pods are currently used in other departments in the City and will help with vehicle maintenance issues and driver training.

Rubicon also offers additional products that the City is not proposing using at this time but may wish to consider in the future. These include front-facing cameras mounted on the vehicles that can be used to automatically capture issues like carts not out or contaminated carts. They also have other applications for other departments. SWM facilitated a demonstration of SmartCity to the Department of Public Works, showing how the cameras can capture and report potholes and other street conditions. Rubicon also offers hopper cameras to show if contaminants are

being dumped from a cart. Rubicon continues to develop and refine these technologies to make them more useful for cities and has been extremely responsive to SWM’s requests for enhancements.

Alternatives

The City Council could choose not to approve the contract amendment. This alternative is not recommended because the system used in the remaining fleet has fewer capabilities than SmartCity and creates a greater administrative and customer service burden by having to manage multiple systems. Additionally, the tablets used with the current system need to be replaced this coming fiscal year and are much more expensive and less useful than the devices needed for SmartCity.

Financial Impact

SWM is not requesting additional funding for this contract as this project results in other savings that more than cover the additional contractual costs. Funds are available in Orgs 5400MM10, 5400MM11 and 5400MM31 in Object 728600.

The additional costs of the Rubicon contract amendment of \$10,382 in year 3 and \$7,000 in years 4 and 5 will be more than offset by savings in the overall project. Savings will be realized as \$26,500.00 of annual service agreement costs with Fusion / Navigator are no longer needed, and the purchase of smartphone devices and data plans from AT&T / FirstNet is projected to save SWM at least \$16,000.00 annually on average over the current devices and plans required for Fusion / Navigator. The previous 2 years and next 3 years of the proposed contract amendment amount are shown in the table below. Costs for future amendments of this contract that exceed a total contract cost of \$639,811 will be negotiated and brought before City Council.

Description	Price for City of Durham
Year 1 (Paid)	\$187,160.00
Year 2 (Paid)	\$92,160.00
Year 3	\$102,542.00
Year 4	\$99,160.00
Year 5	\$99,160.00
TOTAL	\$580,182.00

SWM is also asking to establish a contingency fund in the amount of \$59,629 for the contract, which will allow up to 15 more user licenses and 5 more vehicle Pods to be added to the contract without requiring further action by City Council. Those items will likely be needed before the proposed contract term ends. Even with this contingency amount, annual savings are projected at more than \$13,000.

Equal Business Opportunity Summary

Due to the nature of this agenda item, a review by the Underutilized Business Compliance Division was not required, and a compliance report was not issued.

The original contract was a purchase consortium for a contract and was not reviewed for compliance with the Ordinance to Promote Equal Business Opportunities in City Contracting.

Rubicon Global, LLC is also a Certified B Corporation. Certified B Corporations are businesses that meet the highest standards of verified social and environmental performance, public transparency, and legal accountability to balance profit and purpose. B Corps are accelerating a global culture shift to redefine success in business and build a more inclusive and sustainable economy.

Contractor Workforce Diversity & Hiring Practices

Due to the nature of this agenda item, obtaining Contractor Workforce Diversity & Hiring Practices information is not applicable. However, Rubicon did provide the following information.

TOTAL WORKFORCE:

Employment Category	Total Employees	Total Males	Total Females
Project Manager	110	57	53
Professional	92	51	41
Technical	10	6	4
Clerical	158	50	108
Total	370	164	206

MALE:

Employment Category	White	Black	Hispanic	Asian or Pacific Islander	Indian or Alaskan Native
Project Manager	43	8	2	4	0
Professional	21	12	4	14	0
Technical	4	1	0	0	1
Clerical	25	14	9	1	1
Total	93	35	15	19	2

FEMALE:

Employment Category	White	Black	Hispanic	Asian or Pacific Islander	Indian or Alaskan Native
Project Manager	41	5	4	3	0
Professional	20	15	1	5	0
Technical	4	0	0	0	0
Clerical	49	48	8	2	1

Total	114	68	13	10	1
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Attachments

First Amendment to the Contract Between the City of Durham and Rubicon Global, LLC for In-Vehicle Technology for Solid Waste Collection Vehicles

Order Number 1 to the Master Software Services Agreement

Exhibit C - Pricing