



STAFF REPORT ACTION REQUIRED

Amendment of Purchase Order 6025412, Contract No. 08TE-16RD, Tender Call No. 69-2008 For the Reconstruction of Pavement, Curb and Sidewalk and Construction of Traffic Signals, Street Lighting, Landscaping, Irrigation System and Soil Cell System on Bloor Street.

Date:	May 7, 2010
To:	Public Works and Infrastructure Committee
From:	Executive Director, Technical Services Director, Purchasing and Materials Management
Wards:	27
Reference Number:	P:\2010\Cluster B\TEC\PW10029 (AFS-11762)

SUMMARY

The purpose of this report is to request authority to amend Purchase Order No. 6025412, issued to Four Seasons Site Development Ltd., for the reconstruction of pavement, curb and sidewalk and construction of traffic signals, street lighting, landscaping, irrigation system and soil cell system on Bloor Street from 45 metres west of Avenue Road to St. Paul's Square. The total amount requested is \$4,448,000.00 net of all taxes (\$4,689,236.55 net of GST and HST Recoveries), revising the current contract value from \$19,718,592.20 net of GST to \$24,166,592.20 net of all taxes (\$24,407,828.75 net of GST and HST Recoveries). This increase is a result of unforeseen site issues during construction.

RECOMMENDATIONS

The Executive Director of Technical Services and the Director, Purchasing and Materials Management recommend that Council grant authority to:

1. Amend Purchase Order No. 6025412 issued for Contract 08TE-16RD to Four Seasons Site Development Ltd., by an additional amount of \$4,448,000.00 net of all taxes, (\$4,689,236.55 net of GST and HST Recoveries).

Financial Impact

The amendment for an additional \$4,448,000.00 net of all taxes (\$4,689,236.55 net of GST and HST Recoveries) increases the current contract value from \$19,718,592.20 to \$24,166,592.20 net of all taxes (\$24,407,828.75 net of GST and HST Recoveries).

The funding for the increase is available in the 2010 Transportation Capital Budget in account CTP806-27-09 - Bloor Street Transformation in the amount of \$3,662,000.00 net of all taxes (\$3,860,607.97 net of GST and HST Recoveries) and account CTP310-01-20 in the amount of \$786,000 (\$828,628.58 net of GST and HST Recoveries). The cash flow requirements for this project are \$4,689,236.55 in year 2010, all net of GST and HST Recoveries.

The Deputy City Manager and Chief Financial Officer has reviewed this report and agrees with the financial impact information.

ISSUE BACKGROUND

The Bid Committee at its meeting dated June 25, 2008, authorized the award of Contract No. 08TE-16RD, Tender Call No. 69-2008 to Four Seasons Site Development Ltd, being the lowest bidder meeting specifications, for the Reconstruction of Bloor Street West and East from 45 metres west of Avenue Road to St. Paul's Square.

The report can be found at:

<http://www.toronto.ca/legdocs/2008/agendas/committees/bd/bd080625/bddd.pdf>

The firm of Four Seasons Site Development Ltd., as the successful bidder, was issued Purchase Order No. 6025412 in the amount of \$19,718,592.20 (excluding GST).

The design and construction of the Bloor Street Transformation Project (BSTP) has been a joint effort between the Bloor Street BIA and City since the Fall of 2006. In October 2006, design kick-off meetings were convened with the BIA, the BIA consultants and City's Transportation Services, Economic Development and Culture and Technical Services Divisions in an effort to synthesize project scope, establish project team member responsibilities and project schedules. The major components of the BSTP include the installation of soil cells under sidewalks to promote vigorous growth of new large diameter trees, irrigation and rain water collection for trees and raised planter areas, granite curbs and surface treatment on the public sidewalk and private boulevards, replacement of traffic signals, new street lighting, alterations to Toronto Hydro infrastructure, road drainage alterations and full pavement reconstruction.

The responsibility for the design of the various project components was divided into two primary areas. The BIA directly engaged consultants to undertake the detailed design and tender documentation preparation for all components bounded within the sidewalk and boulevard areas. The City's Technical Services Division was responsible for the

designs of road pavement, and road drainage. Upon completion by the two teams, the various design components were assembled into a single collective package for the purposes of calling a public tender. Early in the detailed design phase, at the request of the BIA, an ambitious schedule was established for a tender call in early spring 2008 to expedite construction completion by year's end 2009.

In July 2008, construction commenced on the first phase of the contract on Bloor Street from Yonge Street to St. Paul's Square. The tender documents specified that the first phase of construction was to have been completed by year's end 2008 and similarly, the second phase and full completion of the contract by year's end 2009.

Since commencement of the BSTP contract, significant unforeseen issues have arisen resulting in extra work, cost escalation, and considerable delays impacting the completion of the contract. Currently, the first phase of the contract has been substantially completed and the second phase is actively in progress with a substantial completion scheduled by year's end 2010.

Summarized below are the major unforeseen issues that have arisen during the course of construction.

1. Bell Duct Issues

In August 2008, during the first phase of construction, a shallow Bell duct structure was encountered below the existing east bound curb lane on Bloor Street from Park Road to St. Paul's Square. As a result of the south sidewalk being widened toward the road, the alignment and elevation of the existing duct structure was in conflict with the granite curb and supporting concrete foundation. In order to resolve the conflict, it was necessary to relocate the existing Bell duct structure to a new horizontal alignment and lower elevation. The relocation of the Bell duct structure was under taken by the general contractor's subcontractor with approval of Bell. The direct cost of the work was \$244,900.00 of which the City will be recovering \$173,900.00 through a cost sharing arrangement, for a net cost of \$71,000.00. The indirect cost for any delays associated with the relocation will be dealt with at the completion of the contract.

2. Issues at 2 Bloor Street East

In August 2008, at the request of the BIA, the contractor was instructed to modify the sequencing of construction activities between Yonge Street and St. Paul's Square. After having commenced reconstruction of the sidewalks on the south side of Bloor Street and encountering difficulties with the Bell duct structure described above, the contractor was requested on behalf of the BIA to commence work on the north side in order to have the sidewalk and private boulevard reinstated on the 2 Bloor Street frontage prior to the peak retail season in December. Shortly after the contractor mobilized crews to the north side of Bloor Street, the property owner, Brookfield Properties Corporation (Brookfield) advised the BIA and previously unknown to the City, the need to undertake waterproofing of the substructure roof for 2 Bloor Street which projected below grade under the private portion of the boulevard. The contract

scope includes the installation of granite paving on both public sidewalk and private portions of the boulevard over the substructure roof.

Prior to the City's contractor carrying out the work on private property, it was necessary to execute an agreement between the City and Brookfield. During preparation of the agreement between Brookfield and the City to facilitate entry to undertake work on private property, Brookfield requested through the BIA, the extension of the granite paving on the private boulevard beyond the limits described in the BSTP contract. Brookfield advised that the additional areas of granite paving would also require waterproofing an additional area of the substructure roof. Subsequently, Brookfield retained an independent contractor to undertake the waterproofing. While Brookfield's contractor was undertaking waterproofing, Four Seasons was only able to undertake work within the public road allowance. As a result of the waterproofing not having been completed on private property by December 2008, temporary restorations were required until granite paving could be placed throughout the entirety of the public sidewalk and the private boulevard and to accommodate pedestrian traffic during waterproofing on the adjacent private boulevard areas.

In spring of 2009, Brookfield completed the waterproofing work and in summer of 2009, Four Seasons resumed work on the north side of Bloor Street, including removal of temporary restorations. Total cost of temporary restorations and additional work undertaken by Four Seasons fronting 2 Bloor Street is \$391,000.00

3. Issues with vibration at 33 Bloor Street East

In December 2008, the property manager for 33 Bloor Street raised concerns that vibration from excavation activities within the public road allowance was creating discomfort for building occupants. The existing building foundation located over the TTC Yonge Subway line was determined to be sensitive to vibration and there were concerns over possible structural damage and destabilization of the structure. Subsequently, the contractor was directed by the City to stop all operations and backfill the excavated area in front of the building until a structural assessment was undertaken by professional engineers engaged by both the City and the property owner. The cost of stand-by for the contractor until a decision was made and the implementation of precautionary measures is \$65,000.00

4. Winter Condition Issues

The unforeseen issues identified above resulted in a delayed completion for the first phase of the BSTP beyond the stipulated date of December 2008. The contractor continued to place granite from January to March which would have been otherwise completed prior to winter protection having been required. The contractor was required to erect a heated enclosure to protect the granite until materials used for the installation were sufficiently cured. As a result of undertaking the installation of the granite during the winter and within an enclosure, the contractor's productivity was adversely impacted. In addition, the contractor was required to provide winter maintenance for the temporary sidewalk located within the existing the road as the

City's Transportation Operations were not equipped to clear snow within the construction zone. The total cost for winter heating and snow removal is \$241,000.00

5. Traffic Signal Issues

The installation of new traffic signals at five locations on Bloor Street was identified as a requirement for the BSTP and was budgeted as part of the overall project cost. Initially, the installation of the traffic signals was to be performed by a separate vendor retained by Transportation Services, Traffic Plant Installation and Maintenance (TPIM) and accordingly, the work was not included as part of the tender package issued for the BSTP contract. As a result of scheduling conflicts and Occupational Health and Safety Act (OHSA) requirements, the work had to be undertaken by the BSTP contractor. The traffic signal work undertaken by the BSTP contractor will result in an equal reduction to work that would have been performed by the TPIM vendor. The cost of the traffic signal work performed by Four Seasons is \$460,000.00

6. Toronto Hydro Chamber Issues

As a result of the of the BSTP boulevard modifications, the elevation of the Bloor Street road pavement required lowering in order to achieve adequate drainage of all sidewalks areas treated with granite paving and a standard height curb was required to deter delivery vehicles from mounting the sidewalks over areas of soil cells. Lowering of the road pavement required lowering of fourteen hydro chambers which was to be undertaken concurrently with the BSTP contract by Toronto Hydro. The extent of the work required to be undertaken by Toronto Hydro was not fully known until after the BSTP contract had been tendered and the electrical cabling rework within the chambers was more extensive than initially anticipated. The Toronto Hydro work could not be coordinated simultaneously with the City contract because of the inability to maintain two way vehicular traffic and a temporary sidewalk within the road. As the BSTP contract progressed, separation between the City's contractor and Toronto Hydro as required by OHSA could not be maintained. During the modifications to the hydro chambers, primary and secondary electrical feeders servicing the retail and high rise buildings that were in a prolonged temporary state as a result of the medications posed a risk to electrical service continuity. In order to alleviate the risk of electric service disruption, the second phase of the BSTP contract, from Yonge Street to Avenue Road, was deferred from 2009 to 2010. The cost associated with deferring the second phase of the contract is \$2,100,000.00.

7. Hydro Vault Roof Issues

In order to maintain a uniform treatment, the roofs of hydro vaults located within the sidewalk areas require lowering for overlaying with granite paving. The lowering of the hydro vaults was included within the BSTP contract. Problems with the design of structural steel components for the hydro vaults prepared by the BIA's consultants resulted in rework after manufacturing and subsequent delays to the construction schedule. Temporary measures were required to secure vault roofs that had been removed awaiting the structural steel components and subsequent work was required to be partially completed out of sequence. The cost of temporary measures, rework

and remobilizing crews to complete the hydro vault modifications and adjacent areas for granite paving is \$455,000.00.

8. Asbestos Abatement Issues

During the excavation within the sidewalk areas to facilitate the installation of soil cells for tree planting, abandoned utilities containing asbestos materials, unknown at time of tendering, have been encountered. It is foreseeable that asbestos containing materials will continue to be encountered in undisclosed locations up until the excavations within the sidewalk areas are completed. The cost for abating asbestos containing materials as construction progresses is estimated at \$70,000.00

9. 1 Bloor Street West Store Areaway Issues

Abandoned foundation walls, undisclosed during the design and tendering stages of the BSTP project, were encountered under the existing sidewalk during excavation along the store front at 1 Bloor Street west. In addition, an areaway at the same location required extensive waterproofing and restoration of the roof slab. Total cost of the additional work is \$50,000.00.

10. Test Pits Investigation

Due to issues with the underground utilities encountered during the project first phase, additional exploratory investigations were performed for the second phase of the contract in effort to address potential conflicts in advance of construction. The cost of additional investigations is \$55,000.00

11. Miscellaneous & Site Conditions

There have been unforeseen site conditions encountered during the construction phase unknown during the BSTP design and tendering phase. Some of the other issues encountered include revisions to pole bases and catchbasins due to conflict with other utilities, removal of abandoned water valve boxes, retrofitting of combined sewer maintenance holes, revisions to bollard footing details, revisions to planter locations after installation, additional traffic and pedestrian warning signage requested by Transportation Services, revisions to electrical equipment for BIA lighting components, investigating a pedestrian tunnel leak between Holt Renfrew and ManuLife Centre, preparation of site to accommodate the Toronto International Film Festival (TIFF) and Pride Parade events. To date, the collective cost of extra work associated with miscellaneous unforeseen issues is \$490,000.00

Table 1, below, summarizes additional cost incurred to date as a result of unforeseen issues arising during construction.

TABLE 1 ADDITIONAL COST TO DATE.

Item	Description of Issue	Amount
1	Bell Duct Issues	\$71,000.00
2	Issues at 2 Bloor Street East	\$391,000.00
3	Issues with vibration at 33 Bloor Street East	\$65,000.00
4	Winter Condition Issues	\$241,000.00
5	Traffic Signal Issues	\$460,000.00
6	Toronto Hydro Chamber Issues	\$2,100,000.00
7	Hydro Vault Roof Issues	\$455,000.00
8	Asbestos Abatement Issues (Estimate)	\$70,000.00
9	1 Bloor West Areaway Issues	\$50,000.00
10	Test Pits Investigation	\$55,000.00
11	Miscellaneous & Site Conditions	\$490,000.00
	Total	\$4,448,000.00

The above assignment of costs is still under review with the BIA as some items require further discussion.

Estimate of Cost to Complete the Work

Throughout the first phase of the contract numerous anomalies were encountered resulting in changes to the work and subsequent additional costs. However, since having commenced the second phase of the contract in January 2010, significantly fewer unforeseen issues have arisen requiring changes to the contract. On the basis of the amount of work completed to-date and encountering fewer problems for the second phase of the contract, the projected additional cost is \$4,448,000.00. Accordingly, staff is estimating the final cost at construction completion at \$24,166,592.20.

The BSTP Financing Agreement between the City and BIA, adopted by City Council on June 24, 2008, provides authority to an upset limit of \$20,000,000.00 to pay for potential cost overruns. Currently, the BIA has financed \$11,975,000.00 with the City for the BSTP. Funds in the amount of \$25,000,000 were budgeted by Transportation Division for completion of this project. Accordingly, the additional funding request for the BSTP is within the context of the financial arrangement contemplated in the Agreement.

COMMENTS

The BSTP has proven to be a unique and challenging project throughout the planning, detailed design and construction phases. Since late Fall 2006, the City has dedicated significant resources and effort toward the success of the project that has required a close working relationship with the BIA and the BIA's consultants, consultation and coordination with stakeholders, utility companies undertaking infrastructure renewal, developments in progress, property owners undertaking work in areas to be improved and event organizers (such as Pride Parade, TIFF, Holt Renfrew Holiday Window unveiling) in an effort to uphold expectations and minimize disruption for pedestrians, nearby residents, retailers, property owners and motorists. City staff will remain committed to the success of this one of a kind type project.

We are now, respectfully, requesting an amendment to the existing P.O. No. 6025412 in favour of Four Seasons Site Development Ltd. for the Reconstruction of Pavement, Curb and Sidewalk and Construction of Traffic Signals, Street Lighting, Landscaping, Irrigation System and Soil Cell System on Bloor Street from 45 metres west of Avenue Road to St. Paul's Square, under the terms and specifications of Contract No.08TE-16RD.

We are requesting that P.O. No. 6025412 be amended to \$24,166,592.20, net of all taxes (\$24,407,828.75 net of GST and HST Recoveries).

CONTACT

M. Barbon, P.Eng.
Manager, Design and Construction
Linear Infrastructure
Telephone: (416) 392-7659
e-mail: mbarbon@toronto.ca

D. Ferguson
Manager, Construction Services
Purchasing & Materials Management
Telephone: (416) 392-7323
e-mail: dfergus4@toronto.ca

SIGNATURE

W. G. Crowther, P.Eng.
Executive Director
Technical Services
Management

Lou Pagano, P.Eng.
Director
Purchasing and Materials