CITY OF **VANCOUVER**

ADMINISTRATIVE REPORT

Report Date:	September 6, 2006
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Meeting Date:	September 26, 2006

TO: Vancouver City Council

FROM: Co-Director of Development Services – Policy & Regulations, and Director of Support Services, in consultation with the General Manager of Corporate Services

SUBJECT: AMANDA - Replacement Information Technology for PRISM to Support Permitting, Inspection and Compliance Activities

RECOMMENDATION

A.   THAT Council authorize the General Manager of Community Services, in consultation with the City Manager and the Director of Finance, to negotiate an agreement, satisfactory to the Director of Legal Services, with CSDC Systems Inc., as is necessary to acquire and implement required AMANDA modules to replace the existing PRISM system running on the City's mainframe computer, within the overall implementation budget as in Recommendation D below.

B.   THAT, upon the City Manager, in consultation with the Director of Information Technology, Director of Legal Services and Director of Finance being satisfied as to the terms and conditions of the legal agreement, that the General Manager of Community Services and the Director of Legal Services be authorized to execute to deliver same on behalf of Council.

C.   THAT no legal rights or obligations will be created or arise by virtue of Council's approval of Recommendations A, B and D unless and until the necessary legal agreements have been executed and delivered by the General Manager of Community Services and the Director of Legal Services.

D.   THAT Council approve the budget for acquisition and implementation of the "permitting" module in the AMANDA application (estimated at $2.0 million net of available funding in the CSG Operating Budget) with interim financing to be provided from the Capital Financing Fund on terms acceptable to the Director of Finance; AND THAT Council approve the additional ongoing operating costs associated with the application as detailed in Appendix A; source of funding to be the existing Information Systems Improvement Budget in Community Services and a 1% increase in application/service fees in each of 2007 and 2008.

E.   THAT Council approve the addition of the following five RFT positions, subject to classification by Human Resources: one regular full-time Systems Analyst II position in Corporate Services Information Technology Division; and four regular full-time positions in Community Services Information Services Division (A Network Support Specialist 1, a Systems Analyst IA, a Systems Analyst II, and a Systems Analyst III). The cost of these positions, including benefits is estimated at $366,000 pear year, at no net impact to the City's operating budget, as detailed in Appendix A.

CITY MANAGER'S COMMENTS

The mainframe computer system must be abandoned as there will not be technical support after December 31, 2006. Therefore, all systems must be transferred with the largest remaining being PRISM, as all other significant applications have been transferred. Contemporary information technology to support the City's permitting, inspection and compliance activities has been identified as a need for almost ten years. The AMANDA application is already in use as a "corporate system", serving several departments, and its Permitting module is widely used in North American municipalities. The funding strategy proposed has been successfully used by Community Services to fund the City's "License+" and "Domino" applications. The proposal in this report is consistent with the past strategy and the fee increase is modest to support significant improvement in service.

The City Manager RECOMMENDS approval of A, B, C, D, and E.

COUNCIL POLICY

Council approves major support system changes that require significant financial resources. Where internal sources are used to finance projects, the terms of such financings are normally delegated to the Director of Finance. Council must approve all changes to the City's regular full-time staff complement.

PURPOSE

This report seeks Council approval to proceed with the replacement of the City's PRISM mainframe computer system, as it is the last major application on the mainframe, using the AMANDA Permitting module, in a staged manner. A funding strategy is outlined and approval is sought to negotiate an agreement with the vendor to expand the use of this existing system, and to add sufficient staff resources to maintain and enhance our systems support for our permitting activities.

BACKGROUND

In 1984 the City implemented a computer-based system to assist in managing permits, related inspections, and compliance (enforcement) activities. The "Permits and Licences System" (PALS) was a mainframe-based application written and implemented using in-house expertise. It functioned from 1984 through 1995 when it was replaced by a successor mainframe system known as "Permit Review and Inspection System Manager" (PRISM).

In contemporary information technology (IT) terminology, PRISM might be seen as a new release or version of PALS, offering enhanced functionality to better meet staff needs. But PRISM is still a system running on the City's IBM mainframe computer, employing computer language that is now long outdated.

PRISM remains the operating system in Development Services, as well as in parts of Licences & Inspections and Planning, for support of most permitting, inspection and compliance activities.

In 1995, the City initiated the Development and Building Regulation Review (DBRR) as one of its "Better City Government" components in response to Council-identified areas needing attention. The DBRR initiative undertook a re-engineering approach of identifying best practices and benchmarking to identify areas where improvements could be made to our permitting/approval processes. When staff reported on recommended process changes to Council in 1996, staff training and new IT were also identified as priorities for improvement in our service delivery. Advancing on all fronts simultaneously proved overwhelming while still maintaining day-to-day services. Consequently, in 1999 staff training and new IT were established as secondary priorities to implementation of the more fundamental process changes required to better integrate the City's permitting, inspection and compliance activities.

Through the creation of the Development Services Department in 1999, many identified process changes have now been successfully implemented and are continuing on an ongoing basis. Staff training has also been advanced to the extent possible with existing resources.

Advancing the need for replacement IT was also pursued with a Canadian company working with several municipalities to develop a computer application for permitting and related services. Unfortunately, before a sufficiently functional application was developed this company was acquired by Autodesk, a large American IT firm interested in the Canadian firm's GIS technology. Autodesk essentially chose to freeze the municipal permitting application as it then existed since it wasn't seen as a core component of its corporate strategy. While the City then abandoned the business relationship, the City's "VanMap" GIS system remains as an immensely useful and ever-expanding asset of this former endeavour.

PRISM still remains to be replaced with a contemporary, network-based, web-enabled application capable of further facilitating corporately integrated permitting, inspection and compliance activities, with public access.

PRISM is now the largest remaining system running on the mainframe computer. In 1992 Council approved a corporate Information Systems Plan (ISP) which was amended in 1994. A report to Council on the status of ISP implementation in 1996 states:

> "Our mainframe based information systems are in the process of being replaced, and this must be completed, ideally before the end of this decade. Software and hardware maintenance will become increasingly expensive or impossible to obtain, and the current systems cannot deliver the technology based solutions to support the Better City Government initiatives."

The service contract for the City's mainframe computer expires on December 31, 2006 and it is important that systems critical to the City's business be moved off the mainframe by this time, or as soon thereafter as possible.

Mainframe technology has been exceeded by PC-based, networked technology. The IBM mainframe technology is now at increasing risk in terms of hardware, technical support, and significant service delivery impacts on our public customers when the system "goes down". A PRISM replacement is imperative, both to migrate from the mainframe and to provide an IT application with capabilities that can be exploited in future to deliver the support commonly now available to staff – and the public – in many municipalities.

DISCUSSION

In March a small "scope and approach" contract was completed by CSDC systems, the vendor of AMANDA. After having gained a basic understanding of PRISM, its users and its functionality, this contract confirmed that the AMANDA Permitting module could replace PRISM and that this could be achieved over a period of about eighteen months, contingent on the availability of PRISM user group expertise from the many and diverse permitting, inspection and compliance activities served by PRISM.

In considering PRISM replacement with the City's Business Advisory Committee (BAC), Information Services and Community Services assessed the merits of the two most promising strategic alternatives: re-writing PRISM in a contemporary computer language and moving it to a PC-based, network application ("Lift and Shift"); and deploying the permitting module in AMANDA. The alternative of retaining PRISM via an extension of the maintenance contract for the mainframe was not a cost-effective or viable alternative other than for an interim approach if needed while implementing a viable alternative.

The cost of the "Lift and Shift" alternative was comparable to the AMANDA alternative but offered no capacity for future systems improvements. It was therefore concluded that AMANDA was the best alternative to pursue.

In order to replace PRISM and facilitate timely abandonment of the mainframe computer, it is recommended that implementation of AMANDA proceed in a phased fashion. The initial phase will develop the Permitting module to the extent necessary to replace the functionality of PRISM. Decisions will be made in configuring AMANDA during this phase so as not to preclude future development to employ additional functionality (i.e., beyond PRISM). The initial phase will also take advantage of additional functionality when it can be readily achieved without delaying PRISM replacement.

FINANCIAL IMPLICATIONS

The Community Services, Information Systems Improvement budget consolidates all ongoing fee increases from our permit and license users and operational savings related to major systems development projects. The budget funds all ongoing incremental costs of new systems and repays borrowed funding (plus interest) for systems development.

CSG currently has $872,000 in annual, ongoing funding for new systems improvement purposes. CSG is now repaying the last of a series of loans that funded document imaging (DOMINO), Licensing (AMANDA) and our share of what has become VANMAP. The current loan balance of approximately $1.3 Million will be repaid at the end of 2007. Beginning in 2008, this cash flow can be applied to repaying the loan for PRISM replacement.

Implementation and ongoing costs associated with the AMANDA option for replacement of PRISM are detailed in Appendix A. Implementation costs will be funded from the Information Systems Improvement budget identified above with interim financing being provided as a loan from the Capital Financing Fund on terms acceptable to the Director of Finance. It is anticipated that a maximum of $2.0 million will be advanced over the 18 month development period.

Without additional sources of funding, it will take 10 years to repay this loan, during which time there will be no additional funding for major systems improvements in Community Services. The Director of Finance considers this loan repayment period to be too long given the anticipated life of the product and CSG is concerned that the inability to upgrade our systems for 10 years will cause our customer service to deteriorate to an unacceptable level.

CSG proposes that the fees paid by the major beneficiaries of improved service - our permit users - be increased by 1% in addition to inflation, beginning in 2007, with a further 1% increase in 2008. This will raise approximately $480,000 annually ($240,000 in 2007), sufficient to offset the increased ongoing costs of AMANDA, primarily the 5 staff requested and higher licensing costs associated with more concurrent AMANDA users. With this additional revenue, the interim financing provided for implementation is expected to be repaid by 2011, and acceptable time period for software applications.

During the initial installation period it is expected that the AMANDA team will need to utilize one of the two large conference rooms in East Wing. Since there is already a shortage of large conference rooms at the City Hall campus, this is not a desirable short or long term solution. Eventually additional space may need to be acquired to accommodate these staff.

Commercial rentals of blocks of office space have recently cost the City about $6,000 per year per person plus one-time renovation/furniture costs and ongoing cost for computers, phones, etc. Costs to temporarily convert a CSG meeting room to a project office for 18

months can be covered within CSG existing Information Technology budget, but no provision has been made in the initial project estimates to properly house and equip new staff once the system is operational, if we decide to return our meeting room to its original purpose.

Staff will report back to Council during the initial 18 month implementation regarding ongoing space needs, if necessary.

Contingency estimates in the initial project budget have been set at 20%. It is hoped that this can be reduced as we define our requirements further.

CONCLUSION

PRISM has served to support the City's permitting and related activities for over a decade. Shortly after its implementation in 1995 it was recognized that a network based, web enabled application was required with more functionality and the potential for integration with other City IT applications. The City currently uses the AMANDA application to support services in several areas, principally in Community Services. AMANDA's Permitting module is now used in Engineering Services and more fully used in other cities. Using AMANDA to initially replace PRISM and then more fully exploit its functionality is the recommended course for provision of IT that will more fully support the corporate, applicant and public needs regarding permitting, inspection and compliance activities.

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Appendix A

PRISM Replacement Funding Plan
September, 2006

IMPLEMENTATION COSTS

	2006	2007	2008	2009	2010	2011	TOTAL
HARDWARE	100,000						**100,000**
SOFTWARE	95,542	382,167	95,542				**573,250**
RESOURCES - NO BACKFILL	121,500	486,000	121,500				**729,000**
RESOURCES - BACKFILL REQUIRED	39,000	156,000	39,000				**234,000**
CONSULTANTS/CONTRACTORS	114,317	457,267	114,317				**685,900**
CONTINGENCY	59,105	236,420	59,105				**354,630**
OTHER	6,000	24,000	6,000				**36,000**
	535,463	1,741,853	435,463	0	0	0	**2,712,780**

SUSTAINMENT AND ENHANCEMENT COSTS

	2006	2007	2008	2009	2010	2011	TOTAL
LICENSES			130,520	130,520	130,520	130,520	**522,080**
UPGRADE - HARDWARE				100,000			**100,000**
UPGRADE - SOFTWARE				100,000			**100,000**
UPGRADE - STAFF RESOURCE				160,000			**160,000**
STAFF RESOURCE			18,000	24,000	24,000	24,000	**90,000**
IT/BUSINESS STAFF RESOURCE			274,500	366,000	366,000	366,000	**1,372,500**
	0	0	423,020	880,520	520,520	520,520	**2,344,580**

FUNDING PLAN

	2006	2007	2008	2009	2010	2011	TOTAL
ADDED REVENUES		(240,000)	(480,000)	(480,000)	(480,000)	(480,000)	**(2,160,000)**
CSG IT FUNDING PLAN			(872,000)	(872,000)	(872,000)	(872,000)	**(3,488,000)**
	0	(240,000)	(1,352,000)	(1,352,000)	(1,352,000)	(1,352,000)	**(5,648,000)**

NET PRESENT VALUE CALCULATION

	2006	2007	2008	2009	2010	2011
IMPLEMENTATION COSTS	535,463	1,741,853	435,463	0	0	0
SUSTAINMENT/ENHANCEMENT	0	0	423,020	880,520	520,520	520,520
PAYMENTS FROM FUNDING PLAN	0	(240,000)	(1,352,000)	(1,352,000)	(1,352,000)	(1,352,000)
NET CASH COSTS (INCOME)	**535,463**	**1,501,853**	**(493,517)**	**(471,480)**	**(831,480)**	**(831,480)**
NPV - 6% discount rate	**535,463**	**1,952,306**	**1,513,078**	**1,117,214**	**458,604**	**(162,726)**