



REPORT FOR ACTION

Bike Share Toronto - Purchase of Equipment in 2019, Ontario Municipal Commuter Cycling Program

Date: February 14, 2019
To: Toronto Parking Authority Board
From: Acting President, Toronto Parking Authority
Wards: All

SUMMARY

This report seeks approval from the Toronto Parking Authority (TPA) Board for a \$7,500,000 purchase of new equipment, including supply, delivery and installation of approximately 1,250 new bicycles, 105 new stations, 2,292 docks, and ancillary elements from PBSC Urban Solutions Inc. (PBSC), pursuant to the terms and conditions of an established Equipment Supply Agreement between TPA and PBSC. Bike Share Toronto has been allocated capital funding of \$6,000,000 by the provincial government's Ontario Municipal Commuter Cycling Program (OMCC), which requires 20 percent matching funds by the municipality of \$1,500,000. The municipal contribution is available through eligible Section 37 and Section 45 Planning Act Reserve Funds and is contained in the TPA 2019 Capital Budget request.

This opportunity enables the ongoing phased expansion plans for the Bike Share system to reach a network size of 6,000 bikes over a five-year period. The 2019 capital funding will facilitate the extension of the network of stations beyond the existing service area, generally north/west of High Park; east along Dundas Street and Gerrard Street East and Kingston Road and north of Yonge Street and Eglinton Avenue.

RECOMMENDATIONS

The Acting President, Toronto Parking Authority recommends that:

1. The Board of Directors of the Toronto Parking Authority authorize the purchase of new equipment to support the 2019 planned phased expansion of the Bike Share Toronto system, subject to City Council approval of the 2019 TPA Capital Budget request, including supply, delivery and installation, comprising new bicycles, new stations, docks, and ancillary elements from PBSC Urban Solutions Inc., pursuant to the terms and conditions of the Equipment Supply Agreement dated March 22, 2016 between the Toronto Parking Authority and PBSC Urban Solutions Inc., in the amount of \$7,500,000, excluding Harmonized Sales Tax.

FINANCIAL IMPACT

The cost for the new equipment, including shipping and installation totals \$7,500,000, excluding HST. The following table summarizes the main elements of the proposed purchase. A detailed equipment listing for new stations is listed in Appendix A to the report dated February 14, 2019.

2019 ORDER – TOTAL COST	
Equipment (see Appendix A)	\$6,388,118
Installation	\$914,508
Shipping and Storage	\$150,000
Sub-total	\$7,452,626
Contingency	\$47,374
Total	\$7,500,000

Budget Committee, at its meeting scheduled for February 13, 2019 is considering Item BU3.3, "2019 Rate Supported Budgets - Toronto Parking Authority", which includes the capital funding request for the 2019 Bike Share expansion.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2019.BU3.3>

The 2019 budgeted annual system operating costs will remain at \$5,340,000, with the operator receiving an additional \$914,508 for the system expansion as per the current memo of understanding. Bike Share's 2019 ridership revenue is budgeted at \$4.0 million which anticipates completion of the planned expansion prior to the summer season and a \$10,000 annual revenue contribution for each new station.

The Ontario Municipal Commuter Cycling Program, a joint provincial-municipal program, introduced in December 2017, was established to support the provincial goals of implementing new or expanded commuter cycling infrastructure to support commuter and frequent cycling. The Bike Share Toronto component of funding under OMCC provides for \$6,000,000 in 2019 and requires a municipal contribution of 20% per the provincial funding program's requirements. The Bike Share funding is part of the larger overall program for Toronto coordinated by Transportation Services. The OMCC funding will be matched by \$1,500,000 from Planning Act Reserve Funds (Section 37 and 45) collected for the Bike Share Toronto program. The Planning Act Reserve Funding was collected from development funding in Wards 9, 10, 11, 12 and 13.

DECISION HISTORY

The Toronto Parking Authority Board, at its meeting of February 25, 2016, in considering the matter, "*Bike Share Toronto Equipment Supply Agreement - PBSC*", outlined the results of a Request for Proposals (RFP) process, authorized staff to enter into an Agreement with the successful proponent, PBSC Urban Solutions Inc., to supply new equipment to support phased expansion plans for the Bike Share system, envisaged to comprise 5,000 additional (6,000 total) bikes over a five-year period, as and when required, and replace certain existing equipment in order to integrate the then-existing bike share system with the new/expanded system. The term of the supply agreement is five (5) years with up to three (3) additional two (2)-year optional renewal periods at TPA's sole discretion. A copy of the Equipment Supply item is provided as background information in Appendix C to the report dated February 14, 2019.

The TPA Board, at its meeting of April 24, 2017, in considering the matter, "*Bike Share Toronto Equipment Purchase - PBSC*", authorized the purchase of new equipment, comprising approximately 750 bicycles and 70 stations for the 2017 phased expansion, from PBSC under the Equipment Supply Agreement in the amount of \$3,750,000. .

The TPA Board, at its meeting of March 5, 2018, in considering the matter, "*Bike Share Toronto - Purchase of Equipment 2018, Public Transit Infrastructure Fund (PTIF) Program and Metrolinx*", authorized the purchase of new equipment comprising approximately 1000 bicycles and 90 stations for the 2018 phased expansion from PBSC under the Equipment Supply Agreement in the amount of \$5,256,325. (Item PA8.2). <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2018.PA8.2>

COMMENTS

The Toronto Parking Authority seeks to place the order for the new Bike Share equipment under the 2019 program immediately after budget approval in order to ensure timely delivery and installation for the prime summer season to maximize user revenues and availability of the enhanced service in these highest demand times.

The Bike Share Toronto system (formerly BIXI Toronto) was launched May 1, 2011 and encompassed approximately 1,000 bikes, 81 payment stations and 1,570 docks. In July 2016 Bike Share Toronto expanded by 120 stations and 1,000 bikes, in August 2017 another 70 stations and 750 bikes were added to the system, and in 2018 the phased expansion continued with the addition of another 90 stations and 1000 bikes. The system is currently comprised of 360 stations and approximately 3,750 bikes. After the 2019 expansion is completed Toronto will have 5,000 bikes and 468 stations.

In 2015 a Feasibility Study was undertaken to establish the parameters of a viable long-term plan for the Bike Share Toronto system. The mandate for this Study was to establish parameters and guide the expansion of the system over the subsequent five (5) years. At the time of its completion in 2016 the Study concluded that a system in the range of 6,000 bicycles and a 600 stations would be an optimum target to handle the demand within the City of Toronto.

The 2019 expansion will include the purchase of new EMV compliant (i.e. Europay, MasterCard, Visa) payment hardware. It is the global standard for chip-based Debit and Credit Card transactions. Instead of relying on the magnetic strip on the back of a payment card, EMV transactions use a microchip, which securely stores information, including the cardholders' account number. These microchips provide both the merchant and the customer with increased protection against fraudulent transactions. Payment card companies have introduced a series of dates by which this technology must be in place or the liability for fraud may become the merchant's responsibility. The 2019 expansion will see the addition of chip and pin readers at all new terminal stations, and the stations with the highest frequency of casual pass purchases. By the end of 2019, all stations will be PCI compliant.

Planning Act Reserve funds Section 37 and Section 45 will be used for the 2019 expansion to match the OMCC. The OMCC program requires a 20% matching by municipal contribution. The 20% will be funded by eligible Section 37 and Section 45 Planning Act Reserve Funds (\$1,500,000) and is budgeted to fund this phase of expansion. Funds were collected from several new development projects in Wards 9, 10, 11, 12, and 13. The stations purchased with eligible Section 37 and Section 45 funds will be installed according to the location criteria outlined in the development agreements. The Chart below shows the funds collected by Ward and the budget amounts.

Ward No.	Ward Name	Total Available	Total Budgeted
9	Davenport	\$ 50,460	\$ 50,460
10	Spadina-Fort York	\$ 261,966	\$ 242,168
11	University-Rosedale	\$ 54,652	\$ 54,652
12	Toronto-St. Paul's	\$ 127,673	\$ 127,673
13	Toronto Centre	\$ 1,025,047	\$ 1,025,047
		\$ 1,519,798	\$ 1,500,000

More details on the planning for locations are provided in Appendix B, 2019 Bike Share Expansion Plan, to the report dated February 14, 2019.

CONTACT

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sean.wheldrake@toronto.ca

SIGNATURE

Robin Oliphant
Acting President, Toronto Parking Authority

ATTACHMENTS

Appendix A - Quote from PBSC Urban Solutions Inc.
Appendix B - 2019 Bike Share Expansion Plan
Appendix C - Bike Share Toronto Equipment Supply Agreement

APPENDIX A - QUOTE FROM PBSC URBAN SOLUTIONS INC.



TPA Equipment Pricing

Date: February 7, 2019.

TPA Equipment Pricing			
	Units	Price Per Unit (CDN)	Total Price
Initial Bicycle/Kiosk Purchase Order			
Iconic Bicycles (3 speed with Fender, one color,)	1,250	\$1,090	\$1,362,500
E-FIT Bicycles (3 speed with Fender, one color,)	2	\$2,595	\$5,190
Total Bike Price			\$1,367,690
Kiosk Standard V2.1, Flat Solar Panel (EMV integrated)	83	\$12,975	\$1,076,925
Kiosk Standard V2.1, Hardwired (EMV integrated)	1	\$12,975	\$12,975
Smart Map Frame	21	\$7,750	\$162,750
EMV Compliance Kit	250	\$2,100	\$525,000
Kiosk technical platform	555	\$1,100	\$610,500
Docking Point	2292	\$860	\$1,971,120
Cable			
Black(docking point)	2188	\$116	\$253,808
Yellow (terminal)	300	\$139	\$41,700
Terminator plug	210	\$38	\$7,980
eCable			
eDocking Point	0	\$895	\$0
eBlack(edocking point)	0	\$200	\$0
eYellow (terminal)	0	\$139	\$0
Terminator plug	0	\$38	\$0
Special technical platforms (Elbow 180)	5	\$670.00	\$3,350
Special technical platforms (45 Degree)	48	\$1,027.00	\$49,296
Special technical platforms (L)	2	\$1,012.00	\$2,024
System Cards	5,000	\$2.50	\$12,500
Standard Map Frame	80	\$1,600	\$128,000
Spare Part	1,250	\$130	\$162,500
Shipping	1	\$150,000	\$150,000
Installation	2,292	\$399	\$914,508
Total equipment price			\$7,452,626

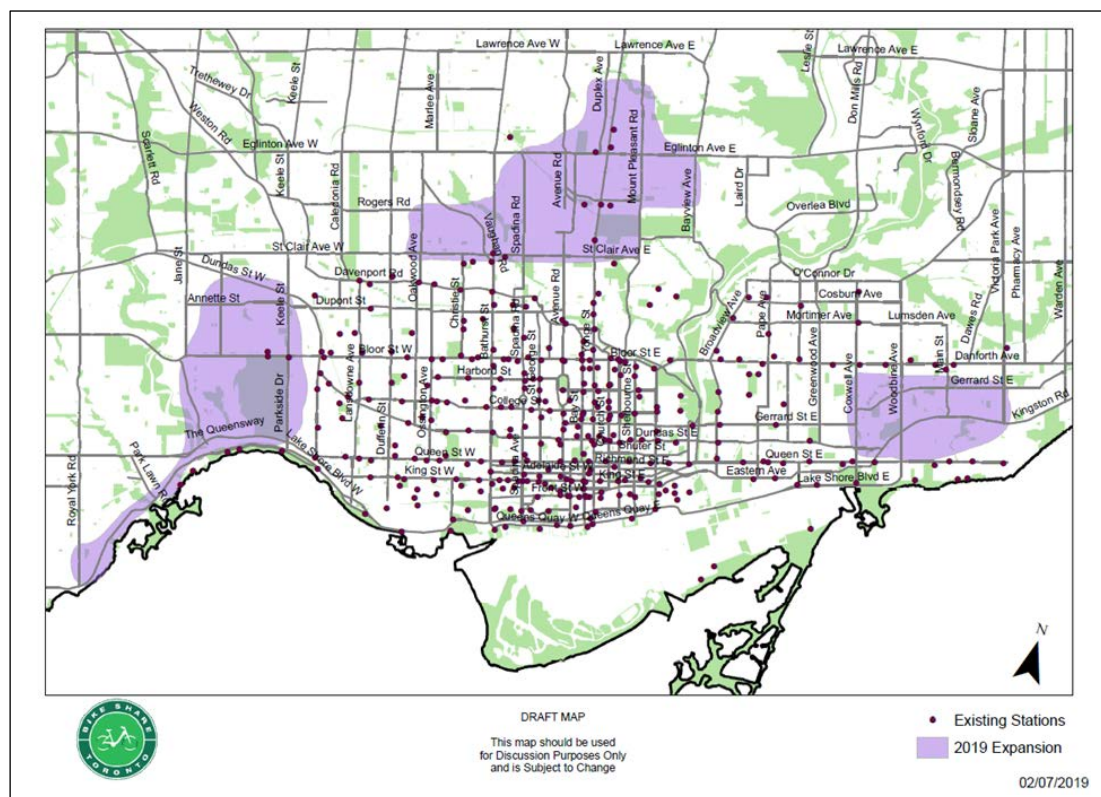
Terms & Conditions

- 1) As per Supply Agreement.

APPENDIX B - 2019 BIKE SHARE EXPANSION PLAN

In 2019, OMCC funding will be used to expand the Bike Share Toronto system. In total, this funding will add 105 stations and 1,250 bicycles to the system. The OMCC funding will be used to expand the system, bringing Bike Share Toronto service to more neighbourhoods in the City of Toronto. For every new station that is added outside the service area, one station is to be added into the central area. The expansion zones include the following areas of interest in the City:

- Bloor West Village
- Forest Hill Village
- High Park
- Humber Bay Park East and Lakeshore Boulevard East
- Mimico
- Kingston Road east of Victoria Park
- St Clair Ave
- Swansea
- The Junction
- Yonge and Eglinton



The OMCC funding is being matched by Planning Act Reserve Funds (Section 37 and Section 45). Stations purchased with the municipally matched funding will be installed following the location guidelines that have been defined in the agreements. There are five Wards contributing to the Planning Act Reserve Funding. Reserve funding was

collected prior to the Ward changes and have been adjusted according to where the development is located.

The station siting specifications can be found in the chart below: one station will be installed in Ward 9, five stations will be installed in Ward 10, one station will be installed in Ward 11, two stations will be installed in Ward 12, and twenty stations will be installed in Ward 13.

Ward	Development Location	Siting Specifications
9	1093 Queen St. W.	To cover the cost of installing a Bike Share Station on the subject property
10	1030 King Street West	Indexed - for bicycle share stations within Ward 19
10	10, 11 and 25 Ordnance Street and 45 Strachan Avenue	Provide, at no cost to the City, two (2) Bike Share Stations, each comprising of a minimum of 10 Bike Share Spaces
10	30 Ordnance Street	Provide at no cost to the City, a bike share station to be located on or in the vicinity of the lot or, at the option of the owner, submit payment for the cost of the same
11	245-255 College Street and 39 and 40 Glasgow Street	For streetscape and parkette improvements on Glasgow Street and in the immediate vicinity of the project, including bicycle facilities (bike share)
12	1486 Bathurst Street	The construction of Bike Share Toronto bicycle space in the vicinity of the lands
12	230 Vaughan Rd.	To be allocated towards the Bike Share program in Ward 21
12	1657 - 1659 Bathurst Street	For capital improvement projects in Ward 21 such as bike share, arts and culture, local parks and local libraries, as determined by the Ward Councillor
12	109 Vaughan Road	To be allocated toward local seniors, arts, library and streetscape improvement projects, to be determined by the Ward Councillor
13	951 - 971 Bay St. & 36 Wellesley St. W.	For the provision of bike share facilities at locations near lot
13	64-70 Shuter St.	Two bike share stations in the vicinity of the site
13	454-464 Yonge Street	For bicycle share stations in the area
13	480-494 Yonge St and 3 Grosvenor Street	To be allocated towards the expansion of Bike Share

Planning Process

The planning process is currently underway to secure new locations. Every location follows a standardized process to ensure that the location meets the criteria for a Bike Share station. In the initial planning phase, locations are identified that enhance and strengthen the existing network. The ideal is to have a 300 metre grid network of stations; this continuous network ensures that stations are within a walkable distance from both a customer's origin and destination.

Bike Share planners look for locations in highly visible areas that can accommodate large stations. They also look for spaces near cycling facilities, landmarks or tourist destinations, transit hubs, areas of high employment density, retail destinations and college/university campuses. Once an area has been initially identified, planners evaluate the spaces. Property lines are reviewed and measurement tools are used to identify the footprint. Next, on-site investigations occur to take exact measurements and confirm that there is no street furniture, underground vaults or venting obstructing the space. Additionally, we adhere to the City of Toronto's "Vibrant Streets: Toronto's Coordinated Street Furniture Program" guidelines, which identify required clearances to maintain a functional public realm. In addition City Councillors are informed of the proposed locations in their Ward.

If a station meets all of the criteria, site photos and measurements are sent to Transportation Services, Right of Way Management for confirmation. Right of Way Management reviews the site applications and cross references them with existing work orders and construction. They ensure that the required clearances are maintained, and the sites can accommodate the installation of a station. If the station is approved, this location is reserved for the installation of a Bike Share station. Even after taking time to carefully plan locations, last minute changes can occur when utility work and capital work (e.g. road reconstruction, sidewalk repairs) take place in the right of way. The majority of the Bike Share Toronto stations are located in the road allowance, and follow this approval process.

The 2019 expansion will likely see an increased number of stations located in the roadway, displacing on street and boulevard parking spaces. On average, a bike share station with 15 bicycle docking points occupies the same space as 2-4 car parking spaces. Stations are expected to see 30-60 rides per day. Bike share stations may see more turnover and rides than a parking space. As the bike share system continues to expand beyond the downtown core, availability of space in the right of way decreases. Neighbourhoods outside of the downtown core tend to have more limited spaces in the right of way, and fewer plaza spaces. Planners will be working closely with Transportation Services to identify appropriate locations in the roadway.

APPENDIX C - BIKE SHARE TORONTO EQUIPMENT SUPPLY AGREEMENT



BOARD MEMORANDUM IN-CAMERA

5.2

TO: Lorne Persiko
FROM: Marie Casista
SUBJECT: **BIKE SHARE TORONTO
Equipment Supply Agreement - PBSC**

FILE NO: 6190-00
DATE: February 19, 2016

MEETING DATE: Thursday, February 25, 2016

RECOMMENDATION:

MEETING	MINUTE
February 25/2016	16-031
Approved:	JF

It is recommended that the Board of Directors of the Toronto Parking Authority (the "TPA") authorize staff to enter into a supply agreement with PBSC Urban Solutions Inc. (the "PBSC") to supply new equipment to support phased expansion plans for the bike share system, as and when required, and replace certain existing equipment in order to integrate the existing bike share system with the new system, for a five (5) year term with up to three (3) additional two (2) year optional renewal periods at TPA's sole discretion, under the business terms and conditions outlined herein. (The total amount of the Vendor's submission for the Initial Order, based on the estimate of quantities provided by TPA for the purposes of evaluating the proposals, is \$4,888,400 based on a five (5) year warranty, not including HST).

Purpose:

The purpose of this report is to obtain TPA Board approval to enter into a supply agreement with PBSC for the supply of new equipment to support the phased expansion plans for Bike Share, Toronto and replace certain equipment in order to integrate the existing bike share system with the new system for a term of five (5) years with up to three (3) additional two (2) year optional renewal periods.

Background:

The existing Bike Share, Toronto system (formerly BIXI Toronto) was launched May 1, 2011 and contains approximately 1,000 bikes, 81 payment stations and 1,500 docks. The hardware was supplied by Public Bike Share Company and the software was supplied by 8D Technologies. This current system configuration is no longer available. Since the time of the system launch, it was recognized that the system was too small and that significant expansion would be necessary to support the service mandate and generate system efficiencies. Currently, it is assumed that a 5,000 bicycle and a 500 station system would be of sufficient size to handle the demand within the City of Toronto.

At its meeting of March 26, 2015 (Minute #15-039), the TPA Board authorized staff to enter into an agreement with Metrolinx for their investment of up to \$4.9 million to support the expansion of Bike Share, Toronto.

At its meeting of September 17, 2015 (Minute #15-146), the TPA Board authorized staff to enter into an agreement with MMM Group Inc. to complete a Bike Share Feasibility Study for the expansion of the Bike Share, Toronto system. The mandate for this Study was to establish parameters and guide the expansion of the system over the next five (5) years.

Important considerations included:

- i) The system's coverage area (assuming a 5,000 bike system within the next five (5) years;
- ii) Appropriate station densities given growth corridors and area demographics;
- iii) Station design and placement efficiencies; and,
- iv) Five (5) year implementation schedule.

The Toronto Parking Authority issued a Request for Proposals (RFP) on July 29, 2015 for the supply and delivery of the relevant hardware, software, integration, and operational and performance requirements for the Bike Share, Toronto system. All prospective suppliers were to provide a full service solution including hardware, software, warranty and support services. An open call was posted on the MERX Canadian Public Tender network which closed August 26, 2015.

For the purpose of response evaluation, each responding company based their estimating quantities on 1,000 bikes, 400 platforms, 2,000 docking points and 100 payment terminals, (the "Initial Order"). Proponents were expected to provide assembly or installation cost per unit and the cost per unit for both a 5 year and 10 year warranty. The term of the contract stipulated by TPA is five (5) years, with the option to extend, at TPA's sole discretion, for up to three (3) additional two (2) year periods. The unit prices are quoted in Canadian dollars and are inclusive of all applicable costs except HST, which is quoted separately. In addition, and in order to give adequate consideration to new bike share systems, proponents were requested to provide a salvage value for the existing equipment.

RFP Results

In total there were seven (7) complete responses, of which the top three (3) proponents were invited to attend a webinar to demonstrate their solution and showcase existing and future technology and improvements. The bike share systems that scored in the top three were PBSC Urban Solutions Inc., 8D Technologies and Bewegen. All three top solutions are headquartered in Canada, although Bewegen partners with other companies in Europe for certain system components. Before giving regard or credit for any salvage value for the existing bike share system, the top scoring system was PBSC Urban Solutions Inc.

The scoring results are somewhat surprising as PBSC Urban Solutions Inc. is a reasonably new company that was purchased by Mr. Bruno Rodi from the Trustee in Bankruptcy in March 2014. Since then, there has been significant investment in hardware and software improvements and their future roadmap for innovative functionality appears strong. Mr. Luc Sabbatini (formally of Bell Media Sales and Astral Media) is now the CEO and a major shareholder.

Although not the only evaluation factor, system costs represents 20% of the total score. The scoring results for the top three (3) responses, before any salvage value consideration, are as follows:

TOTAL COST ⁽¹⁾		
	Warranty	
	5 Year	10 Year
PBSC Urban Solutions Inc.	\$4,888,400	\$5,365,500
Bewegen	\$6,541,588	\$7,467,588
8D Technologies	\$6,590,390	\$7,799,563

1. Total cost includes 1,000 bikes, 400 platforms, 2,000 docking points, 100 payment terminals, map frames, assembly and installation

Preference is for a five (5) year warranty period. Other important RFP scoring considerations included experience, number of bikes and systems deployed throughout the world, financial strength, size and number of employees, references, and future roadmap.

After concerning the salvage value for the existing system, PBSC Urban Solutions Inc. scored even higher. They have offered to exchange the existing 81 payment terminals and the 1,500 existing docking points with new PBSC equipment such that the existing system will be fully integrated with the new system. Further, they have dedicated a transition team to develop the plan to complete the conversion within a 72 hour time period. This is important as our goal is to reduce the shut-down time for the existing system as much as possible. No other proponents offered a system switch out, rather most offered a nominal value, if any, for the existing equipment.

Comments:

Based on the scoring results, PBSC Urban Solutions Inc. offers the best bike share system for the City of Toronto and other surrounding municipalities. It is our intention to place an initial order for new equipment with PBSC for delivery in late spring 2016. Conversion of the existing bike share system is planned for the end of May 2016. Future purchases of approximately 1,000 bikes and 100 payment stations are planned each year thereafter until the optimum system size reached.

The initial order for new equipment, extra conversion costs, shipping and installation total \$5,745,355. The equipment listing for both the new stations and the conversion of the existing stations is attached as Appendix 'A'.

INITIAL ORDER – TOTAL COST	
Equipment (see Appendix 'A')	\$5,235,355
Installation & Transition Costs	\$400,000
Shipping & Storage	\$60,000
Contingency	\$50,000
Total	\$5,745,355

Funding for the total amount of \$5,745,355 for the Initial Order is from existing, fully funded, reserve accounts with the TPA and the City of Toronto set up solely to fund the expansion of the bike share system in the City of Toronto.

Conclusions:

It is recommended that the Board of Directors of the Toronto Parking Authority (the “TPA”) authorize staff to enter into a supply agreement with PBSC Urban Solutions Inc. (the “PBSC”) to supply new equipment to support phased expansion plans for the bike share system, as and when required, and replace certain existing equipment in order to integrate the existing bike share system with the new system, for a five (5) year term with up to three (3) additional two (2) year optional renewal periods at TPA’s sole discretion, under the business terms and conditions outlined herein. (The total amount of the Vendor’s submission for the Initial Order, based on the estimate of quantities provided by TPA for the purposes of evaluating the proposals, is \$4,888,400 based on a five (5) year warranty, not including HST).

List of Attachments:

Appendix ‘A’ – Equipment Listing