

Staff Report

Origin

In July 2007, Council approved the establishment of an annual program for the installation of enhanced accessible pedestrian signal (APS) features (Attachment 1) at traffic signals, pedestrian signals and special crosswalks. An implementation strategy commenced in 2008 with all new locations to include APS devices as the City standard, and existing locations to be retrofitted with APS devices over a multi-year period

A competitive procurement process was undertaken to identify a qualified contractor to supply new APS devices over a five-year term in order to complete the retrofit of existing locations that do not have APS devices and replace existing APS devices that have reached the end of their life cycle.

This report supports Council's Strategic Plan 2018-2022 Strategy #1 A Safe and Resilient City:

Enhance and protect the safety and well-being of Richmond.

1.2 Future-proof and maintain city infrastructure to keep the community safe.

This report supports Council's Strategic Plan 2018-2022 Strategy #5 Sound Financial Management:

Accountable, transparent, and responsible financial management that supports the needs of the community into the future.

5.2 Clear accountability through transparent budgeting practices and effective public communication.

5.3 Decision-making focuses on sustainability and considers circular economic principles.

This report supports Council's Strategic Plan 2018-2022 Strategy #6 Strategic and Well-Planned Growth:

Leadership in effective and sustainable growth that supports Richmond's physical and social needs.

6.3 Build on transportation and active mobility networks.



Traffic Signal

Analysis

Procurement Process and Recommendation

A procurement process was undertaken to identify the most qualified and experienced contractor to supply APS devices with quantities over a five-year term sufficient to enable installation in:

- the remaining existing locations (38 traffic signals) that do not have APS devices;
- existing locations with APS devices (58 traffic signals) that have reached the end of their life cycle; and
- new locations.

A Request for Quotations (RFQ) for the Supply and Delivery of Audible Accessible Pedestrian Signals was posted on BC Bid by the City in June 2019. Three quotations were received; one quotation was eliminated as it did not meet the minimum requirements of the RFQ (i.e., the product did not provide the City's required APS features). The remaining two quotations were evaluated by Transportation staff according to the following criteria:

- 1) Financial Performance (total cost): 30% weighting
- 2) Product Performance: 30% weighting
- 3) Product Warranty and Technical Support: 20% weighting
- 4) References: 20% weighting

The quotation received from Astrographics Industries Ltd. received the highest overall score from the review team and was the lowest priced quotation received in response to the RFQ that also met the required specifications (Table 1).

Table 1: Pricing of Proposals Evaluated
(based on forecast product requirements over five-year term)

Proponent	Pricing	Average Score
Astrographics Industries Ltd	\$720,480.00	61.3
Econolite Canada	\$759,501.60	51.5

Astrographics is the distributor of the APS product, which is made by Polara Enterprises. Polara has been in business since 1996 with over 400,000 APS units installed in North America. Astrographics has supplied this product to the City of Burnaby, City of Langley and City of Saskatoon.

The priority for the first two years of the contract will be the retrofit of existing locations that do not have APS devices. The replacement of existing APS devices that have reached the end of their life cycle will be the focus of the remaining three years of the contract.

APS devices that are no longer usable will be recycled by Cobra Electric, who is the City's electrical contractor. Products are broken down into components (e.g., metal, electronics, plastic), sorted and recycled at local centres.

Financial Impact

The supply of APS devices for this contract will be funded from previously approved capital projects (Accessible Pedestrian Signal Program) and projects that have been included in the 2020 budget process. Annual expenditures over the five-year term will not exceed Council-approved funding.

Conclusion

The City has an annual program for the installation of enhanced accessible pedestrian signal (APS) features at traffic signals, pedestrian signals and special crosswalks. To fulfil the on-going objectives of the program, a competitive procurement process was undertaken to secure the supply of APS devices over a five-year term. Based on the evaluation process, the City wishes to negotiate and enter into an agreement with Astrographics Industries Ltd for the provision of APS devices as outlined in the RFQ and this report.



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Att. 1: Required Accessible Pedestrian Signal Features

Required Accessible Pedestrian Signal Features

The City's required APS features are based on industry guidelines and reflect consultation with Richmond Centre for Disability (RCD) and representatives from Canadian Institute for the Blind (CNIB) and Advocates for Sight Impaired Consumers (ASIC).

Feature	Description	Special Crosswalk	Pedestrian Signal	Traffic Signal
Pole Locator Tone	<ul style="list-style-type: none"> Pole locator tone during DON'T WALK phase Repeated once every 2 seconds 	√	√	√
Tactile Arrow in Direction of Crossing		√	√	√
Vibrating Tactile Arrow in Direction of Crossing	<ul style="list-style-type: none"> APS arrow vibrates when WALK light is on 	N/A	√	√
Red LED Light on Button Push	<ul style="list-style-type: none"> Red LED light illuminates on button push 	√	√	√
Audible Confirmation Tone on Button Push		√	√	√
Custom Audio Message: verbal wayfinding message	<ul style="list-style-type: none"> Wayfinding message following audible acknowledgment (e.g., <i>3 Road crossing Granville</i>) Single repetition of entire message with each push of button except during WALK indication Wayfinding message played on push button station when activated by a pedestrian only 	√	√	√
Custom Audio Message: verbal "caution" message	<ul style="list-style-type: none"> "Caution" message following verbal wayfinding message (e.g., <i>Amber lights flashing. Use caution. Vehicles may not stop immediately. Amber lights flashing. Use caution</i>) Play verbal "caution" message in its entirety (approx. 15 sec) in place of cuckoo or chirp 	√	N/A	N/A
Standard Audible Indicators	<ul style="list-style-type: none"> Upon actuation of the WALK indication, the standard North-South "cuckoo" sound and East-West "chirp" plays at both sides of crosswalk along with corresponding vibrating tactile arrow 	N/A	√	√
Volume/Sound	<ul style="list-style-type: none"> Minimum and maximum volume setting options All sounds capable of adjusting automatically to ambient noise Sounds synchronize across all push button stations Pole locator tone, acknowledgment/wayfinding message and cuckoo/chirp capable of having separate volume control options 	√	√	√
Increased Volume on Demand	<ul style="list-style-type: none"> Increased volume with extended button press (3 sec) Wayfinding message and standard audible indicators have increased volume feature Button press time is adjustable Increased volume with extended button press is adjustable 	√	√	√
Pushbutton Appearance	<ul style="list-style-type: none"> APS pushbutton, sign and locating tone incorporated into an integrated unit 	√	√	√
Braille and Raised Letter Street Name	<ul style="list-style-type: none"> Pushbutton sign capable of adding Braille and raised street name 	√	√	√
Pushbutton Housing Requirements	<ul style="list-style-type: none"> Vandal proof and powder coated to provide high contrast for the visually impaired Housing made of corrosion-resistant material 	√	√	√
Communication	<ul style="list-style-type: none"> Ability to communicate remotely (wired or wireless) Preference for ability to remotely provide real-time fault alerts 	√	√	√