Public-Private Partnerships in Municipal Infrastructure

Theory and Practice

Prepared by IBI Group

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Public Private Partnerships: Theory and Practice Abstract

INTRODUCTION

As government deficits increase and debt charges add to even more debt, a variety of approaches is being explored to reduce government expenditures. One technique is to involve the private sector in partnerships with government in the provision of services, both capital costs and operating. Do such partnerships, in fact, result in lower costs? Or do they simply transfer costs from the public to the private sector or from capital costs today to operating costs in the future?

THEORY

Having asked the questions, the report summarizes a variety of build, own, operate, transfer, purchase, lease and finance arrangements that make up public private partnerships. These range from complete privatization on the one hand, to operating part of a system for a fixed fee and for a fixed time on the other. In between are a variety of build, operate and finance alternatives.

PRACTICE

The report reviews eighteen case studies in Canada, from Nova Scotia to British Columbia. Cases include partnerships which are planned; which are either completed or in operation; and others which were planned but failed to materialize.

Partnerships between school boards and municipalities were reviewed in three municipalities. These types of partnerships involve the joint construction and/or use of facilities such as swimming pools, gymnasiums, auditoriums, meeting rooms and libraries. Non-profit or senior citizens housing is sometimes included as a third component. In all instances, there appear to be real savings in both construction costs and operating costs, although, problems may arise in ascertaining responsibility for certain maintenance and repair activities.

In a number of instances, municipalities have saved the capital costs of a new facility by having it built by a private firm. In Richmond, British Columbia, a soccer pitch was constructed by a firm which intended to hold the land for future expansion and use it for employee recreation in the meantime. In return for a greater amount of capital construction, the municipality assisted the firm in getting a reduction in its taxes. In another instance, an ice centre was constructed by a private developer in return for an ongoing rental fee. The developer also benefitted as the ice centre increased the attraction for development of other adjacent land that he owned. In Strathcona County, Alberta, a private firm was able to construct a water distribution system through using land the firm owned for gas and electricity transmission. In this instance, the firm recovered its investment through ongoing operation and charges to the users.

In several examples, private firms were responsible for financing public infrastructure. In Scarborough, a developer donated land and financial assistance to a library board for the construction of a new branch library. In return, the municipality approved the application for an increase in density and the developer avoided a lengthy and costly municipal board hearing. In Waterloo Region, landowners contributed up-front funds to the Region for construction of regional roads that were otherwise not scheduled for construction for an

additional five-to-seven years. In return, the developers will be reimbursed for 90% of their investment at the time in the future when the roads were originally scheduled. The developers are also able to register their plans for subdivision and start construction five-to-seven years earlier. In Peel Region, a developer sold land to a school board at discount and covered the cost of a mortgage for three years until the school board receives its expected provincial funding. In all of these cases, it is likely that some or all of the costs of the developer is passed to the ultimate purchaser of the homes.

Another group of case studies involves the operation of water and sewage treatment plants with examples from Ottawa-Carleton, Hamilton-Wentworth and the Ste-Marie-de-Beauce, Quebec. In all of these instances, there appear to be reasons why the private sector operation is a money-saving partnership for the municipality. In small municipalities, such as Ste-Marie-de-Beauce, a private firm operating a number of small plants in different municipalities can provide economies of scale. In Ottawa-Carleton, private sector expertise and staffing was required to implement a new treatment process. However, over the long term, the municipality may be able to operate the entire system as cheaply as a private operator could. In Hamilton-Wentworth, the municipality's desire for economic development in the waste management field was balanced with a private firm's desire to have an operating system as a demonstration example of its abilities and the firm was prepared to locate its office functions in Hamilton-Wentworth.

Another examples examined included new regulations regarding waste management in Laval, garbage collection in St-Hyacinthe, Quebec, plans for municipal services in Halton Region and the operation of the Windsor-Detroit tunnel.

CONCLUSIONS

The report examined why the private sector may be more efficient than government and concluded that it related to competitiveness, speed of decision-making and flexibility of organization. Other benefits from private sector involvement arise from the ability of the private sector to utilize zoning permissions on publicly-owned land, the ability to pass on costs to home buyers, and efficiencies through utilization of land already owned. Economies of scale through the operation of a number of small operations, by sharing highly skilled expertise are also benefits that a private firm can offer to the public sector.

Difficulties with partnerships include the time required to negotiate contracts, the determination of a private rate of return which is politically acceptable and which also reflects the risk involved, the need to clearly define responsibilities, service levels and fee rates and the need to ensure that adequate maintenance takes place on facilities that are to be returned to government operations.

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1. INTRODUCTION

Over the past several decades, Federal and Provincial governments in Canada have spent more money than they have received in revenue and have generated large debt loads. The servicing of this debt has begun to significantly reduce the ability of the senior levels of government to provide additional funding for municipal and other infrastructure projects. Not only is there a growing concern that existing infrastructure is not being adequately maintained and renewed, but the ability to provide new infrastructure that is required for new development has also been seriously eroded.

Local municipalities are controlled by provincial legislation which prevents them from acquiring the same levels of debt that have been undertaken by senior governments. However, a growing demand for services, an increasingly large bureaucracy, and an increase in welfare and other social costs, has seriously impeded the ability of municipalities to compensate for the reduction in financial transfers from the senior levels of government.

As a result of the financial situation, governments at all levels have begun to look at both what they do, and how they do it with a view of making operations more streamlined, more efficient and/or more cost effective. The philosophy of universality is being questioned with the idea of more closely targeting programs to those most in need and a "user pay" or "menu driven" approach is being suggested to permit program users to make their own decisions and priorities. Separate bureaucratic "turfs" or compartmentalized programs are increasingly being brought under pressure to find more effective ways to utilize scarce resources, including buildings and land. Standards developed in a time when public involvement and resources appeared almost limitless are being scaled back to what is more reasonable and necessary, leading to reduced public land takings for road rights-of-way, parkland, school sites and more joint or mixed use of public land where it is available. Different government departments have had to coordinate their actions and delivery of programs by sharing of facilities, staff and expertise. Increasingly, government departments are looking to the private sector to assist them in the provision and delivery of services and facilities, particularly the provision of the infrastructure necessary to accommodate continued growth and development.

The introduction of the private sector, however, also introduces more than an additional source of funds. Putting together a specific team of private sector firms to address a specific infrastructure problem may involve less bureaucracy and standardized procedures than would be the case if the same undertaking were carried out by a completely government operation. This leanness of approach and refinement of the team to specific situations plus the use of private sector expertise could result in lower labour costs

and reduced construction times. Thus, the cost of the project would be reduced, the necessary money borrowed for a shorter period of time, and development dependent upon the infrastructure could be constructed at an earlier point in time, thereby producing an earlier start-up date of revenue flows.

2. THE ISSUES

Does a private sector partnership, in fact, result in lower costs? If so, why? Is it because the private sector has greater experience and expertise in the operation? Are there differences in public versus private labour costs? Have government bureaucracies become too large, hierarchical, rigid, inflexible and inefficient? Is there a difference in the ability to raise capital and the cost of such capital? Are usual regulations and regulatory operations relaxed due to the high profile of a specific partnership project? Are there other reasons?

Aside from actually saving money, does a public-private partnership simply transfer the debt, often government secured, to a different account so as to not negatively affect the government's credit rating? Off balance sheet accounting or non-recourse financing may assist a government in balancing its books, but it does not necessarily affect the actual project cost. These costs will ultimately have to be paid either by the user or by society as a whole. Also, does the financing of public-private partnerships simply transfer government financial problems to the future? While private sector firms may provide capital upfront today, they must be reimbursed, with interest, over the operation of the facility. The government may reduce its expenditures today, but does it give up a long term revenue stream it might previously have enjoyed? Are these foregone revenues greater or less than the maintenance and upgrading costs which are avoided?

Does the use of public-private partnerships actually facilitate or accelerate the development of housing? Does the use of a private partners to provide a municipal service raise problems of liability and responsibility?

Another question regarding involvement of the private sector in municipal and provincial projects is whether the private interests are able to claim a capital cost allowance or a similar tax relief. If this is so, the private sector firm benefits today in a reduction or deferral of taxes, but the Federal government then, correspondingly, has its revenues reduced. Is this anything other than a technique to transfer federal funds (through foregone federal revenues) to a municipal project? If similar projects are carried out across the country, then the reduction in municipal expenditures would be offset by a reduction in federal revenues.

3. THE STUDY

In order to better understand the implications of the public-private partnerships, Canada Mortgage and Housing Corporation retained IBI Group to document innovative experiences of private sector involvement in urban infrastructure, delivery and financing and to assess the impact on costs and quality of service, with particular attention to the housing sector with regards to the impacts on developers, new home buyers and existing home owners.

The study tests the hypothesis that private involvement in infrastructure service translates into a reduction of costs to existing and new homeowners and/or translates in more or better service for the same fees.

The study examines the different models of public-private partnership, assesses their strengths and weaknesses, and then examines a number of specific case studies.

In looking at the various partnership models, the study examines the conditions under which each model is most appropriate to use, and compares the arrangements to the more traditional methods of financing and providing public infrastructure.

4. MODELS OF PUBLIC-PRIVATE PARTNERSHIPS

The Ministry of Municipal Affairs of Ontario, in its study of Innovative Financing Approaches, has defined a public-private partnership as: "any situation where the costs, risks and rewards of creating, refurbishing or expanding infrastructure are shared by government and the private sector". To this could be added those situations where an existing public facility is operated and maintained by a private firm. In addition, not all situations will include costs, risks and rewards being shared; in some instances only the costs or the rewards may be included. This may be the case, for example, in various value capture techniques where the increase in property values, ie. rewards, resulting from a public expenditure in infrastructure are shared between the benefiting landowner and the government agency carrying out the undertaking. This type of situation would also be an example of an involuntary partnership, ie. if taxes are levied against properties to compensate for increased values, then existing property owners would not have the option of opting out of the partnership.

In examining the various options, single capital letters are used to describe various private sector activities. The letters as used below are somewhat different from those that have been used elsewhere. In other instances, a single letter has been used for two quite distinct activities, ie. the letter "O" has been used to describe both Own and Operate; the letter "B" has been used for both Buy and Build. On the other hand, in some reports two letters have been used for the same thing, ie. a "B" for Build, and a "D" for Develop. In the following account, therefore, each letter has only one meaning and each meaning has only one letter.

B -- Build (includes Develop and Construct)
L -- Lease (includes Rent)
O -- Operate (includes Maintain)
P -- Purchase or Buy
T -- Transfer

All of these actions are from the private sector viewpoint. In other words, the public sector may sell a property and the private sector buys it. For this transaction we use the letter "P". The concept of Transfer, or "T", includes selling and donating or giving property to the public sector.

4.1 "O" - OPERATE

This is essentially the simplest involvement of a private firm in a public operation. An operation which was previously carried out by a public agency with public employees is contracted out to a private firm to operate. This procedure is often used in cases where there is no easy way to recover the costs of operations through user pay fees. The public agency that is contracting out the work negotiates the fee that it will pay to the private operator for the operation. Activities can be as diverse as collecting garbage or operating a prison. The capital costs of the project,

such as a prison, are born by the public agency as are the major costs of repair, renovation and replacement. The benefit to the public agency is that a private firm carries out the operation at less cost than the public agency would incur if it carried out the operation itself. The benefit to the private firm comes from reducing operating costs so as to maximize profit, given that revenues are fixed by agreement. Service levels and operational standards need to be set by the public agency to ensure that the private firm maintains a minimum level of service. All operating agreements can be customized to the specifics of the local situation; public vehicles can be used by private operators, or certain activities and some of the operating costs can continue to be borne by the public agencies.

4.2 "LO" - LEASE AND OPERATE

This partnership occurs when the public agency leases a facility to a private firm and the private firm then operates the facility. As with the "O" - Operate technique, the private firm brings its expertise to the operation and maintenance of the facility, while the public agency sets the minimum operating standards. With a lease payment process, however, the private firm expects to be able to raise revenue through user pay or other revenue producing techniques. The private firm negotiates the amount of the lease it will pay and then attempts to maximize its revenue through providing a superior level of service and/or through concessions or other innovative revenue techniques. As with the "O" procedure, the private firm has an interest in reducing costs, but also has an interest in raising revenues. It may, therefore, be necessary for the public agency to negotiate fee caps as well as minimum service levels. Airports and water filtration plants are examples of facilities which can be leased to a private firm which then operates the facility.

4.3 "PO" - PURCHASE AND OPERATE

This technique is essentially the privatization of a formerly public facility. The public agency receives the payment for the facility upfront, while the private firm carries on the operation. There are obviously ongoing sources of revenue which the private firm feels will be able to offset the purchase price of the facility. The partnership aspect occurs when the public agency wishes to maintain some control over how the facility continues to be operated. The public agency may, through negotiations, set conditions regarding protection of the existing labour force, minimum service levels, and fees to be charged for the services. Because public control of a private monopoly is more difficult than one where there is competition, selling as opposed to leasing a facility would generally be used in cases where the facility would compete in the private market with other firms. In cases such as airports, the competition may, however, be in a different country.

This type of partnership is similar to the "PO" - Purchase and Operate technique, but also includes a requirement that the private firm purchasing the facility either builds or develops a new facility or enlarges or renovates an existing facility and then operates the new or enlarged facility. This

4.4 "PBO" - PURCHASE, BUILD AND OPERATE

technique would generally be used in instances where the public sector wished to no longer be responsible for the operation of the facility but at the same time wished to ensure that employment and development goals were met. An example might be where a government sells a manufacturing concern with the stipulation that the purchaser invest a minimum amount of capital in plant improvement or expansion within a certain period of time. Again, the purchase and sale agreement may contain requirements for maintaining operations and/or labour force levels for a specified period of time. The requirement for the purchaser to invest further capital in the facility may reduce the public sector sale price from that which would have been received from a straight "PO" transaction with no requirement for the purchaser to invest additional funds. In this way, the procedure could be a technique whereby the public sector, in effect, invested capital in economic development (through a reduction in income) while not, at the same time, appearing to spend the required money.

4.5 "LBO(T)/LB(T)O" - LEASE, BUILD AND OPERATE

These techniques involve the leasing of a facility to a private firm with the requirement that the private sector then build a new or expand the facility and operate it for a period of time. This forms a type of "wrap around" technique and could be used in a situation where the private firm leases a portion of highway, constructs an addition, runs the project as a toll road for a number of years and then transfers ownership back to the public agency. For political and administrative purposes, it may be required that the transfer of ownership of the new facility takes place immediately upon construction and the combined facility is then operated under an agreement. The Dartford Bridge in England is an example of this technique and provides the private firm with ongoing revenues from the leased facility, while the building and development of the new facility is underway.

4.6 "B" - BUILD

This is the standard "turnkey" operation. The public sector enters into an agreement with a private firm to construct a facility for an agreed upon amount and to immediately turn it over, upon completion, to the public sector for operation. The public sector is responsible for arranging the ultimate capital financing for the facility and benefits from reduced construction costs over what would be the case if the facility was constructed by the government itself. Again, as in a type "O" partnership, the public benefit results from value engineering or the ability of the private firm to undertake the task at less cost and/or less time than the public sector. Once built, such a facility could, of course, be subject to some type of operating arrangement.

4.7 "BTO/BOT" - BUILD, TRANSFER AND OPERATE OR BUILD, OPERATE AND TRANSFER

In both of these techniques, the public sector enters into an agreement with the private sector whereby a private firm builds and operates the facility. Some or all of the financing cost of the construction is the responsibility of the private firm. Once completed, the facility is operated by the private firm and the excess revenues over what is required for ongoing operating

costs is then used to pay off the loan originally undertaken by the private firm to construct the facility. At the end of the set period of time or when the capital cost has been reimbursed, the ownership of the facility reverts to the public agency. In some instances, the facility is transferred immediately upon construction due to the needs of regulatory requirements for public ownership or other taxation reasons. In these instances, the operating agreement would provide the same types of guarantees and required service levels as it would if the facility remained in private ownership until the end of the lease period. In some instances, the transfer at the end of the "BOT" partnership may not take place but may be replaced by an ongoing operating agreement in order to continue to utilize the operating expertise of the private sector firm.

4.8 "BO" - BUILD AND OPERATE

In this type of partnership, the private sector builds and operates a facility and is responsible for capital financing. However, due to monopolistic or social welfare concerns, the operation is regulated and controlled by a public body. Both the levels of service and the fees charged can be subject to regulations. Examples are privately owned utility monopolies such as phone, electricity and cable companies.

4.9 "BT" - BUILD AND TRANSFER

This is the type of partnership where the private firm builds infrastructure facilities on private land and then turns the facilities and the land over to a public agency, often at no cost to the public agency. This would include situations where land is being subdivided but the created parcels cannot be sold until servicing is provided. The owner of the land then would be responsible for such things as building the roads, curbs, sidewalks and installing sewers, water lines, electrical facilities, telephone and/or cable line, and then turning the land with these facilities over to various public bodies. Parkland might also be developed and transferred in a similar way. The benefits to the public agency are self-evident; the benefits to the private sector are that without such facilities, the value inherent in the land cannot be realized.

4.10 "T" - TRANSFER

In this type of partnership, the private firm simply transfers land to a public agency. This is generally an exaction required by a public agency. This land may be used for park or transportation purposes or for the construction of a public facility such as a library. The transfer of money, ie. a "cash contribution" may also be required. As with the "BT" type of option, such a transfer would be required as a condition of approval of a rezoning or increase in density whereby the private benefits could not be realized unless such a transfer were to take place.

4.11 FINANCIAL ARRANGEMENTS

In addition to a variety of building and operating agreements, there are examples of public-private partnerships where only non-traditional financing is involved. The normal financial models, which could also be seen, in a way, to be public-private partnerships, are ones where general taxes are collected from property or retail sales or income, and monies so

raised are then used by the public agencies to build and operate facilities. Bonds may be issued by the public agency for upfront capital needs and then these are repaid through taxes. The other normal financing technique is for the public agency to collect user fees to pay for the services. The latter may include government run telephones, water works, electrical distribution and toll roads.

Innovative techniques include a variety of value capture or beneficiary pay schemes. These can be seen as directed levies where the amount of the tax is proportional to the amount of benefit that the property owner gains from the construction and operation of a public facility. Where, through the provision of new roads or transit facilities, the value of private land increases, a value capture technique would charge a levy back some, but not all, of that increase in value. A recent study commissioned by Canada Mortgage and Housing Corporation and carried out by Mohammed Qadeer and Andrejs Skaburskis of Queen's University ("Recapturing of Unearned Increments, Land Taxes and Betterment Levies", June 1994) reviews theories of recapturing gains in land values and analyzes the experiences of Canada, Britain, Australia, and the U.S.A. in implementing these measures.

A beneficiary pay charge goes beyond user fees and/or value capture techniques to assess fees where non-users benefit. Examples could include a gasoline tax which would be used to pay for a subway. The justification would be that automobile users benefit through reduced congestion because of the transference of many drivers to using public transit. Additionally, a special tax on retail businesses could be levied because of the increased sales that the business received due to the increased accessibility resulting from a new transportation facility.

Another innovative financial arrangement is "front ending" or a loan from a private consortium to a public agency to advance the construction time of a public undertaking in order to accelerate the timing of new development. Examples would be the public construction of a road where the developer would pay the costs upfront and then be reimbursed at the time that the public agency had originally scheduled construction of the road, or the public construction of a major sewer project financed by a private firm which would then be reimbursed through charges made to hook up new customers.

In examining alternative finances, an entire range of revenue sources can be included. These would include property taxes and assessments, user fees, tolls and transit fares, government operating grants and subsidies, sale or lease of surplus property, development charges, easements, density bonuses, operation of concessions, operation of space, advertising, connection fees, negotiated exactions, payroll or income taxes, sales taxes, parking fines, vehicle licence fees and even use of lotteries. This list is not based on known specific examples of use nor is it necessarily exhaustive.

Rather, it is simply given to suggest that there exists a wide range of possible partnerships and interactions between public and private agencies that can be explored further to determine new arrangements that meet particular circumstances and situations. It may not be too far-fetched to suggest that, over time, there will come a blurring of the public and private sectors of society as both move to an entrepreneurial approach which includes a concern for the welfare of all segments of society.

5. CASE STUDIES

While there are many theoretical approaches to structuring a public-private partnership to provide and maintain municipal infrastructure, there have not been a large number of implemented examples in Canada. Many proposals have been made for partnerships, but have not yet been implemented due to a variety of difficulties. It is, therefore, necessary to examine in more detail a number of successful partnerships to determine why they worked and who benefitted from them, as well as to look at proposals which have not carried through in order to better understand the range of difficulties that such partnerships may run into.

Representatives of Canada Mortgage and Housing Corporation, the Canadian Home Builders Association, and IBI Group met to review a number of known examples of public-private partnerships in Canada. The emphasis was on those that would have a direct impact on housing supply, housing cost, and/or other types of municipal development. Airports and regional freeways were excluded from the group. It was also decided that the case studies should include both Build and Operate examples, and should include activities across Canada.

The examples chosen can be grouped into several types. The first group of case studies reviews examples of cost savings through joint construction and use of municipal and educational facilities. These include schools and recreation centres in Cumberland Township, Metropolitan Toronto and Pittsburgh Township, Ontario.

The next group contains examples of municipalities reducing up-front infrastructure costs by having the private sector, for a number of reasons, finance and build the facilities. Included in this group are an Ice Centre and a Soccer Pitch in Richmond B.C.; Water Supply system in Strathcona County (Highway 14) in Alberta; and a school in Cape Breton, N.S.

The third group involves examples where the private sector finances the provision of municipal services. Examples include a Library in Scarborough, Ontario; Roads in Waterloo Region; Sewage Treatment Plant in Rockland, Ontario; and schools in Peel Region.

The fourth group involves the operation of water and sewage treatment plants and includes examples in Ottawa-Carleton; Hamilton-Wentworth; and Sainte-Marie-de-Beauce, Quebec.

The last group includes Waste Management in Laval and St. Hyacinthe, Quebec, municipal services in Halton Region and the Windsor-Detroit Tunnel.

From the perspective of housing, public-private partnerships can have two effects: the purchase price of housing; and the operating cost of housing

A HOUSING ROAD MAP

(usually through property taxes). The use of development charges or upfront negotiated solutions tends to increase initial house prices while resulting in lower operating costs through lower taxes. On the other hand, schemes where a facility is privately built and publicly leased will tend to shift the burden from capital (affecting house prices) to operating costs (affecting taxes over time). The private operation of existing facilities will reduce ongoing costs while leaving capital costs unaffected. Projects which include the joint use of facilities will reduce both capital and operating costs, while turn-key design and build solutions will primarily reduce the capital cost of the project.

Examples of Joint Construction and Use of Facilities include:

- 5.1 Cumberland Recreation Centre
- 5.2 Toronto Schools
- 5.3 Pittsburgh Township Schools

Examples of Reducing Upfront Infrastructure Capital Costs include:

- 5.4 Richmond Ice Centre
- 5.5 Richmond Soccer Pitch
- 5.6 Alberta Highway 14 Water Supply
- 5.7 Nova Scotia Schools

Examples Tending to Increase Housing Costs include:

- 5.8 Scarborough Library
- 5.9 Waterloo Roads
- 5.10 Rockland Sewage Treatment
- 5.11 Peel Region Schools

Examples of Reducing Infrastructure Operating Costs include:

- 5.12 Ottawa-Carleton Sewage Treatment
- 5.13 Sainte-Marie-de-Beauce Water Treatment
- 5.14 Hamilton-Wentworth Water and Sewage Treatment

Other examples:

- 5.15 Laval Waste Management
- 5.16 Saint-Hyacinthe Waste Collection
- 5.17 Halton Region
- 5.18 Windsor-Detroit Tunnel

5.1 CUMBERLAND COMMUNITY FACILITIES

Municipality: Township of Cumberland, Ontario

Partner: Carleton Board of Education for facility.

Nature of partnership: Joint build and operate.

Service provided: Recreation centre and school.

Why did municipality seek partnership?: Reduce costs through joint use of similar/identical facilities.

Was partnership successful?: Cost reduced community facilities and school built.

How was partner selected?: Carleton Board of Education owned lands adjacent to municipal site.

Why did partner get involved?: Municipality and Board of Education recognized mutual benefits.

Savings: No duplication of facilities.

Downside: None observed.

Impact on housing: Sharing facilities results in reduced capital costs, leading potentially to lower house prices (lower development charges); and lower operating costs (potential ongoing tax savings).

Lessons learned: Capital cost savings by shared use of facilities.

Contact: Mr. Jacques Lortie
Commissioner of Parks and Recreation
Township of Cumberland
255 Centrum Blvd.
Orlean, Ontario K1E 3V8

5.1.1 Municipal and School Board Agreement

The Parks and Recreation Department has a mandate to provide community recreation facilities. The Board of Education is responsible for providing schools. In the Township of Cumberland the municipality and the Board of Education owned adjacent sites and each required new facilities.

The concept for a joint facility had its genesis in a Recreational Master Plan completed in 1983. A User Committee made up of local citizens, Township staff, and design professionals was formed to provide guidance in the type and nature of facilities to include in a combination recreation centre and high school.

Early planning activities for the high school and community/recreation centre indicated that a number of similar facilities were required for both the school and community. This is fundamentally the basis for the joint use agreement which was achieved and which provided reduced costs for both the municipality and the school board.

The User Committee directed studies and surveys, visited other facilities and met on a regular basis. The committee invited participation from community and recreation associations, potential user groups, advisory bodies and special interest groups. The final program for facilities included a variety of components, with special features and design considerations.

The extensive program required a phased approach to construction. Phase One included: a public library, recreation centre (community facilities, pool, assembly hall, fitness club), and a high school (including a gymnasium and cafeteria/storage area). Although the Township library and the school library are not linked, both students and the public have access to the books and library resources of each.

Phase Two of the Centre, an arena, was opened in the fall of 1994.

Construction of the Centre was delayed one year when initial tender estimates in 1990 came in $2 million over budget. The project was retendered later in 1990 during the early stages of the recent economic recession resulting in an acceptable tender amount.

The capital cost of Phase One was $7.141 million. The Ontario Ministry of Tourism and Recreation provided a grant of $1.068 million (14.9%). The remaining amount, $6.074 million, was paid from the Residential and Commercial Lot Charge Reserves (which was replaced by the Development Charge Reserve in 1991).

The capital cost for Phase Two, the arena, was $3.286 million. A grant in the amount of $720,000 (21.9%) was received from the Ministry of Tourism and Recreation.

The Township transferred to the school board two acres of serviced land in return for the inclusion of other facilities in the school to be used by the community including a triple gymnasium, community storage areas, extra locker and shower areas, an office, a full set-up cafeteria/auditorium with raised stage, sound system and lighting, and exterior amenities such as a paved basketball court and a running track around the soccer/football field. In addition, the school houses a full sized daycare centre used primarily by children of students attending the high school. The transfer of land to the Carleton Board of Education, part of the municipality's contribution towards school construction, also had the effect of permitting the creation

of a school which provides a variety of facilities to its students as well as to the residents of Cumberland.

The school is linked by a hallway to the OASIS wave/leisure pool, fitness club and arena allowing convenient access and use by students during school hours.

Features of the OASIS wave/leisure pool represent examples of a variety of program and design approaches evident in contemporary community pool facilities, for example, wave, on deck sauna, swimming lap area, water play features, and auxiliary facilities such as a large public viewing area, community meeting room, a child minding centre, a cafe, and an equipment shop. In addition, efforts have been made to create a fully accessible facility for the public and special needs groups in terms of design features and building materials.

Future phases are to include squash courts and outdoor tennis courts, to be followed thereafter by exterior landscaping, a second arena, and additional tennis courts.

5.1.2 Achievements

The utilization of a broad based community participation in the planning and implementation of the facility resulted in community-wide endorsement of the approach as well as the resulting facilities and phasing programs.

The cost-effectiveness of entering into a joint use agreement can be demonstrated. The joint use of facilities results in a more efficient use of the resources rather than a duplication of facilities, each of which may have had significant periods of underutilization.

The Ray Friel Centre and the high school are located in an area of the Township which is easily accessible. The centralization of a variety of community facilities on one site in such a location provides a greater accessibility to a larger portion of the population. There are, as well, certain additional efficiencies resulting from the joint facilities such as a sharing of public land for the benefit of the whole community as well as energy efficiencies in terms of reduced hydro and water consumption.

5.2 TORONTO SCHOOLS

Municipality: Toronto, Ontario

Private sector partner: Non-private partnership, joint funding and operation of school facilities in conjunction with co-op housing and municipal community centre.

Nature of partnership: Joint design, build and operate.

Service provided: Education.

Why did municipality seek partnership?: Reduce school costs; make efficient use of land, and share facilities.

Was partnership successful?: Schools and housing built; facilities shared; and land requirements reduced.

How was housing partner selected?: Proposed housing developments.

Why did housing sector get involved?: Need for provision of schools to permit residential development to proceed.

Savings and/or accelerated activities: Facilities shared between School Boards and municipality, and schools provided with minimal land requirements.

Downside: Maintenance disagreements, insufficient play area.

Impact on housing: Housing built that could not have been constructed if schooling were not made available. Sharing of facilities results in both lower capital and lower operating costs.

Lessons learned: Great care must be exercised in drawing up the original maintenance and operating agreements.

Contact: Mr. Norbert Hartman
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Toronto, Ontario M5T 1P6

5.2.1 St. Lawrence Housing Development

On September 9, 1977, an agreement was signed by the Minister of Education for the Province of Ontario, the Chairman of the Metropolitan Toronto School Board, the Chairman of the Metropolitan Separate School Board, and the Chairman of the City of Toronto Board of Education to provide for a mixed use housing and joint School Board development in the St. Lawrence neighbourhood in Toronto. In Metropolitan Toronto

PUBLIC - PRIVATE PARTNERSHIPS

TORONTO: ST. LAWRENCE SCHOOLS

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there are both Public and Separate Boards of Education. The Public Board comprises local Boards of Education in each of the six municipalities of Metropolitan Toronto plus a French Language Board. The Metropolitan Toronto School Board is responsible for the capital funding of new schools, while the municipal boards are responsible for the operation of the schools and the provision of the necessary teachers and supplies.

The first school in the new St. Lawrence development was designed as part of a mixed use building and was housed on part of the first and second floors of an eight storey building. The remainder of the ground floor was used for commercial purposes, and the upper floors were occupied by a non-profit housing development. The school was designed to accommodate both the Metropolitan Separate School Board and the Toronto Board of Education. Classrooms and ancillary spaces for the two Boards were provided on opposite sides of twin general purpose rooms which are separated by a folding door. The combined space of 4,000 ft^2 can be used for school or community purposes. Outdoor play space, which in the case of the first Market Lane school in the St. Lawrence project was less than an acre in size, was owned and maintained by the City of Toronto, while the two School Boards shared in the overall development and construction cost of the facility.

The two schools housed in the facility were Market Lane and St. Michael's. Because the schools were constructed in the first phase of the development and because they contained general purpose rooms which could be used for community purposes, the schools quickly became the focal point for the community. Moreover, by being constructed adjacent to (and under) residential units, a measure of informal, after-hours security was provided to the school.

However, there were certain problems that developed from this first development. The sharing of one building with other users makes it very difficult to phase and to expand school activities. Portables or other temporary accommodation cannot readily be located adjacent to the school. The mechanical and electrical systems for the entire building were common and difficulties ensued with regards to assigning responsibility and costs for the maintenance of these facilities. Each of the operating partners had different unions who were responsible for different parts of the facility and disagreements arose as to who was responsible when breakdowns occurred. The question of liability for accidents and other occurrences in mixed use facilities was not clearly resolved. Is a leak through the roof of the school the responsibility of the Board of Education or of the housing development above? The coordination of the architects and the design consultants between the various users was difficult since there are different fire code requirements for schools than for residential buildings. Also, separate fire escapes were required for each of the activities.

5.2.2 Second St. Lawrence School

At a later date, a new Market Lane school was constructed in St. Lawrence for the Toronto Board of Education's uses. Mindful of its experiences in the first Market Lane school, the Board of Education wished to avoid the stacking of ownerships one above the other. Thus, the new school is constructed adjacent to a community centre which has been provided by the City of Toronto, with an older, converted office building on the other side of the school. This community centre itself is partially built into the ground floor of the adjacent residential building. The City and the Board of Education share use of the swimming pool, gymnasium and general purpose rooms. However, each facility has its own change rooms on either side of the shared facility and the Board is allocated the use of the shared facilities at certain times of the day, during which time the community centre access is restricted, and at other times the common facilities are used by the community centre and access is restricted to the school property.

Given the location of the school on the north side of The Esplanade, a local street, and Crombie Park on the south side, a tunnel was required under the road to permit the school to utilize the park space as the school's play area. While students may cross the street unsupervised going to and from school, it was concluded that for liability, safety and supervision reasons, the children should not have to cross the street during the school day. In both the new Market Lane school and the first joint Market Lane/St. Michael's school, the amount of land area given over the play space was significantly less than the amount usually considered for suburban schools.

This need to reduce school site requirements, share a site and make joint use of parkland was brought home to the Boards of Education in Metropolitan Toronto at a later date in relation to an Ontario Municipal Board (OMB) hearing for housing redevelopment of the motel strip in Etobicoke. The OMB held that where a municipality is attempting to achieve an urban style of intensification, it was inappropriate for the School Boards to assert land area requirements normally associated with suburban schools.

A further example of efficient use of land and building space is the Humberwood School complex in Etobicoke. This is a joint facility housing the Etobicoke Board of Education, the Separate School Board, a City Library and recreation facility. It is planned to operate as a shared use corporation where all of the users are tenants of the facility and the facility itself is run by a six-person board, two persons from each of the users. This board hires a general manager to manage the entire facility.

The other experience learned by the Toronto School Board, and applied in the new Market Lane school, was to ensure that all aspects of the operation and maintenance of joint facilities are spelled out in a detailed maintenance

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TORONTO: MARKET LANE SCHOOL

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agreement. The various entities are looked upon as separate "silos", i.e. buildings on their own piece of land and independent of other structures. Facilities which are to be shared between silos then must be the subject of detailed agreements specifying not only maintenance and liability, but also who can use the facilities for what purposes and at what times. In the first Market Lane school, many of these matters were not addressed in the agreements and, in fact, the agreements were never signed and the maintenance and operation therefore depended upon the good will of the individuals involved. Unfortunately, over time these individuals became subject to the institutional policies of the various bodies and some of the agreements and cooperation broke down. There are still ongoing maintenance difficulties which have yet to be worked out between the Board of Education and the housing development above.

5.2.3 A North York Example

Another and somewhat different example of shared education accommodation in Toronto was an agreement reached between Tridel, a developer of condominium apartments, and the Metropolitan Separate School Board in North York. In that instance, the School Board owned an elementary school which was obsolete and needed to be rebuilt. The original family community had dwindled as the area around Sheppard and Yonge became the office-oriented North York Downtown, but the Separate Board required an arts-oriented school, the Cardinal Carter Academy For the Arts, to accommodate students from grade 7 to the end of post-high school courses. The Separate Board asked for proposals and Tridel's concept was eventually accepted. Tridel acquired the site from the School Board, transferred the development rights onto an adjacent piece of land they owned, constructed a school at their cost, and transferred the school plus some additional land with no density rights on it back to the school, and built a 33 storey residential condominium on the adjacent land. The school extends 2½ storeys below grade and 1½ storeys above, but has natural light to all levels. A separate heating plant is provided for the school. The school was designed by an architect retained by the Separate School Board but paid for by the developer.

5.2.4 Plans For Ataratiri

With the knowledge gained from these and other experiences in Toronto, the Toronto Board of Education worked with the City of Toronto on the design for schools in the proposed Ataratiri housing development in the east end of Toronto. Many schemes were looked at for schools in the project, and these were judged on the basis of ease of phasing and expansion, the location and amount of open space and safety. The Humberwood project in Etobicoke had demonstrated that lunch rooms and general purpose rooms can be shared and can be rearranged to form either one large area or several small areas; outdoor kindergarten play areas can be shared between schools; a unified arts room, a music room, senior science rooms, industrial arts and family studies rooms can be shared by different boards on a timetable and booking basis; and access can be

controlled between the schools and the adjacent library and community centre.

The final design for the school in Ataratiri included free-standing school buildings to provide for individual identity, ease of vertical or horizontal expansion, simple unambiguous maintenance and security arrangements, and phasing according to the School Boards' timelines. Parking was to be located underground to free up surface site areas for other uses; space was identified adjacent to the schools for the location of portable classrooms, unlike the situation in the first school in St. Lawrence where the portables are located several blocks away; and an elevated or sub-grade link must be provided to playgrounds where there is a street between the school and the playgrounds. Hard surface play areas were to be provided for each school and separate entrances provided for both kindergarten and primary students. Play fields were to be shared between schools and with the City's recreational centre on a timetable basis, general purpose rooms were to be used between schools, and enclosed links to the community centre were to provide equal and all-season access to the community centre facilities. Adjacent residential buildings would have grade-related open space in order to provide for observation onto the school yards in the non-school hours.

One of the philosophies guiding the Board of Education in Toronto is that the school should be a focus for the community around it. Thus, the school is located in the centre of the community and community facilities, community recreational activities and libraries are located adjacent to the school to both reinforce the focal point and to provide opportunities for sharing of facilities between the municipality and the Board.

5.2.5 The Railway Lands

Although the Ataratiri project has been cancelled, the experience gained from this exercise assisted in the development of a scheme to provide two schools, a community centre and associated park space and play fields in the CN Railway Lands development. The City of Toronto, CN Real Estate, the Toronto Board of Education and the Metropolitan Separate School Board recently concluded an agreement to provide the required facilities. In this agreement, an estimation has been made of the number of students that will be generated from the housing to be built on the CN lands. The total number of expected students will account for approximately 70% of the capacity of a neighbourhood school. CN will pay a development levy at the time of building permits which will, in total, account for 70% of the cost of the school. This levy for educational purposes is specific to the CN development as the School Boards in Metropolitan Toronto do not have Education Development Charge By-laws and the City of Toronto's development charges have been waived until 1995. Should development charges be introduced in the future, either Educational or Municipal Development Charges, CN lands would be exempt from any such charge.

The developer pays the levies for the cost of the school as development proceeds and this money is accumulated by the Boards of Education. Before a school is built, the School Boards are responsible for the busing costs to transport students to existing schools in the area. Not only will the School Boards benefit from this charge, but so will the Province. In Metropolitan Toronto, the Metropolitan Toronto School Board is responsible for funding the construction of public schools as it receives no provincial funding. However, the Metropolitan Separate School Board normally receives a grant of between 40% and 60% of the cost of new school construction. With CN paying for 70% of the cost of the school on its land and the other 30% being charged to a neighbouring developer, the Province is not required in this instance to contribute its normal amount to the construction of the separate school.

When built, the school will form part of a joint community centre, swimming pool, day-care and educational facility. This joint use of common facilities, such as meeting rooms, cafeteria, gymnasium and ancillary rooms, will save about 18% of the total school floor space that otherwise would have to be constructed in stand-alone facilities. A public library, also paid for by the developer through a building permit time levy, will be adjacent. The land on which these will be built is owned by the City (donated by the developer). While the land is City owned, the school buildings, when constructed, will be owned by the School Boards. The City of Toronto can, if it wishes, build the recreational facilities and/or the library before the construction of the schools. The actual construction of the schools will be dependent upon the level of students generated. There is a guarantee in the agreement that the school will be built by the time that 95% of the total projected school population has been generated by the new development. Should a school not be built after the 95% development level has been reached, all of the funds paid by CN will be reimbursed to CN.

The development levy that is set to build the Railway Lands' school will be indexed to the increase in construction costs. The detailed agreements between the City and the two Boards of Education will not involve the developer. Once the agreement is in place, the detailed negotiations regarding the timing and phasing of construction and the integration of the various facilities amongst the users of the building is not the responsibility of the developer. The developer is responsible for the hard infrastructure costs, while questions of timing, programming, use of facilities, responsibility for operating costs and the programs provided are the responsibility of the public agencies. Having paid the money for the hard costs, the developer is assured that a school will be built to serve the residents of the new community and, if it is not built, that the charges will be reimbursed. Under a City-wide Development Charge By-law, no developer is guaranteed that facilities will, in fact, be built in a location

and at a time which will benefit the community or development which provided the development charge funds.

5.2.6 Conclusion

None of the arrangements discussed above involve construction of a school by a private sector firm. However, in arriving at the cost of the school in the CN lands to be covered by the development charges, the developer was able to point out procedures that reduced the construction cost from $\$103/ft^2$, as originally estimated by the School Board, down to $\$90/ft^2$. In another jurisdiction, the Region of Peel (immediately west of Metropolitan Toronto), where school funding is an even greater problem than in Metropolitan Toronto, a developer had estimated that he could build a new secondary school for about $\$100/ft^2$, while the Peel Board of Education has indicated that its costs at the present time run from $\$100\text{-}\$120/ft^2$. Also, none of the agreements entered into to date by the Boards of Education in Toronto and adjacent areas have included a developer operating and/or maintaining a school facility. These areas may prove fruitful for further investigation in the future as a means of reducing the overall costs of providing educational facilities.

5.3 PITTSBURGH TOWNSHIP - SCHOOLS AND HOUSING

Municipality: Pittsburgh Township

Private sector partner: Daycon Corp.

Public sector partner: Frontenac, Lennox and Addington Roman Catholic Separate School Board.

Nature of partnership: Joint construction of community centre, separate school and seniors housing.

Service provided: Education and recreation.

Why did municipality seek partnership?: Reduce capital costs of constructing a community centre.

Was the partnership successful?: No. Project has not proceeded. Stand-alone school under construction. No community centre.

How was private partner selected?: Developer had access to land with subdivision approval for a school site.

Why did private sector get involved?: Ability to add a senior citizens housing development and to undertake the construction of the project.

Cost savings: Were to have been through joint construction and joint use of a school and a recreation centre.

Downsides: Project involved sole sourcing and negotiations instead of the more normal open tendering process.

Impact on housing: Additional senior citizens housing units would have been constructed. Sharing of educational and municipal facilities would result in lower capital and operating costs.

Lessons learned for future partnerships: All parties must go into such a project with a clear understanding of what benefits are being sought and what costs are involved.

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5.3.1 Introduction

The proposal was described by Nancy Bardecki, the Director of the Municipal Finance Branch of the Ontario Ministry of Municipal Affairs, in her paper, entitled *Current Provincial and Industry Initiatives*. Essentially, the project was to include a municipal community centre, with recreational and day-care facilities, a senior citizens housing building, and a separate elementary school. The construction would take place on a piece of land in a subdivision which had been set aside for school purposes.

5.3.2 The Proposal

The project originated in 1991 when the Township of Pittsburgh began to look for a site for a new recreation centre/community centre complex. At the same time, the Separate School Board was looking for a site for a new school and the two jurisdictions began to discuss a joint facility that would allow the sharing of kitchen facilities, craft shops, gymnasium and meeting rooms. In addition, the school auditorium and library could also be shared with students using the facilities in the day time and the general community utilizing the auditorium as a municipal hall and recreation area in the evening and on weekends.

As the discussions took place, the Planning Department began to float the idea of introducing a senior citizen housing component as part of the development. It was felt that the seniors would be able to take advantage of the facilities in the community centre, auditorium and library, while at the same time the presence of residential units would provide a type of informal security and a 24-hour presence on the site.

A local developer, Daycon Corp., had access to land with a draft approved plan of subdivision which contained a block set aside for a school. He approached the City with the suggestion that this site would be the ideal location for such a joint use project. Moreover, his firm had constructed a seniors accommodation elsewhere, was a general residential commercial and institutional builder, and was anxious to construct the entire project and maintain the seniors housing development. The design solution that was suggested was one which contained a community centre in-between a school at one end and a seniors housing building on the other.

Discussions also took place regarding the financing of the undertaking. One suggestion was that the developer build the facilities and then lease back both the community centre and the school to the respective public bodies. If this were not feasible, the construction could be on a negotiated cost basis with the School Board and the municipality providing the

upfront capital financing. In any case, the sharing of facilities and space, as well as the land area, would permit both the School Board and the municipality to have lower capital costs of construction. Furthermore, with a single design and with construction facilities taking place at the same time, it was felt that there would be savings in both architectural and construction costs. The residential units could either be run as a private sector facility or as a non-profit housing unit.

The School Board was interested in such an undertaking. The provision of central heating and the sharing of parking spaces and some of the recreational facilities could result in a cost savings for the School Board. The developer was interested in designing and building not only the seniors housing and the community centre, but also the school itself. His proposal was that the cost of the school would be less than if the School Board were to construct the school on its own.

Apparently, the staff at the Ontario Ministry of Education were, at first, somewhat reluctant to approve such a mixed use project with no public tendering process. The discussions regarding a building and leasing back arrangement proved not to be fruitful, but a turnkey project with a pre-determined price was acceptable.

According to Mr. Jim Miller, the Commissioner of Planning for Pittsburgh Township, such a mixed use project did not fit into the normal procedures of the Ministry of Education and it was necessary for the Township to persevere up the Ministry of Education hierarchy in order to gain approval for the scheme. Eventually, the Ministry, which is responsible for most of the capital funds for such a project, came on-side and agreed with the concept.

5.3.3 The Results

Near the end of 1992, however, the project began to come apart. Essentially, the School Board began to develop concerns about the non-traditional way that this project was proceeding. It has been the School Board's practice in the past to use an open tender process to obtain the architect and builder of school buildings. The joint use project being considered, however, involved a quite different approach: the developer/builder was already involved due to land ownership and negotiations were then ongoing regarding the cost of the facility and its design. Some lobbying began to take place with School Board members suggesting that they should not proceed with a project that was not open to tender.

From the standpoint of the developer, he would have to guarantee a fixed price for the construction of the building. He wished to keep confidential the various techniques that he would employ to bring the project in at or under budget. He became nervous that the School Board officials would not be able to keep confidential the information that they learned

concerning his development techniques. Moreover, as is often the case in such partnerships, some concern was raised regarding the amount of profit that the developer would make from his involvement in such a negotiated process.

Other problems arose that affected the acceptability of this mixed use project. With a variety of users of the site, the School Board would not be as able to control access to the site and this led to a concern for safety of the children. News reports of access problems at other schools in metropolitan areas did not allay these concerns.

Difficulty was also encountered in pulling together the financial side of the negotiations. Mr. Charles Jefferies, the School Board's Superintendent of Physical Facilities, feels that all of the participants may have started the process with unrealistic expectations of the extent of cost savings. In his view, it would be better in these types of partnerships to accept that costs may not be reduced significantly, but that the benefits arise because of access to use a greatly expanded set of facilities. On the other hand, the downside to gaining use of facilities provided by others is the need to surrender some sovereignty over one's own facilities. This awareness of both the lack of major cost savings and the loss of control only came late in the negotiation process and led to some cooling of support for the whole project.

Another difficulty with such partnerships is the time involved in putting the project together. Until such time as successful models are produced elsewhere in Ontario, each partnership project will have to go through a very time consuming process of determining costs, responsibilities, liabilities, maintenance agreements, use agreements, etc., and those increase the overall time as compared to a more conventional stand-alone project. In the case of Pittsburgh Township, the School Board had determined that the school had to be available in September 1995. As negotiations dragged on and enthusiasm cooled, they eventually had to decide to cut out of the whole process and implement a more traditional design, tender, and build procedure in order to ensure that the September 1995 deadline would be met.

Eventually, the entire project fell apart, the Separate School Board acquired the land from the developer, an architect was retained in the traditional manner, a tender call process was employed, and at the present time a traditional stand-alone elementary school is under construction in Pittsburgh Township. There is no seniors housing being provided, and there is no community centre. Some of the recreational facilities in the school can be used by the public as a result of an agreement that the Planning Department was able to obtain during the site plan negotiations. However, the municipality is still looking for a site in this part of Pittsburgh Township for a community and recreation centre.

5.3.4 Comments

Embarking on a public-private partnership entails the use of non-usual procedures. A certain amount of negotiations must take place and all of the partners must be realistic about the costs and benefits.

The difficulty in Pittsburgh Township was that there was no competitive bid so that comparisons of the costs were not possible. The private sector partner, in this instance, would have been self-selected as he not only owned the land, but was also in the business of designing and constructing buildings. Even if the final cost to the School Board and to the municipality for their facilities was less than they would normally have had to pay for separate stand-alone structures, there would always be a concern that the public bodies were conferring a major financial benefit on one particular landowner.

Timing is critical as negotiations and agreements take more time than traditional stand-alone projects. To avoid disappointments creeping in during the process, sufficient time must be available to resolve conflicts and all partners must be clear, upfront, as to what benefits each hopes to achieve from the partnership and what costs or difficulties each is prepared to pay to gain those benefits.

PUBLIC - PRIVATE PARTNERSHIPS

RICHMOND ICE CENTRE

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5.4 RICHMOND ICE CENTRE

Municipality: Richmond, British Columbia

Private sector partner: Riverside Business Park Incorporated

Nature of partnership: Build and lease.

Service provided: Municipal arena.

Why did municipality seek partnership?: Needed to build an arena but lacked land and money.

Was partnership successful?: Arena built and being operating by the City.

How was private partner selected?: Landowner targeted the City as a potential client.

Why did private sector get involved?: Arena would attract tenants to adjacent industrial land owned by the private sector partner.

Savings: City did not have to use city-owned land, no upfront capital costs, built five years faster, and with twice the capacity.

Downside: At end of lease, City may lose ice surfaces.

Impact on housing: Reduces need for upfront capital (lowers development related charges), but replaces this by an ongoing tax supported lease cost.

Lessons learned: Need to respect differences in value base between public and private sectors (need to look at both sides); should decide beforehand which principles and practices are not negotiable and which might be; need to be able to react at a much faster speed than usual for government; need for openness to new ideas and operational models; should define "City standards" in facility design beforehand.

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5.4.1 Background

In January 1993, City Council adopted a report from the City Wide Facility Task Force (made up of community members, City Councillors, and staff) that the first priority for new recreation facilities in the City was an Aquatic/Arena complex and that a referendum should be held in the fall of 1993 requesting permission from the electorate to borrow the money necessary to build such a complex. The complex would house an aquatic centre and two ice surfaces with the land and facility capacity to be expanded to four ice surfaces should demand dictate in the future.

One of the dilemmas for Council was where to locate the proposed facility since the land needed for the original complex plus expansion and parking was approximately 14 acres. Another was the $30 million price tag and voters' growing displeasure with increased taxes.

Several proposals had been received in the past from private companies proposing to build ice arenas in the City, always using City owned land. The proposals included private sector operation and a guaranteed amount of ice time leased by the City for youth sports. However, in June of 1993, as the City was preparing for the fall referendum, Riverside Business Park Inc. approached the City with a different proposal.

5.4.2 The Solution

The developer owned a large tract (35 acres) of industrially zoned land in the eastern part of the City. He wanted an anchor tenant that would help attract other tenants to the proposed Business Park. He would build, to City standards, a four-rink complex on his land, and lease it to the City as a turn-key operation. The City had the option to sublease to a community organization.

The facility would contain four ice surfaces, four team rooms, two change rooms per rink, concession area, skate rental and skate sharpening area, pro shop, administrative offices, first aid room, public washrooms, bleacher seating for 480 people, and a pub and viewing lounge for 200. In return, the developer asked for lease payments of $1,022,000 (plus GST) per year from the City for the first five years with consumer price index increases thereafter, and a twenty-five year lease. Upon agreement by Council and a signed lease of ten years, a referendum was held to gain voter approval to enter into a twenty-five year lease, and this was approved.

The City gained a much needed ice arena at least five years earlier than if the City had built the facility and an increase of two ice surfaces over what was originally proposed. In addition, they did not have to use City property in order to build it.

The City has set up an operating agreement with a non-profit association, the Richmond Arenas Community Association, to operating the new complex and the old arena complex of two ice surfaces. The agreement is

5.4.3 Operating Agreement

for the Association to return to the City 100% of the costs and expenses incurred by the City associated with the operation of the arenas, and the City will pay the yearly lease costs. The Association will retain the first $25,000 in net profit annually, and any profit above that will be split 25% to the Association and 75% to the City. The City's portion will be put into a replacement facility fund so that at the end of the lease the City could have the money to build a new facility, or buy the existing one, or continue to lease it.

5.4.4 Principles

In order for the Arenas Association to return 100% of the operating costs incurred by the City, the focus for the community group changed from one of primarily service to one of primarily revenue generation. The major changes to past revenue practices include increased user fees, liquor sales, and advertising.

From a City point of view, several principles were compromised: City ownership of public facilities and public process in facility design (although indirectly all of the arena user groups had significant input into the details of the design). There were principles that were deemed important to conserve: physical accessibility requirements, and the ability to have a community organization actually operate the facility. Both of these were maintained in this agreement.

5.4.5 Comments

The City has gained four much needed sheets of ice on privately owned land with no capital costs. The developer has gained an anchor tenant for his business park with a guaranteed twenty-five year lease. Financial projections show it is a beneficial arrangement for both parties.

From its experience, the City would recommend that any municipality contemplating such an arrangement should hire a project manager to spend time, before the deal is signed, to clarify details, expectations, etc., and to be prepared to spend tim on ongoing details during project development. This would minimize the amount of retrofitting necessary in the next several years. For this project, the "project managing" fell to the current Arena Coordinator, along with his regular full-time duties. Hiring of the architect should ideally be done jointly. In this project, the developer's regular architect was used with apparent little experience with arenas.

The timing of this project was good: it was built quickly in a time of need. The demand for ice time was growing and the new facility could capture the need. Also, it was built and operating before other communities built new facilities, so this arena could capitalize financially on a lack of ice time in surrounding municipalities.

The developer was a willing, amenable partner. Firstly, he approached the City for the project. Secondly, his objective was greater than just building the arena. He gained an anchor tenant, on a guaranteed long term lease,

for his business park with which to attract other tenants and increase his business attractiveness.

5.5 RICHMOND SOCCER PITCH

Municipality: Richmond, British Columbia

Private sector partner: Honda Corporation of Canada.

Nature of partnership: Build and operate.

Services provided: Soccer pitch and playfield.

Why did municipality seek partnership?: Municipality needed more soccer pitches to accommodate growing population in a specific area.

Was partnership successful?: Soccer pitch, playfield and ball diamond provided.

How was private partner selected?: Owns the land.

Why did private sector partner get involved?: Wanted to provide recreational opportunities for employees and pay lower assessed taxes on land until needed for business expansion.

Savings: Construction costs of approximately $135,000 (1984), no land costs during period of use.

Downside: None to date. When Honda requires the land to expand, the loss of one all-weather sand field will pose some adjustments for scheduling. However, this field will have served the community during a period of growth in participation. The City has increased its component of sand fields and the loss of one field could be overcome.

Impact on housing: Reduces need for upfront capital, but replaces this by less annual tax receipts.

Lessons learned: Cost analysis of the options available for such arrangements need to be done early in the negotiation stage; be clear on what the objectives are before proceeding to in-depth negotiations.

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PUBLIC - PRIVATE PARTNERSHIPS

RICHMOND SOCCER PITCH

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5.5.1 Background

At the opening of a new Honda warehouse complex in the spring of 1984, the owner mentioned to the Mayor that they were planning to build a soccer pitch for the use of their employees on a portion of their site and perhaps there was an opportunity to gain some community use from it.

5.5.2 Negotiated Solution

The area is located in a warehouse area of the City, away from residential neighbourhoods. The initial proposal from Honda to provide a regular grass soccer pitch on 2.62 acres of land was of no interest to the City as it would become unplayable during the winter months. After negotiation, the company agreed to install an all-weather sand field, complete with drainage and irrigation, at a cost to them of approximately $135,000. The City agreed to assume all maintenance cost (approximately $6,000 per year), assume liability for community use, allocate the field to community groups on the same basis as other facilities (giving Honda employees first priority), and support a reassessment of the property for tax purposes from "industrial" to "seasonal recreational". Subsequent discussions resulted in an additional 3.63 acres being put into a practice playfield and a ball diamond which the City also maintains and allocates. The agreement can be cancelled upon 90 days notice by either party. It should be noted that the City received full development fees on the warehouse development resulting in no loss to the City for parkland acquisition.

5.5.3 Total Contribution and Benefits

The total cost to the company was approximately $135,000 to build the fields. In return, they have received a tax break (approximately $17,000 per year in 1984) on a parcel of land that they are saving for future expansion, as well as the good will that goes with good corporate citizenship.

The cost to the City is the cost of maintenance (approximately $6,000 per year), and the loss of tax revenue. In return, the City has had the use of an all-weather sand field, practice field and a ball diamond since 1985 on property they do not own and for which they did not pay capital costs. The field was built during a period of rapid residential growth within the community and specifically growth in participation in soccer, a time when the City was unable to build facilities in the area at a pace that would accommodate this growth. During the past several years, the City has built a number of all-weather soccer pitches. If Honda gave notice of reclaiming the land, the loss of a field, while it would pose some difficulties, could be accommodated.

As a result of this project, another company entered into a similar arrangement building a playfield, two tennis courts, and parking stalls. The cost to the Delf Company was approximately $60,000. Since it was adjacent to the Honda facilities, the maintenance costs for the new facilities were minimized.

5.5.4 Conclusion

The facilities are located in an area of the City away from residential units making them ideal for adult level play and available for the use of workers. At the same time, they provide some community facilities for the growing residential community adjacent to the industrial area which, until recently, could not be provided by the City.

These two projects were of tremendous benefit to an area of the City which was poorly served in terms of outdoor playfields and tennis courts. This partnership allowed the City, at very little expense, to provide residents in the area with these facilities, while the City acquires land elsewhere over time to create permanent public amenities.

Cost analysis of the options available for such arrangements needs to be done early in the negotiation stage. In this case, the City could have asked Honda to absorb the costs of both building and maintaining the playfields as the tax savings over the past ten years of the agreement would have easily covered both costs.

5.6 ALBERTA HIGHWAY 14 WATER DISTRIBUTION PROJECT

Municipalities: Towns of Tofield and Viking; Villages of Ryley and Holden; and Counties of Strathcona and Beaver, with membership on Highway 14 Regional Water Services Commission.

Private sector partner: CU (Canadian Utilities) Water Ltd.

Nature of partnership: Design, construct, own and operate.

Service: Water supply system.

Why did municipality seek partnership?: Debt burden on municipalities too large in order to provide improved water quality and assured supply.

Was partnership successful?: Following two years of negotiations and three months of construction, 68 km of transmission pipeline was commissioned in August 1992.

How was partner selected?: CU Water Ltd. made proposal to Commission.

Why did private sector partner get involved?: Private partner has 80 year history in natural gas production and distribution and in electrical power generation and distribution; the skills and systems are transferrable to the supply and distribution of piped, potable water; and Canadian Utilities (parent firm) owns right-of-way from Edmonton to Viking.

Savings and/or accelerated activities: Municipalities could not have managed the debt load either alone or together. Having a high quality and dependable water supply makes future residential or commercial/industrial development feasible/ attractive.

Downsides: Water costs are double previous rates (but water quality and availability are benefits). Water rates in adjacent areas are 40% to 60% less where provincial capital grants funded all/most of the systems.

Impact on housing: Area more attractive to potential house buyers; and limits to growth due to inadequate water supply have been eliminated. Reduced municipal upfront capital requirements, while increasing ongoing water supply costs.

Lessons learned: Regional supply of water services provides cost savings from economies of scale, feasibility of undertaking may lie in a strategic advantage (in this case, the private partner owned the right-of-way, avoiding costly and protracted efforts to obtain easements).

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This project was previously described in: a conference paper *Highway 14 - A Case History* presented by Suzanne Bowden, Canadian Utilities Ltd., undated; *Infrastructure*, Price Waterhouse Jan. 1993, No. 2; and *Innovative Infrastructure Financing: Case Study - Municipal/Regional Water Supply*, Canadian Construction Association, undated.

5.6.1 Water Supply and Quality Problems

Several communities to the east of Edmonton had experienced water supply and/or quality problems. For example, the Town of Tofield's water treatment plant required major upgrading in order to meet safe drinking water standards. The Village of Ryley faced serious water shortages and quality problems in that the raw water source was contaminated by agricultural infiltration. Throughout the area country residential subdivisions and farm residences experienced very poor quality water from wells.

The local governments of six municipalities: the Counties of Strathcona and Beaver, the Towns of Tofield and Viking, and the Villages of Ryley and Holden, in the Highway 14 area to the east of Edmonton had been in discussions for several years regarding the formation of a regional water commission and established the Highway 14 Regional Water Services Commission in July 1990. This Commission had the objective of sourcing water from the City of Edmonton and building a pipeline to Tofield and Ryley, with capacity to eventually reach Viking which would need an improved water supply in the near future.

The cost of building facilities to meet the communities' needs was high. For example, a water treatment plant to service only the Town of Tofield had been estimated by municipal officials to cost $5 million.

The capital cost of the proposed pipeline would require that each municipality borrow a substantial sum of money. Each municipality differed with respect to its borrowing capacity; the debt would be a significant burden to them all; and there were concerns that local opposition would be encountered from residents not in the immediate vicinity of the pipeline who would not be beneficiaries of the new service.

5.6.2 Supply and Distribution Solution

Canadian Utilities has an 80 year history in Alberta in natural gas production and distribution and in electrical power generation and distribution. The company has a gas franchise in the County of Strathcona and bills customers directly. For several years, the company had also been reading household water meters and billing the County's water customers as well as handling the gas meter reading and billing activities. The combination of services saved the County the expense of meter reading and allowed it to delay the installation of a new computer and billing program.

For its part, Canadian Utilities Limited considered its gas and electrical power experience would be directly transferrable to the skills and systems necessary to provide piped, potable water. The firm considered itself rich in resources of equipment, emergency response procedures, customer information systems, customer billing systems, fixed asset accounting, and policies and procedures. The firm was clearly interested in establishing a regional water system in the same way that it provides gas and electrical power on a regional basis. The regional approach allows the distribution of capital costs inputs to be spread over a large customer base.

Canadian Utilities approached both the Government of Alberta and the Highway 14 Water Commission to seek permission for CU Water Ltd. to undertake the project to supply and distribute water.

In the Highway 14 area, Canadian Utilities owns a right-of-way from Edmonton to the Town of Viking. This provided the company with a major advantage. It provided a simple alternative to the time consuming and likely expensive effort to obtain easements from multiple individual owners along alternate routes. Because Canadian Utilities already owned its land, it would be relatively easy to design and install another pipeline in the right-of-way. In addition there would likely be substantial time savings. Indeed the 68 km long pipeline was built by CU Water Ltd. in three months.

The capital cost of the pipeline was $12 million. The Province of Alberta provided capital grants of $4.9 million under an existing municipal water and waste water program. The amount of the grant is based on the dollar value of the project, and the funds available for such infrastructure. From year to year, the amount of a grant can fluctuate. The grant is not repayable to the Province.

The member communities of the Commission could have received the $4.9 million grant themselves. However, some of the Commission members concluded that they could not manage the debt load if they built the system themselves. The Commission decided, therefore, to enter into the agreement with CU Water. It should be noted that the Commission is set up as a limited company, so that the borrowing power of individual municipalities is not jeopardized.

CU Water provided the remaining $7.1 million in funding and agreed to design, construct, own, operate and maintain the water supply system. There are water supply agreements with the municipalities that operate their own water distribution systems. Special franchise agreements exist with some of the municipalities that wish to have the company own and operate the distribution system within all or a portion of those municipalities.

These agreements constrain the member municipalities from setting up a competing system during the lifetime of the agreement. However, truck operators can provide water to individual customers who choose not to subscribe to the CU Water service.

By the end of 1992, about 1,000 households were served by the system. Agreements with the member municipalities have been tailored to suit their particular needs. Under the agreements, the company:

- provides wholesale water to the Town of Tofield;
- owns and operates the distribution system and distributes water directly to households in the Village of Ryley;
- distributes water to rural residences within proximity of the transmission pipeline in designated rural franchise territories in the Counties of Beaver and Strathcona; and
- operates a major truck fill station with four fill bays to serve commercial water haulers in the area.

The pipeline was constructed with sufficient additional capacity to service the future needs of other communities located along Highway 14 such as the Town of Viking and the Village of Holden.

Although both are part of the Commission, additional funding would be required in order to expand the facilities for their use.

Customers pay user fees to CU Water Limited. Water rates are set out in the agreement between the Commission and the company, but in any event are regulated by the Public Utilities Board (PUB) of Alberta which also controls service regulations and operating procedures. CU Water is presently engaged in a General Rate Application (GRA) process to get new rates.

Under the terms of the agreement, Strathcona County buys water from the City of Edmonton (currently at a rate of $\$0.40/m^3$) and sells it to the Highway 14 Regional Water Services Commission (for an additional $\$0.115/m^3$). The Commission in turn sells the water to CU Water (with an additional mark-up of approximately $\$0.065/m^3$). The total sale price is $\$0.58/m^3$. But there is also a transmission charge payable bringing the total cost to the consumer to approximately $\$2.00/m^3$. All customers are charged at the same rate regardless of their location along the system.

The rate base includes debt cost (interest only), depreciation (from 25 to 60 years) and return on equity. The amortization period is not considered in setting the rate.

The agreement sets out annual quantities of water which the Commission will supply to CU Water for transmission to its customers. If the consumption of water is less than anticipated, resulting in a revenue shortfall, CU Water absorbs the loss. However, the company can apply for rate adjustments in subsequent years (perhaps 20% to 40%).

Under the terms of the agreement, CU Water will supply water for a 25-year period and will generate revenues through user charges to individual customers. The Commission can terminate the agreement after 15 years with a 10 year notice, i.e. a 25 year term. CU Water can terminate the agreement after 15 years with a 5 year notice period, i.e. 20 year term. The agreement is automatically renewed every 5 years if neither party chooses to terminate it.

A buy back provision enables the Commission to purchase the system at years 15, 20 and 25, subject to a five year notice. The buy back cost would be net book value after 20 years. Any buy back agreement would have to deal with the fact that the transmission line runs within lands owned by Canadian Utilities.

5.6.3 Commentary

A number of benefits and impacts have been observed.

Canadian Utilities Limited, a major utility company, was able to finance its $7.1 million share of the project from internal sources. This obviated the requirement for the member municipalities to support the required level of borrowing had they undertaken the project themselves.

Canadian Utilities' ownership of the right-of-way in fee simple from Edmonton to the Town of Viking provided a major advantage in construction costs and timing. As the company already owned the land, it was relatively easy to design and install another pipeline in the right-of-way. Alternatives would have required easements across numerous private properties.

The experience of Canadian Utilities in the supply and distribution of regional utility services is, in the firm's opinion, transferrable to the supply and distribution of piped, potable water. Existing in-house expertise in all aspects of construction management and operation provided it with distinct advantages in this application.

There is a cost, however, to the residents. Water rates for the residents of Tofield and Ryley have doubled.

Tofield had the alternative of building a new $5 million water treatment plant. In that case, water rates would have been doubled or else the town would have had to raise taxes in order to improve the water supply. It was evident that costs to residents of Tofield would increase under any scenario.

About 4,000 persons in the vicinity of the pipeline now have access to high quality water that they would not have otherwise.

During the two year negotiation process leading to the public-private agreement, many public meetings, open houses and forums were held. For example, residents were given the opportunity to bring their water bills to meetings at which company officials would calculate the new bill based upon the proposed rate increases. The Town of Tofield held a plebiscite to give the residents the choice between the proposed pipeline or the town building its own water treatment plant. With a voter turnout of 75%, the pipeline was endorsed by a margin of 3 to 1.

After one year of operation, Canadian Utilities Water Limited felt that existing customers were satisfied. The high water rates continue, however, to be a problem in gaining additional rural customers along the pipeline. Existing farms or acreage owners continue to use their wells, even if the water quality is poor because well water is perceived to be "free". According to the company this degree of resistance was fully anticipated. The firm anticipates that these reluctant potential customers will subscribe to the service over a 5-10 year period as well pumps and infrastructure require service and replacement.

There appears to be some perception that access to dependable qualities of good water will have the effect also of opening up commercial and residential development opportunities when lots are connected to the convenience of "city water".

Canadian Utilities Water Limited has reported that when the truck fill station opened early in 1993 there was a boycott from commercial water haulers. Their grievance was that the pipeline would bring piped water to acreages and put the truckers out of business as residences would no longer require trucked water to fill their cisterns. While piped water is expensive,

it is competitive with the cost of trucked water, so the water haulers have had to maintain, or in some cases, lower their rates in order to retain customers. While this does not create new piped water customers, Canadian Utilities Water Limited argues that alternatives and competition are good for consumers.

The company is continuing its negotiations with certain members of the water commission. The firm would like to serve additional markets from its piped water supply, but is currently restricted due to the franchise area agreements. Canadian Utilities Water Limited argues that restrictions on the market area are felt by current customers because the firm cannot accumulate the customers necessary to lower the price for everyone through economies of scale.

While customers are apparently pleased with the supply and quality of water, there is an issue of fairness and water pricing between the privately supported Highway 14 project and neighbouring publicly funded water projects. Water facilities in nearby communities were funded at an earlier time almost exclusively through provincial grants. As a result, these communities charge only 40% to 60% of the rates charged to users under the Highway 14 project.

The Commission operates with two representatives from each of the six member municipalities, appointed by their respective Council. No additional staff are required by the Commission because CU Water operates the system. There is a consequent cost savings to the municipalities which do not, therefore, require additional operations staff. However, there are ongoing administrative costs associated with resolution of conflicting interpretations of the agreement.

As described above, there is a buy-back arrangement included in the agreement between the Commission and CU Water. However, the water transmission line is in the right-of-way owned by Canadian Utilities. This would surely complicate any effort to execute a buy-back. Additionally, a buy-back would likely have to be financed through municipal borrowing, the very reason the Commission originally entered into its water supply agreement with CU Water. The prospects of a buy-back in this situation do not appear strong.

5.7 NOVA SCOTIA SCHOOLS

Municipality: Sydney, Nova Scotia

Private sector partners: Proposals being reviewed.

Nature of partnership: Design, construction, ownership and operation.

Service provided: Education (a Life Long Learning Centre).

Why did municipality seek partnership?: Financial assistance and need for innovative design and operating solutions.

Was partnership successful?: Significant interest shown by private sector in the call for proposals; innovative design displayed in plans.

How was the private partner selected?: A three-stage proposal call process.

Why did private sector get involved?: Already engaged in the business of carrying out many of the functions required: building design, building construction, building maintenance, and supply of computer equipment.

Savings and/or accelerated activities: Not yet determined.

Downside: Union concerns regarding possible loss of jobs and public concern with private sector profit making.

Impact on housing: Housing supply not directly affected. The proposal reduces government capital requirements and replaces them by ongoing lease payments.

Lesson learned: A multi-faceted proposal call involving a variety of different private sector disciplines provides the opportunity to structure a multi-phase and long term partnership.

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5.7.1 Background

The Nova Scotia Department of Education is in charge of a proposal to involve the private sector in the design, construction, financing and operation of schools in the Province. The department realizes that it is necessary to constantly change the way in which "learning" is viewed in order to meet the educational needs of the future. Technological developments influence both what is taught and how it is taught. Not only

must technology include the use of computers in schools, but there must be a greater emphasis on networking of these computers with outside sources. Students today must be trained to take advantage of the information highway of the future. In addition, buildings must be designed to provide for a variety of teaching and technological functions and must be able to adapt and be adapted to changing requirements during their lifetime.

This need for creativity in the approach to learning is taking place at the same time as the province's education budget, in real terms, continues to shrink. New and innovative ways must be found to accomplish the objectives of the Department of Education. Such processes will involve all levels of government and the participation of the private sector.

The Department of Education, therefore, put out a call for Expressions of Interest for individual firms or group of firms to design, construct, finance and operate a technologically advanced 600 student junior high school in Cape Breton. All proposals must also include a solution to keep the technology current over the life of any agreement.

5.7.2 Expressions of Interest

Mr. Douglas Nauss, the Executive Director of Finance and Operations for the Nova Scotia Department of Education, indicated that the Cape Breton school is the first of three schools for which the Nova Scotia government is going to involve the private sector. The second school will be an elementary school in Halifax County, while the third will be a high school in King's County. The latter school will also contain facilities for Acadia University and their Living Laboratory and Job Shadow programs.

With regards to the Life Long Learning Centre in Sydney, 17 Expressions of Interest were received. The 17 were reduced to 3 applications, all of which contain computer firms, such as IBM, Apple, Digital; architectural firms; construction companies; and property management firms. In all cases, the private sector will finance the school construction and will design it to incorporate the requirements of the Ministry of Education. Once constructed, the private consortium would continue to operate the school and to be responsible for maintenance and the provision of a capital improvement sinking fund over the life of the contract. The consortium will receive an annual lease payment from the Nova Scotia Department of Education, while the costs of teachers salaries and school supplies will be born by the local school board. The question of whether the consortium will be exempt from property taxes is presently being negotiated.

In reviewing the 17 Expressions of Interest, it was noted that the designs of the schools were of a higher quality and much more innovative than the traditional design of schools in the Province. For a number of years now, the design of all schools in Nova Scotia has been under the direction of the Department of Supply and Services and there has not been the extent of innovation that one might have expected or hoped for.

5.7.3 Stage Two of the Proposal Process

Once the three groups had been short listed from the seventeen submissions of Stage 1, the Nova Scotia Department of Education provided a more detailed outline of its concerns and of the matters that should be covered in a more detailed proposal for the Life Long Learning Centre.

The Department of Education indicated that it is looking for cooperation and team work from academic, community, political and business leaders to ensure the availability and accessibility of diverse and multi-disciplinary training, now and for the future. Teachers and students must have the necessary facilities, enhanced with classroom aids and technologies, to connect with databases and library resources to allow for the sharing of information and the facilitation of open communications. The Learning Centre must not only provide an environment that encourages children to be creative and competitive, but must also provide access and curriculum for all citizens.

Questions to be addressed in Stage 2 of the proposal include:

- What are the current and projected educational needs, and how will the proposed facility meet them?
- How will the solution be financed, and how will this benefit the Province of Nova Scotia?
- A turnkey solution should be provided in sufficient detail in order to determine the total cost of the project over the life of the agreement.
- What experience do you have with the design and construction of educational facilities, and what innovative ideas would you include in the design of a modern Life Long Learning Centre?
- How will you ensure that the computer technology provided stays current, is cost effective, and enhances the learning opportunity of students and the community, and how would you propose to finance this component of the submission?
- How would one ensure that teachers are trained and keep current on computer technology and software?
- How will the Learning Centre support community facilities?
- Break down your costs into design cost, construction cost, technology cost, operating cost and administration cost.

The Department of Education will evaluate the detailed proposals utilizing criteria which include:

- Vision of education.
- Schematic design.
- Application of technology.
- Detailed financing approach.

5.7.4 Roles and Responsibilities

The Cape Breton District School Board will be responsible for determining which students and staff will attend the school, the delivery of the instructional programs, professional development of staff, and the provision of day-to-day instructional supplies. The Board may also veto the lease of space within the complex to tenants which the Board determines are not appropriate within an educational setting. This veto right will be in accordance with any agreement that is reached among the vendor, the Department of Education and the Cape Breton District School Board.

The Department of Education will be responsible for establishing goals, learning outcomes and expectations; determining and defining programs to be offered; developing provincial policy; and allocating resources to the School Board.

The vendor is responsible to design, build, finance and lease the Centre to the satisfaction of the Department of Education and the Cape Breton District School Board. The vendor must provide a "turnkey" solution to meet the physical needs of the 600 junior high students who will attend the facility, and for enhancing the delivery of the curriculum so that the potential of technology enrichment is used to the greatest advantage within the Department and Board constraints. The vendor is also responsible for keeping the technology in the Centre current over the life of the agreement, and to maintain the building and provide maintenance and janitorial services.

5.7.5 Evaluation

The Nova Scotia Department of Education has recognized that innovation in the design and delivery of educational services is necessary if the students of such an educational system are going to be able to participate fully in the computer-rich environment of the 21st century. As far as possible, the Department of Education has laid out its requirements for an educational system, i.e. a student- and community-oriented facility which will provide life long learning, and has then left it up to the private sector proponents to design the type of facility that will meet these requirements.

The benefit of the integrated approach is that it maximizes the opportunities for innovation. Rather than specifying the type of building,

from an operational standpoint, that an architect must design, the Department of Education has opened up a system where possible conflicts between design, construction costs and maintenance efficiencies are traded off within the private sector consortium. Whether the consortium is innovative and cost effective in any one area of design, construction or maintenance, and more costly in another segment is irrelevant in the long run, as it is the total package that will be evaluated.

Moreover, the Education Department has left it up to the inventiveness of the private sector to determine a technique to supply and maintain an up-to-date computer system in the school over the life of the agreement. The type of equipment, its configuration, the number of units, the space required to house this equipment, the techniques to build in a wiring system that can adapt to changing technological demands, and the technique of constantly upgrading hardware and software have been left up to the proponents. The suppliers of equipment, in turn, have had to ensure that their needs are incorporated in with the design and maintenance requirements for the facility as a whole.

At this point in time (December 1994), the Nova Scotia Department of Education has not selected the successful proponent. Moreover, Phase 3 of the process will require the successful proponent to prepare a detailed design solution and to finalize the budget for the project. Detailed agreements will then need to be signed between the proponent and the Department of Education and the Cape Breton District School Board before the building is built and put into operation. It will, therefore, be a number of years before this project can be evaluated both as to its possible cost savings in construction and maintenance, and also in regard to its design ability to reflect and adapt to changing technological requirements.

5.8 SCARBOROUGH PUBLIC LIBRARY

Municipality: Scarborough, Ontario

Private sector partner: Tridel, operating as Sumeru Construction Inc., and Mundet Limited.

Nature of partnership: Private financing.

Service provided: Library.

Why did municipality seek partnership?: Need to acquire land for a new library and desire for financial assistance in the library construction cost.

Was partnership successful?: Land was acquired for free; library was built and is operating, and Library Board cost was reduced.

How was private partner selected?: Private partner owned land in the area where a library was required.

Why did private sector get involved?: Private sector wished an increase in density to permit the development of apartments and library assistance was a condition of approval.

Savings and/or accelerated activities: Library Board acquired land for free and received a contribution of $500,000; housing built on previously institutionally zoned land.

Downside: From public standpoint, none.

Impact on housing: $500,000 contribution to the library cost approximately $450/dwelling unit; on the other hand, 1,112 dwelling units were approved for construction that would not otherwise have been approved.

Lessons learned: In the absence of development charges, municipalities can successfully negotiate for specific public benefits as a condition of granting higher residential densities.

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PUBLIC - PRIVATE PARTNERSHIPS

SCARBOROUGH: PUBLIC LIBRARY

IBI GROUP

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5.8.1 Background

In 1987, the condominium apartment developer, Tridel, operating as Sumeru Construction Inc., along with Mundet Industries Limited, the owner of the land, applied to the City of Scarborough, Ontario to amend the Official Plan and to rezone a 7.5 hectare (19 acres) piece of land so as to permit the development of 1,112 dwelling units plus 13,989 m^2 (150,500 ft^2) of commercial and office space. The land is situated between an existing shopping centre, the Agincourt Mall, and the municipally-owned Tam O'Shanter golf course and, at one time, all of this land including the golf course had been in private ownership. After the sale of the golf course to the Municipality of Metropolitan Toronto, the remaining private area of land continued to be designated for "institutional-recreational" uses. The site, however, is also within an area designated as an "Intermediate Centre" in the Scarborough Official Plan, wherein the Council's policies are to encourage the intensification of office, retail and residential activities. The zoning on the site was for a number of specific institutional and recreational uses.

5.8.2 Library Site Required

As part of the preliminary discussions with City officials, it became apparent to the Scarborough planners that the Scarborough Public Library Board was searching for a site for a new library in north-west Scarborough, and that a location close to the Kennedy Road and Sheppard Avenue intersection was the preferred location. This is the intersection at which the existing Agincourt Mall is located. The Library Board had found very few available sites that would be appropriate for a library, and those that they had found ranged from a cost of $500,000 to $950,000 with the cheaper sites located over 1½ miles from the preferred location. With the approval of the Tridel application, there would be over 1,000 new dwelling units in the area and the need for a library in this general location would be increased. At the same time, a location for the library somewhere in the proposed development would be ideal for the Library Board. It was, therefore, decided that a provision of land for the construction of the new library could and should be made a condition of the requested rezoning and Official Plan amendment to permit apartments.

5.8.3 Density Increase Levy

At that time, the City of Scarborough did not have a consistent policy for charging developers for the cost of community facilities and had not passed any Development Charges By-laws. While specific charges were in place for sewer and water hook-up and the Council had recently passed a $400/dwelling unit parks development levy, other social benefits were, as a matter of practice, negotiated with developers as a condition of granting a higher density. The then Section 36 of the Ontario Planning Act permitted

municipalities, in return for increasing residential densities, to require the provision of facilities considered appropriate by Council. These facilities could include such matters as landscaping, road improvements, day-care facilities, libraries and other facilities which, from time to time, were identified as being required.

In the final agreement, Tridel agreed to transfer to the Library Board a piece of land of 1,200 m^2 in size, approximately ¼ acre. On this site, the Library Board would construct a library of 2,323 m^2, or 25,000 ft^2 of gross floor area. The exact value of this land is difficult to determine, but it should be compared to prices of between $500,000 and $950,000 that had been quoted for other lands that the Library Board was examining. In addition, the developer agreed to provide a cash payment of $500,000 which would be used as a contribution to the cost of the library building. The developer had also agreed to the construction or funding of a 76 child day-care centre, improvements to driveways and drop-offs at the adjacent public school, improvements to the adjacent Tam O'Shanter Park, construction or funding of 10 tennis courts, including clubhouse facilities for public use within the park, construction of a local street extension including pavers and street furniture, and the construction or funding of street tree planting along the local adjacent street. In the end, the developer agreed to a cash contribution of $1.6 million to the City for the provision of community facilities and services as to be determined by Council.

5.8.4 Total Contribution

Thus, a total cost to the developer includes the value of the land dedicated for the library, worth perhaps $300,000 to $450,000; the $500,000 contribution to the library, the $1.6 million total contribution for a variety of community facilities, and approximately $450,000 for the parks development fee, for a total of between $2.85 and $3.0 million. The estimate of the land cost is based on discussions with planners involved in the project and relates to the additional units which could have been built had the land not been given over for the library. At 60 units per acre, a one-quarter of an acre site could support 15 units and a land price per unit of $20,000 to $30,000 would result in a total value of $300,000 to $450,000 for the land. For comparison purposes, now that Scarborough has a Development Charge By-law, the total charge for all growth-related facilities is $2,616 per apartment unit, and $4,044 for each townhouse unit. Thus, the 1,085 apartment units and 27 townhouses of this development would have resulted in a development charge of approximately $2.95 million.

5.8.5 A Negotiated Solution

As a result of the negotiations which took place for this development, which included not only City planning staff but also the local member of Council and the local adjacent residential community, a mutually satisfactory agreement was arrived at. This agreement provided not only community benefits, but also traffic control measures which would prevent through traffic from flowing through the neighbouring community. Because of the agreement, there was no appeal of the Council decision to the Ontario Municipal Board. In Ontario, appeals to the Ontario Municipal Board (OMB) can result in a delay of between 6 months and a year for any development and these hearings also can incur, for the developer, legal and planning fees of approximately $500,000. Thus, being able to satisfy community concerns through negotiations saves the developer these additional costs.

In this example, the developer was able to begin construction of the first phase of the housing development and was able to get these units on the market in Toronto before the housing market cooled down in the early 1990's. Other developments in Scarborough (for example, adjacent to the Scarborough City Centre) which were approved by Council at approximately the same time but which were subject to the delays of an OMB hearing have not yet started construction, even though they were approved by the OMB.

At the present time (late 1994), approximately half of the total permitted dwelling units have been constructed and are occupied, the next phase is under construction, and the Agincourt Public Library has been built and is now in operation serving the residents of north-west Scarborough, including those living in the Tridel development. The total cost of the library was approximately $3.5 million for the building plus an additional $1.5 million for internal work and computer equipment. Thus, the $500,000 contribution by the developer provided 10% of the total cost of constructing the Agincourt Library.

From the developer's standpoint, the total contributions through negotiations are approximately the same as would now be required under the Scarborough Development Charges By-law. From the developer's perspective, there are both benefits and costs of the development charges approach. Because the charges have been pre-determined, there is more certainty as to what the ultimate cost will be. This certainty reduces the time necessary to carry out protracted negotiations with the community and the planning staff regarding proposed developments. On the other hand, the payment of development charges does not guarantee that the specific facilities that would serve the new development are, in fact, built at the time that the development is built. Negotiations regarding recreational facilities, tree planting and library provisions ensure that these facilities are constructed adjacent to the development and benefit not only the existing community, but the new residents. Additionally, it is still too early to tell

whether the development charges approach, by removing direct negotiations with the adjacent community, might also remove the sense of satisfaction that the community may have in ensuring that benefits are provided in their community and to their satisfaction. Without this sense of participation in the ultimate development, there may, in future, be more appeals to the Ontario Municipal Board which will, in turn, increase the costs of development.

The design of the library was coordinated with the design of both the new housing development and the proposed expansion of the adjacent shopping centre. At the present time, the retail-commercial expansion has not taken place and the shopping centre owner has leased a segment of the parking lot to the Library Board for $1 a year to provide for parking for library patrons. By leasing this land, the shopping centre owner does not have to pay business tax and the realty tax is reduced as the land is assessed at a residential as opposed to a commercial rate. Eventually, this land will be required for the expansion of the shopping centre and at that time the library will share its parking needs with those of the shopping centre itself. Thus, the original development agreement has been followed by operating agreements which are designed to ensure the integration of retail facilities, library, housing and recreational facilities into one coordinated development.

5.9 WATERLOO REGION ROADS

Municipality: Region of Waterloo

Private sector partners: ICI Realty Developments Inc. and other residential subdividers.

Nature of partnership: Private financing.

Service provided: Regional roads.

Why did municipality seek partnership?: Road construction not scheduled until 1999-2001, and no funds to construct earlier.

Was partnership successful?: Road construction is presently nearing completion.

How was private partner selected?: Land owners in the affected area wished to commence construction sooner than the scheduled provision of roads.

Why did private sector get involved?: Move forward construction of roads to get subdivision approval and start housing construction.

Savings and/or accelerated activities: Region saved the cost of the non-development portion of the road costs and housing construction able to commence 5 years earlier.

Downside: Municipal risk is that development charges may not be sufficient in the future to cover the municipal cost of the roads.

Impact on housing: Housing costs may have increased due to covering of municipal share of road construction plus carrying costs on developer's borrowings; on the other hand, 500 housing units able to be constructed 5 years earlier than otherwise.

Lessons learned: A mutually beneficial approach which is presently being negotiated for 3 other developments in Waterloo Region.

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PUBLIC - PRIVATE PARTNERSHIPS

WATERLOO: ARTERIAL ROADS

IBI GROUP

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5.9.1 Background

This development was previously written up in a publication entitled *Innovative Financing: A Collection of Stories From Ontario Municipalities*, which was produced in 1993 by the Municipal Finance Officers Association of Ontario and the Association of Municipal Clerks and Treasurers of Ontario.

The Region of Waterloo had two road projects, namely the extensions to Lackner and Fairway Roads in the City of Kitchener, in its capital budgets and scheduled for construction in 1994. Unfortunately, budget pressures resulted in these two roads being deferred for construction in 1999 and 2001. At the same time, the subdivision plans of four developers in the area were given draft approval by the City of Kitchener with a condition that, before final approval and registration would be granted, the two regional roads had to be constructed. The reason was that the area of the subdivisions only had one access point, and such a situation was not satisfactory from a safety standpoint. Thus, the Regional decision to postpone construction of the roads meant that the developers affected were unable to get final approval of their subdivision plans and hence were unable to start construction.

5.9.2 Development Charges

The total cost of the two roads was approximately $2.9 million. The Region had concluded that approximately 90%, or $2.6 million, of the this amount could be attributed to new growth, while $300,000 of the total cost would be attributable to benefits to existing residents. Thus, the Region included the amount of $2.6 million in its Development Charges By-law. This by-law requires that a per dwelling levy be paid to the Region at the time of issuance of a building permit to start construction.

The developers approached the Region of Waterloo to determine some means whereby the construction of these two roads could be advanced. The Region felt that the front-end financing provisions of the Development Charges Act were not appropriate to their operations. The use of these provisions requires the definition of benefitting owners, and the Regional philosophy in dealing with development charges is that the entire region benefits from the provision of services and facilities and growth throughout the entire region pays for these through the development charges. Thus, any technique to involve early funding of these roads would require a partnership with specific developers who are anxious to advance the road construction timetable.

5.9.3 Funding Agreement

Thus, the fundamental concept was that the developers would have to invest money upfront and be reimbursed at a later date. Early on in the negotiations, the developers agreed to carry themselves the total municipal, or non-growth-related, portion of the road construction. Recognizing the financial problems besetting municipalities, the developers agreed to pay the total cost ($2.9 million) of the roads while being reimbursed at a later time with the $2.6 million growth-related component of the roads. It was further agreed that the developers would be reimbursed at the time that the Region had planned to fund the roads, i.e. in 1999 and 2001. In the meantime, the Region would be collecting development charges as housing units were built and would be accumulating, from these charges, that portion attributable to these two roads, in order to have the funds to repay the developers in the future.

The agreement was reached that in return for the developers contributing the $2.9 million cost, the Region would issue promissory notes to provide for the repayment. The actual amount of money to be repaid is equal to the face value plus an adjustment for inflation based upon the Southam Construction Index. This is the same inflation based index that is built into the Region's Development Charge By-law.

The promissory notes are one year "evergreen" notes that have to be renewed each year. The renewal of the notes is covered by a side agreement between the developers and the Region. Thus, each year the notes are renewed for an amount equal to the value at the beginning of the year plus the amount of the Construction Index for that year. This technique was chosen in order that Ontario Municipal Board approval was not required, and to avoid the need of setting up a distinct sinking fund to accumulate the monies necessary to repay the notes.

The developers then received promissory notes worth $2.6 million plus an inflation-related index, and payable in 1999 and 2001. These notes were in a form that could be fully assigned to a third party. Obviously, it would be in the interest of the developers to find someone today to whom they could sell these notes in order to acquire some of the funds that they had to remit to the Region to permit road construction to begin. Unfortunately, these were not normal notes and the developers had difficulty in finding someone to buy them.

5.9.4 Financing Agreement

At this point in time, the Region came up with an innovative refinancing proposal.

The Regional Municipality of Waterloo has a Sinking Fund, which is a separate fund maintained by the municipality to accumulate monies necessary to retire the principal on debentured debt at its maturity. The Sinking Fund consists of money contributed annually by the Region plus interest gained by the investment of that money. At the time the particular

debentures were issued and the annual Sinking Fund contributions calculated, an average annual return of 8% was considered to be achievable.

The Region suggested to the developers that it would buy back these promissory notes at a discount for investment in its own Sinking Fund. The discount on the notes was calculated such that the rate of return for the Region's fund would be 10.5% annually. This interest is in addition to the inflation index which is built into the face value of the notes to account for the increase in construction prices.

In addition, the agreement accompanying the notes indicates that, at the time of repurchase, the Region may hold back up to one-third of the amount in an escrow account in the event that there are any objections or appeals against the Region's Development Charge By-law itself. The reason for the hold-back is that the Region must accumulate funds from development charges to repay these loans. Should there be an appeal against the Development Charges By-law which results in the development charge funded share of the project being reduced, then the face value of the note would have to be reduced accordingly. If, between now and the time when the promissory notes become due, all appeals against the Development Charges By-law are either dropped or resolved, the escrow funds will be paid out to the developers. Thus, the developers who were looking to receive full value for their notes would have a vested interest with respect to this particular agreement, at least, in having the provisions of the Development Charge By-law accepted and upheld. At this point in time, the Regional Development Charge By-law requires a payment of $4,300/dwelling unit for regional purposes, of which $513 is for road purposes.

5.9.5 Risks and Benefits

The Region of Waterloo runs a risk that the rate of construction in the Region may slow appreciably and the Region may not, in fact, receive the income that it anticipates from development charges. If this were the case, the Region would possibly need to defer other growth related expenditures so as to ensure that sufficient monies were available to repay the value of the promissory notes out of the accumulated Development Charges Fund. Under these circumstances, the priorities of the Region in capital investments would be distorted as the construction of Lackner and Fairway Roads would automatically be included as top priority items. Alternatively, the Region would have to finance the promissory notes out of general tax revenues. This was recognized upfront by the Regional Council, and they went into the agreement with "their eyes wide open".

The benefit to the Region was that the amount of money, $300,000, which was originally to be born out of general revenues for the construction of the roads, would be covered by the developers. In effect, the developers (or the new residents if the cost is passed on) are paying not only their

growth-related share of the cost of these two roads, but also the share attributed to the existing population. These two roads would, in addition to serving the new development, take arterial level traffic off of existing local roads in the area and would put this traffic onto properly designed regional roads. The other benefit to the Region is that they were able to make an investment for their Sinking Fund which would pay 10.5% per year plus inflation over the life of the promissory notes. This is a very good investment from the Region's standpoint as the Region has calculated its Sinking Fund based upon achieving a yearly interest rate of 8% including inflation.

From the standpoint of the developers, the benefit of this arrangement is that they are able to register their plans of subdivision and to commence construction of homes 7 years earlier than would have been the case had the roads not been funded and built. The cost to the developers is the additional $300,000 plus the amount that the notes were discounted when they were sold to the Region. Given that some of the notes would come due in 1999 and others in 2001, using the year 2000 as the average redemption time, and assuming the process began in 1994, these notes are discounted for 6 years. The present value of $2.6 million for 6 years at 10.5% is $1.428 million. This is the amount that the developers would receive if they sold their notes to a financial institution. Thus, the developer must still find $1.172 million ($2.6 million minus $1.428 million) plus $300,000, or $1.472 million. The carrying cost of this amount at $150,000 per year, until cash begins to flow from the sale of houses, could cost the developer another $200,000 to $300,000. Thus, the total cost to the developer of front-ending the road construction could be as high as $1.8 million. This is a cost which must, in some way, be recaptured either through a reduction in developer's profit or through an increase in the selling price of the homes.

5.9.6 Developer's Comments

A conversation with Mr. Karl Magid, the President of ICI Realty, one of the three subdividers involved in this process, confirmed our analysis of the cost of this project. While subsequent negotiations with the Region have resulted in the developers having to only put up the net amount of their cost, i.e. about $1.5 million as calculated above, they have also had to provide between $300,000 and $400,000 in addition as a "hold-back" until such time as all of the appeals against the Development Charges By-law have been addressed.

Mr. Magid confirmed that the total cost of this road would be approximately $4,500 per dwelling unit. In fact, it might be greater if the townhouse units in the project (153 out of 449 units) are replaced by a smaller number of single family homes if there continues to be no market for townhouse units in Kitchener-Waterloo. This amount, $4,500, must be seen in light of the development charges presently being levied against developments in the Region. The ICI Realty subdivision which is affected

by the Lackner and Fairway Roads Agreement is Phase 2 of what was originally a 130 acre subdivision brought forward in 1985. At the time of Phase 1, the total development charge for residential units was $2,000 per unit payable at the time of the issuance of the building permit. Development charges now (1994) are $9,100 per unit, and 50% of this must be paid at the time of registration of the plan of subdivision. Thus, the cost to each unit is $9,100 plus $4,500, or $13,600 per unit. However, on top of this there is the carrying cost of the 50% of the levy which has been paid upfront. There is, within the ICI Realty subdivision, a 1.8 acre piece of land which has been designated for 57 townhouse units. Approximately $130,000 has been paid as a development charge upfront and there is no market today for townhouse units. In fact, if the land could be sold for an institutional use, such as a church, this might benefit the developer, as at least he would be able to get his pre-paid development charge reimbursed. Where lots are sold to a builder, it is frequently the case that the builder is unable to pay, upfront, the development charge of those units. Thus, the subdivider must continue to carry the cost of the pre-paid portion of the development charge for an additional 6 months through taking back a mortgage which is interest free for those 6 months. Thus, the total development charges can easily reach $15,000 per dwelling unit.

The alternative for the landowner was to not pay for the road construction upfront, but to await the scheduled completion of the roads in 2001. In fact, were it not for the fact that ICI Realty was able to gain the support of two other developers, ICI would not have been able to afford the upfront costs of the road today. ICI Realty not only has the road costs as part of the agreement, but also had to dedicate the land required for the road, install fencing and put in planting and other landscaping, all with no recompense from the Region. The concern of the developers was that the roads had originally been scheduled for 1993, had been then moved to 1996, and later moved to 1999 and 2001. There was, therefore, no assurance that the roads would be built in 2001, and the delays could continue indefinitely into the future. The $4,500 per unit, while increasing the total amount paid in development related charges by approximately 50%, at least had the result of transforming an uncertain future into a firm decision to build the roads today.

The final conclusion of Mr. Magid is that he is able to continue the build-out of this subdivision because it was purchased at 1985 land prices. For apartments in the Kitchener-Waterloo area, the total levies have now reached or surpassed the land value of apartment sites, which has virtually eliminated the construction of apartment buildings in this area. The combination of levies, development-oriented expenses, parks dedication and the time required for the approval of a subdivision by the many levels of governments and agencies not only in the Kitchener-Waterloo Region, but throughout Ontario, make it almost impossible to create a lot at a price

to enable the construction of "affordable housing". Sales of new units are slow and there is increasing buyers resistance to the prices being asked. Developers have cut their costs as low as possible and have pushed as much of the price back against the cost of the raw land as they can. Their conclusion is that not only in this area but in all of Ontario the costs of levies, permit fees, parks dedications, municipal surcharges to offset department costs and the time involved in bringing a subdivision on-stream have brought the costs as high as the market can afford. Any further increases in the costs of development will simply result in a drying up of the new housing market.

5.10 ROCKLAND WASTEWATER TREATMENT FACILITIES

Municipality: Rockland, Ontario.

Private sector partner: Dominion Waterworks Limited.

Nature of partnership: Financing, construction and operation.

Service provided: Sewage treatment.

Why did municipality seek partnership?: Required a source of external financing and construction expertise not available on municipal staff.

Was partnership successful?: No. Project has fallen apart.

How was private partner selected?: Through agreement with local developers.

Why did private sector get involved?: Dominion Waterworks is in the business of building and operating wastewater treatment plants and private developers required the facility in order to obtain building permits.

Savings and/or accelerated activities?: Private sector operator experienced in sewage treatment plant operation and design and proposal provided financing.

Downside: Difficult for developers to guarantee revenue stream with the downturn in the economy.

Impact on housing: Without this plant, no new building permits or subdivisions could be approved in the Town. Hook-up charges would have resulted in higher house prices and correspondingly lower operating costs and taxes.

What lessons were learned for future partnerships: Costs and risks must be shared and a close study made of the statutory framework.

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5.10.1 Introduction

The Rockland Wastewater Treatment Facility has been the subject of a number of articles. Price Waterhouse wrote about the project in Issue No. 2 of *Infrastructure*; the Ottawa Citizen had an article on May 26, 1994; the Canadian Construction Association put forward a description as an example of innovative infrastructure financing, and Mr. Jean Vachon, the then Chief Administrative Officer of Rockland, made a presentation to the Canadian Institute at their seminar on April 16, 1993.

Rockland is a town of about 7,800 people, located 35 km. east of Ottawa. The Town has benefited from its proximity to Ottawa, and has grown by about 40% over the last 5 years. It's house prices are somewhat cheaper than in other locations in the Ottawa region, and the municipality was looking forward to being able, ultimately, to accommodate a population of about 25,000 persons within the municipal boundaries.

At the present time, the Town of Rockland is served by an aerobic sewage treatment facility constructed in 1977, which has the ability to serve a population of 7,500 persons. As the capacity began to be used up, the Ministry of Municipal Affairs stopped awarding draft subdivision approvals in 1988. In 1992, the Town stopped issuing building permits, except for approved subdivisions. The municipal Council was under pressure from local developers to find ways to permit development to continue. The municipality was also concerned about the loss of local construction jobs if a solution could not be reached to the sewage treatment limitation.

The municipality felt that it would not be possible to ask the existing residents to pay the cost of a sewage treatment plant that was necessary for increased development.

Council had adopted a Development Charges By-law in 1991, but with no development able to be undertaken in the absence of the sewage treatment plant, there was thus no development to pay development charges. Another concern was that the development charges approach only permitted those charges to cover the growth-related portion of infrastructure cost. A consultant retained by the municipality to determine their Development Charges By-law concluded that about 56% of the cost of the new facility would have to be charged to the existing residents of the Town. Subsequent calculations have concluded that this would, in fact, be closer to 38%. Exactly how these figures were calculated is not clear, but do represent the conclusions of the consultant and the new Chief Administrative Officer respectively. Nevertheless, even though paying only this percentage would be less than if the existing residents had to pay the entire cost, it was still concluded by the Town Council that such charges imposed against the existing residents would be excessive. The Council view, held unanimously, is that without development the facility would not be necessary; the required secondary treatment in the new

facility is the result of an increasing population; and therefore no part of the construction cost should be assumed by the present ratepayers.

The municipality also examined the use of the front-end provisions of the Development Charges Act, but ran into difficulties in defining the benefitting area. While the area covered by new subdivisions on the edges of town could be defined as a benefitting area, such a charge would not then be levied on development on infill lots within the already built-up part of the city. There are, apparently, some 500 or 600 such lots in the Town which could be developed without paying the development charge.

The municipality approached a variety of financial institutions and investment firms to attempt to convince them to assume the debt necessary to build the new sewage treatment plant. The idea was that a charge would be imposed when the building permit is issued and this would be used to pay off the debt. All of the institutions refused. Why they refused is unclear, but it may relate to what presently transpired: with a slowdown in building activity and a longer payback period, there may not be sufficient revenues from hook-up charges to pay off the principal and accumulated interest. Subsequently, following an unexpected meeting with representatives of Dominion Waterworks Limited, a proposal was put forward which led to the eventual deal.

5.10.2 The Rockland Solution

A new financial partnership was created composed of Dominion Waterworks Limited and a number of the major developers who owned land in Rockland. This partnership would be responsible for financing, constructing and operating a 10,000 m^2 capacity sewage treatment plant for up to 20 years. At the end of the 20 year period, the plant's ownership and responsibility for operation would revert to the municipality. Dominion Waterworks is a firm experienced in the operation of sewage treatment plants and is in a position to be able to design and construct the necessary facilities. The developers who are the partners of Dominion Waterworks are ones that own land that otherwise could not be developed.

The total cost of the plant is fixed at $12.6 million. The new facility can service a population of about 18,000 persons. This will easily provide for the increase of 3,500 additional dwelling units to the existing 2,700 units in the Town.

Using a fixed price of $12.6 million and 3,500 units, results in a charge per unit of $3,600. Therefore, the agreement proposed between the partnership and the Town is that the Town would collect a hook-up charge at the time of building permit for each new dwelling unit constructed in the Town for the next 20 years. The actual amount charged will increase by 12% per year with the first year charges being 12% above the $3,600 base, or $4,032. This increase is to cover the interest, or carrying cost, of the original investment. If a total of 3,500 new units have been connected

before the end of the 20 year period, or should the capacity of 10,000 m^2 be used up before the end of the 20 year period, the agreement will then terminate, ownership of the system would revert to the Town, and the Town would collect no more hook-up fees. On the other hand, should the 20 year contract term end without 3,500 units having connected to the system, the municipality would be under no obligation to continue to collect hook-up fees. Thus, the entire risk inherent in a slow-down in development resulting in less income than expected would be borne entirely by the developers and Dominion Waterworks.

The Town did a calculation of the average cost per unit of this approach based on hooking up 175 new units each year for the 20 years. With the hook-up fees increasing each year by 12%, the total collections at the end of 20 years would have been approximately $50.84 million; divided by the 3,500 units results in an average cost per unit of $14,525. This was compared to the 1977 facilities which were constructed at a cost of $6.3 million. In that case, the financing was fixed over a 40 year period at an average of 12.5%. Such a contract provided for 1,300 units of capacity, and this worked out to $24,451 per units. Therefore, the proposed method was considered vastly superior to that used in the past.

In an effort to ensure that the increase in the hook-up charges would not adversely affect the price of housing in Rockland, the municipality proposed to reduce its subdivision control fees and its development-oriented lot levies. Building permit fees were to remain at $900, but the lot levies per unit are reduced from $5,500 to $3,650, and per unit subdivision control fees reduced from $1,200 to $300. Thus, even with an increase of $3,600 for sewer connections, the total charges per new dwelling unit only increase from $7,600 to $8,450.

An added benefit to the new plant is that it will consume less space than the existing lagoons, thereby freeing up approximately 60 acres of waterfront property between Highway 17 and the Ottawa River as the lagoons are filled in. Also, with development able to proceed, a number of new commercial projects could move forward in the Town.

Mr. Vachon, in the summary to his presentation to the Canadian Institute Seminar, summarized the three benefits of this deal for the Town of Rockland: 1) employment in the construction industry will continue; 2) prime development land will be rehabilitated; and 3), the most important element, is that the present Rockland ratepayers will not assume any of the cost.

5.10.3 Comments

This project is one where the Town of Rockland wished to obtain a new sewage treatment plant which would permit development in the Town to continue. However, they wished to ensure that no part of the cost of the plant would be born by the existing residents even though their consultant on development charges had indicated that 56% of the benefit of the investment (subsequently recalculated as approximately 38%) would accrue to the existing ratepayers. Thus, the entire cost had to be shifted onto new residents.

The discussions, which included the involvement of local developers in financing the solution, began in the early 1990's at a time when there was a significant rate of inflation in the housing industry. The solution that was reached would result in a charge of $3,600 plus 12% per year on every new residential building permit. This results in a sewer connection fee of just over $4,000 in the first year that the new process is in operation. Such a charge is less than half of the total permit and levy charges for new development. However, this connection charge increases in value very quickly over time such that in the 20th, or last, year of the agreement, the sewer connection charge would be $34,726 per unit. This is an increase of 9.6 times the base charge. Even if inflation were 5% per year, the inflation increase in 20 years would be a growth of 2.6 times. This means that in real dollars, the charge would have increased by about 3.7 times over the life of the contract. Looking at it another way, in the base year the sewer connection at $3,600 is 42.6% of a total development levy and permit charge of $8,450. At 12% per year, the sewer connection component would increase to $34,700, while the rest, assuming it rose at the inflation rate, would increase to $12,870. Thus, the sewer connection component of the total charges would grow from 42.6% to 72.9%.

Using the figures supplied by the Town, the average cost would be $14,525 per unit. However, the early hook-ups would pay substantially less than that, i.e. around $4,000 per unit, while the later hook-ups would pay considerably more than the average, i.e. $34,700. Thus, the impact of the sewer connection fee would grow significantly in both absolute and relative terms over the 20 year term of the agreement.

The proposal called for the Town of Rockland to co-sign the Dominion Waterworks' bank loan in order to get a better interest rate. This would thus put the Town at risk should the revenues be less than expected. The municipality then attempted to obtain guarantees from the developers that would cover the risk to the Town. Such guarantees could include either letters of credit or mortgages on property.

From the standpoint of the developers, the economic climate had changed significantly from that which was being experienced in the end of the 1980's. Previously, the rate of increase in house values, coupled with the

high level of demand, would have made it easier to absorb the increased development-related charge in the selling price of houses.

The housing market today is one of depressed house prices and only moderate increases in the year-to-year change of selling prices. Moreover, there appears to be a mood at the federal level to reduce government expenditures and the resulting concern about job security has further depressed the housing market in the Ottawa area.

The other concern that the developers must feel is the impact that the sewer connection charge will have on the demand for housing in Rockland as it increases, year-by-year, by 12%. Cheaper housing is one of the main attractions of Rockland and people are prepared to pay the extra travel time in order to achieve less expensive housing. The escalating sewer connection charge could eliminate this attraction for Rockland and, in fact, could begin to make Rockland more expensive than competing locations. There is then a need to achieve the 3,500 new dwelling unit target in as short a time as possible in order to avoid the later high charges. For example, in the tenth year, the sewage connection charge would have increased by a little over three times to $11,180 per lot (as compared to the 9.6 times increase to $34,700 in the 20th year). Thus, if the growth in the short term should be slow, a larger percentage of the new units would be pushed into the latter part of the 20 year agreement period and would be subject to the much higher rates. These higher rates would themselves further slow down the demand for new dwelling units.

5.10.4 Evaluation

One cannot escape the conclusion that the Town Council representing today's citizens, while prepared to accept the higher operating costs of the new facility, were not prepared to accept any of the capital construction costs. Although a new sewage treatment system would provide a higher quality of treatment than the existing system, which would benefit all residents, new and old, and even though the freeing up of the 60 acres of land presently occupied by the lagoons would provide eventual revenue for the Town and would benefit existing citizens, and even though the growth that would ensue if a new treatment plant were built would benefit existing businesses through increased number of customers and would benefit existing construction workers, nevertheless the Town decided that the existing residents should not pay one cent towards the capital cost of the new facilities. This was seen by Mr. Vachon, the Chief Administrative Officer, as being, in his words, the most important element: that present Rockland ratepayers will not assume any of the cost.

There may be times when the demand for new housing is such that the entire cost of a facility which benefits all of the residents of a town can be passed on to the new residents. Demand generated by a new industry, i.e. a new auto production plant, or by a new mine, or by the growth of an adjacent large metropolitan area, may provide sufficient demand for new

housing that the house selling prices can incorporate all of the proposed charges. However, in a competitive situation and particularly in a time of moderate increase in demand, the passing on of significant development charges to new residents can have the effect of reducing or curtailing the very growth that was expected in the first place. Thus, total revenues will increase as the charge per unit increases, but only up to a certain point. Beyond that point, increases in per unit costs could result in a reduction in the number of new units sufficient to actually reduce the total revenues received.

It would appear that in the view of the developers in Rockland, the slowdown in the increase of house prices, coupled with the reduction in demand, has meant that a proposal which appeared feasible in a very buoyant economy is now much more questionable in a recession.

5.11 SCHOOL ACCOMMODATION AND FINANCING IN PEEL REGION

Municipality: Regional Municipality of Peel, Ontario

Public sector partner: Peel Board of Education

Private sector partner: Metrus Development Inc.

Nature of partnership: Financial contribution.

Service provided: Education.

Why did school board seek partnership?: Unable to fund new schools from tax base and provincial grants.

Was partnership successful?: Capital contribution, reduction in cost of school site, and 5 year interest free mortgage on land permitted accelerated construction of school which is now under construction.

How was private partner selected?: Metrus was the major developer within the school attendance area.

Why did private sector partner get involved?: (1) To break logjam resulting in delayed or postponed development of residential subdivision; (2) to overcome negative marketing impacts otherwise resulting from no schools within the community.

Savings: (1) $2.55 million not spent for a school site; (2) $2.2 million realized consisting of: cash subsidy for construction; 5 year interest free mortgage on land; and land value at 75% of fair market value.

Downside: Increased cost of providing serviced lots, and decreased competitiveness.

Impact on housing: Residential development able to proceed, and an important amenity is made available to residents. A greater share of the cost of new facilities is passed forward to the buyer of new homes.

Lessons learned: Where costs are passed from the Province (through reduced and/or delayed grants) to the private sector, the home buyer will absorb these costs in the form of higher house prices.

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5.11.1 The Problem

Urban growth and the resulting demand for school facilities in the Region of Peel has outpaced the ability of both the public and separate school boards, and the Province of Ontario to fund new school construction, leaving a significant shortfall on the supply of school accommodation. The result has been an increase in the use of portables and in the number of students being transported over longer distances to holding schools until such time as local area facilities can be provided.

In the current economic climate and in the face of public resistance to higher taxes, school boards are not prepared to raise taxes to build schools in growth areas.

5.11.2 The "Springdale" Solution

5.11.2.1 The Springdale Community

Springdale is a new 4,000 acre residential community in the City of Brampton in the Region of Peel, located to the west of Toronto.

The area was first proposed for inclusion in the City's Official Plan in 1979, finally being approved in 1986. A secondary plan process commenced in 1986, and was finally concluded by an Ontario Municipal Board decision in 1990. The first subdivision approvals were obtained in the fall of 1990, and the first homes were built in 1992.

The concept plan and secondary plan for Springdale included population and household forecasts, housing mix, and the designation of services and facilities, including schools, to meet the needs of the future population.

In time, the community may accommodate some 24,000 units, and a population of approximately 74,000 persons.

The planning process has included estimates of the number of children; and the identification of the number of public and separate schools (originally 24 in total), and specific school sites to be situated throughout Springdale.

In the Province of Ontario, the *Planning Act* regulates the subdivision of land and permits a designation of school sites which are to be purchased by a School Board at fair market value. The secondary plan for Springdale includes provisions ensuring the designation of school sites through conditions of approval for subdivisions.

In addition, the secondary plan also includes provisions related to cost sharing agreements amongst developers. The intent is to create equity amongst developers recognizing that comprehensive land use planning considerations, such as the location of school sites or parks, may affect developers unequally, favouring some while unfairly impacting on others. The policies indicate that the City will use it's best efforts to obtain reasonable cost sharing arrangements amongst landowners.

5.11.2.2 Springdale Primary & Senior Public School

The planning process for Springdale resulted in the identification of school sites and parks in the secondary plan for the area. While this should have been sufficient to permit development to proceed, this was not the case. The *Planning Act* of Ontario provides leeway for interpretation. The Peel Board of Education, for example, filed an objection to development in Springdale essentially on the basis that the Board could not aford to purchase sites or build new schools, and that schools are as important as roads, sewers, parks and recreation centres when deciding whether to approve new development.

In an attempt to free up lands for development, Metrus Development Inc. represents the owners of some 3,000 acres in the Springdale area, reached an agreement with the Peel Board to sell school sites to the board at a discount, i.e. three quarters of fair market value. This purchase option agreement would be registered on title.

The agreement would have the effect of reducing the total development costs for schools. As a result, the board withdrew its request to refer the matter to the Ontario Municipal Board (OMB). This allowed the processing of draft plans of subdivision.

In the interim the school funding situation continued to deteriorate as the Province further reduced capital grant levels.

Metrus continued with its development plans for Springdale. Eventually the Peel Board indicated that it could not build a school for the community. Other school projects had a higher priority than a junior elementary school for Springdale.

The Peel Board took the position initially that developers should provide all of the funds to build the school to the standards established by the Board and the City. The Board was adamant that it would not raise taxes in order to pay for this facility.

Metrus and the Board continued their dialogue for some three years until an agreement was eventually reached that would result in the construction of school facilities well in advance of the timetable that the Board would have followed otherwise. A change in the composition of the elected school board is generally credited as a contributing factor clearing the way to reach the agreement.

The basis of the agreement lay in the acceptance by Board representatives to examine ways to reduce costs, reduce site requirements, and to secure some external funding. It should be noted that the dispute resolution process also included the City of Brampton which was asked to examine its site planning requirements with a view to modifying or relaxing them. Existing requirements included, for example, extensive landscaping, generous set-backs, and an on-site bus loop, all of which added about 2 acres to the site requirements. While there were some adjustments to City standards, the Springdale school situation has set the stage for the further examination of the interplay between City site plan and zoning standards, and school development costs.

To a significant degree, the agreements reached for the construction of the Springdale school can be attributed to the fact that Metrus alone was involved in the deliberations leading to a solution. This large firm had staying power even through a lengthy economic recession in the Greater Toronto Area. In other situations where there may be multiple ownership interests on the private sector/developers side, it may be more difficult to reach an agreement, unless a developers' group is constituted to represent the interests of all of them. (This would be an ad hoc association which would have to gain a consensus from its membership.)

Following are the fundamental principles of the Peel School Board/Metrus agreement for the Springdale school. The official soil turning was held in November, 1994. The school should be ready for students in December 1996/January 1997.

- Economize on land by combining in one school students from Junior Kindergarten to Grade 8, as opposed to the standard approach of separate facilities on separate sites for JK to Grade 5, and Grade 6 to 8. This produced a school for 800 pupils, larger than usual. An 8.3 acre site was rendered surplus to the needs of the School Board, removed from the secondary plan as a school site, and released for development. (The School Board saved some $2.55 million in land costs that

it would otherwise have had to pay for the 8.3 acre site). A 2-storey rather than 1-storey building was constructed (although the developer had advocated a 3-storey facility) on an 8 acre school site situated next to another 8 acre site for public parkland.

- A 25% reduction from the fair market value of the school site payable by the Board to the developer.

- A 5-year interest free mortgage on the school site. In the event that the Board receives a grant from the Ministry of Education before the end of the 5-year term, the developer could be paid earlier. Neither the Board nor the developer expect receipt of the grant in 3 to 5 years.

- A construction contribution payable by the developer in equal amounts over three years (total contribution is approximately $1.35 million). Factored into the funding arrangements were the savings that would accrue to the Board by building the school sooner rather than later. The savings are principally associated with busing costs (up to $700 per pupil per year) and the cost of portables which would otherwise be installed and maintained at the host school during the interim period.

The Board concluded that there is no downside risk other than the possibility that the Ministry of Education and Training might never provide the funding. In the current funding climate, the Peel Board of Education considered it prudent to proceed with the public-private agreement, because in the future there may well be no funding at all available from the Ministry. Even so, the Peel Board did not conclude the agreement until assurances were received from the Ministry that the Springdale school would remain eligible for Provincial funding, and that the agreement would not jeopardize the approval of a future capital grant, which currently is in the range of 20% to 25% of the total capital costs (including land).

The developer is satisfied with this arrangement. The community has a school which should help in the marketing homes in the area. Parents would rather that their children walk to school than be bused. It should be noted that while the agreement will cost Metrus about $2.2 million, other developers in the area will reap the marketing benefits of having a school in their community. For a variety of reasons (solvency during troubled economic times being a primary reason), other Springdale developers did not put up any money. It should be noted also that the Peel Board of Education/Metrus agreement includes provisions related to Education Development Charges (EDC), i.e. growth-related levies for the provision of school facilities. (Pending disposition of court challenges to the EDC legislation, some school boards, including the Peel Board, have chosen not

to implement EDCs at this time). In the event that the Board does eventually adopt an EDC by-law within three years (with payments due at building permit), some portion of the upfront contribution by Metrus will be repaid.

Metrus feels that the cost is far too high. The Springdale school is a one-time example, not a model which can be repeated again and again. The burden should be shared by other "partners", e.g. utility companies and transit companies which continue to provide services or products to school boards at full market rates.

5.11.3 Other Solutions Required

The Springdale example described above was one solution to the school accommodation and funding problems in Peel Region. Both the Peel Board and the Dufferin-Peel Roman Catholic Separate School Board (DPRCSSB) continue to experience problems in all growth areas in Peel Region.

Dufferin-Peel (DPRCSSB) objected to official plan amendments, zoning by-laws and plans of subdivision which would have resulted in new housing and more children than Dufferin Peel could accommodate. The matter escalated into a series of court challenges.

The Office of the Provincial Facilitator (OPF) intervened in an attempt to mediate a resolution to the situation. This added considerable credibility to the process, and resulted in the joint efforts of both the public and separate school boards, local and regional municipalities, the Ministry of Education and Training, and the Urban Development Institute (UDI) to seek solutions to the school accommodation and funding issues in Peel Region.

Brief descriptions of the six categories of solutions identified by the working group between May and August 1994 are provided below. (These have been adapted from *School Accommodation and Financing in Peel*, Report to Hon. Dave Cooke, Minister of Education and Training, from the Provincial Facilitator, September 15, 1994).

5.11.3.1 Permanent and Interim Capital/Financing Solutions

Capital Expenditure Forecast Approvals

School boards apply to the Ministry of Education for capital expenditure forecast (CEF) approvals for identified projects. A variety of cost savings opportunities have been identified (see below). It is recommended that CEF approval funds be treated as a capital envelope, so that where cost savings can be found for CEF approved schools, those savings can be used to meet accommodation needs elsewhere. For example, the Dufferin-Peel Board received CEF approval of $67 million for eight school projects. By applying cost savings measures on these projects, some $8.1 million (12%) could be saved, enough to construct another new school.

Third Party Financing

With financial support from a developer (the Springdale solution) school construction can be advanced prior to Ministry CEF approval.

Other third party financing options include:

- services and/or building contributions on a site in lieu of financial contributions, e.g. roads, parking lots, playing fields, temporary gyms;

- site options, such as early use, site size reduction, interest free mortgage (limited time only) on site purchase and discounts on site costs;

- third party builds school to Board specifications with a lease to purchase option. This could well be an uneconomical options, since boards can borrow at a lower rate than developers, and lease rates (to generate a return) may be too high. In addition, the current level of the Pupil Accommodation Charge from the Province would likely be insufficient to fund lease payments, and current regulations prohibit the redirection of grants for transportation or portable purposes for other school uses; and

- use of municipal reserve funds, teacher and pension funds, and tax-free bonds.

The development industry advocates that developer contributions be considered prepayment of Education Development Charges, or in the absence of an EDC by-law other arrangements recognizing the contribution.

Using Operating Dollars for Capital Projects

The use of operating dollars (for busing and portables) may be sufficient to finance new schools. This would require a change of current Ministry practice which prohibits the redirection of operating dollars to capital. The Ministry would however augment a board's capital account or use some other mechanism to contribute where business cases demonstrated that transportation and portable costs could meet annual financing costs of permanent pupil places. Financing shortfalls could be made through the free use of land for a multi-year period with a deferred purchase and/or cash contribution as prepayment of EDCs.

Education Development Charges

The Province of Ontario enacted legislation in 1990 permitting school boards to levy charges on new development. EDCs do nothing however to address the problem of accommodation backlogs in built out areas. (It should be noted that court challenges are continuing with respect to the legality of EDCs).

EDCs may be only part of the answer because they cover the local share of school costs only. The legislation permitting the adoption of an EDC by-law is permissive, consequently some boards have and others have not adopted them, creating disparities between municipalities and boards in school funding. In the absence of an EDC, alternative mechanisms or arrangements are required to handle developer contributions to school projects.

Sale of School Board Assets

In instances where school site sizes can be reduced (see below), the revenue from the sale of land could be used to assist in financing school construction. For this to work most effectively, Ministry policy would have to be adjusted so that boards could retain 100% of sold assets if reinvested in priority school facilities.

5.11.3.2 Temporary Accommodation Solutions

Lease of Existing Space

This involves the use of existing, vacant commercial or industrial malls or plazas for use as a holding school (until a permanent facility is provided) or as an annex to an existing school. This solution may be more appropriate for secondary schools than for elementary schools. Some of the issues associated with leasing commercial or industrial space include: public acceptance of "non-traditional" space, the compatibility of some commercial/industry areas for elementary schools in particular, and the opportunity to use leased space for a holding school for several schools in sequence (long term leases, up to 10 years, may be required to justify the capital for conversion).

Sharing Accommodation with a Co-terminus School Board

This would involve the temporary sharing of available space where excess capacity exists in one school board area and there is a space need in an adjoining school board area.

A Portable School

Designated school sites often sit idle for years until a permanent school is constructed. Accommodating students on these vacant sites in a temporary,

largely portable school has advantages over using remote holding schools. It keeps students in their own neighbourhoods, avoids busing costs, and avoids the issue of parental acceptance of a remote temporary location while the planning area continues to develop.

The neighbourhood portable school could have access to adjacent parkland. The layout of the temporary school could be designed to anticipate the final design, e.g. parking and other site servicing. The facilities can be located to be remote from the permanent school permitting safe construction and continuity of the program. A relocatable "bubble" structure could be used to accommodate washrooms and a gymnasium/auditorium.

The development industry has estimated that a temporary school with 21 portables could be created for a cost of about $1.1 million. The Peel Board of Education considers the temporary school model to have merit but are concerned about throw away costs, i.e. expenses for services/facilities which cannot be used for the permanent facility. The Board is exploring an alternative in which the permanent core facilities, i.e. washrooms, gym and administrative spaces are pre-built with the portables having access to these facilities. This might have a cost of approximately $3 million.

5.11.3.3 Cost Saving Measures

Multi-Use Facilities

The combination of school and community facilities in one location and the sharing of common facilities amongst school board, municipality and community partners is a technique which has been used successfully in many communities.

One suggestion for the development of multi-use facilities is the creation of a provincial coordination body to match community needs with various sources of funding. This is necessary to overcome the problems faced by individual applicants attempting to wade through the multiplicity of funding sources. Some problems in implementing multi-use facilities include: differences in priorities between boards, municipalities and provincial ministries, the issue of shared liability in multi-use facilities, and the artificial demand for facilities that can be created by making multi-use a condition of funding.

Reducing Land Cost

The Dufferin-Peel Board estimates that 34% of its total 1994 capital allocation will go toward purchasing land for schools. This is enough money to build 3.5 new schools. Freeing up more money for school construction out of what currently goes towards buying land may be the single biggest contributing solution to the school accommodation and

financing crisis. There are three principal techniques which could be employed:

- school land included in municipal land dedications;
- land at discounted prices; and
- reducing school site sizes.

Land for school sites could be included in the current envelope of land dedication required by the municipality for a development, eliminating the need for school boards to allocate funds for land purchases. Dedicated school sites could be obtained, therefore, at no additional land costs to the developer by finding greater efficiencies in the current land dedication framework. For example, in a development of 500 acres it has been estimated that up to 30% or nearly 178 acres are required to be dedicated to the municipality or other agencies for roads and parkland. In a development of this size there would be a need for two elementary schools and part of a secondary school, about 17 to 20 acres of school land, representing 10 to 12% of the total land being dedicated. By reducing road widths, buffer widths, parkland areas, etc., enough savings may be found to offset the area requirements for school sites. This would require a relaxation of the "standards" which have evolved, largely since World War II, and which often have come to be considered as inviolable.

The inclusion of school land dedications within overall municipal land dedications may be a technique more appropriate for elementary schools because of the smaller, more geographically contained catchment area. With the larger catchment area of a secondary school, it may be difficult to calculate and attribute school land dedication amongst developers. It is clear that this technique would require commitment and flexibility from municipalities in revising their land dedication policies.

A second technique is for school boards to acquire land at discounted prices, e.g. the Springdale example where land was sold at 75% of fair market value. A further incentive such as an interest free or low interest mortgage may be necessary for this technique to work. It is important that the costs to the developer/builder are shared equitably amongst benefitting land owners.

The final technique is the reduction of school site sizes, for example the Springdale JK-8 pilot project resulted in an 8.3 acre site reduction at a saving of $2.55 million in land costs for the Peel Board. Significant savings in land requirements can be achieved where school sites and public park land are adjacent and where agreements between the municipality and school board are reached regarding the use of the outdoor space during school hours. Fewer and smaller school sites can result in reduced

operating and maintenance costs to school boards. In addition, for this technique to work successfully, municipalities need to agree to facilitate approvals for the freed up parcels of land.

Reducing the Cost of School Buildings

Reducing the cost of constructing a school could include the relaxing of site standards and building specifications by the Ministry and municipalities, e.g. requirements for bus loading and unloading areas, drop-off and pick-up areas, paving, floor coverings, and landscaping. Special, and more expensive design or architectural features could be justified only as functional requirements. Additional savings for both new construction and renovation may also be found in standardized products and purchasing procedures.

The Peel Board of Education conducted a post-construction assessment of a senior public school which had a final construction cost of $6 million, with a unit cost of $89.11 for the 68,000 sq. ft. (6,300 m^2) school. In addition to a more compressed design which would use less land area, twenty-five separate material and design cost reduction opportunities were identified which would have reduced the cost by $10 per sq. ft. to $79.11 per sq. ft.. The total cost could have been reduced by almost $1.3 million, a reduction of 21%.

Other Third Party Contributions

Other types of private contributions to schools, e.g. dedications, bequeaths, memorials, heritage or ethnic funds, could be explored, similar to those used in university or hospital expansions. Depending on the size of the contributions and the relative wealth within a school board's jurisdiction, equity may be an issue.

5.11.3.4 Program Related Solutions

Year Round Schooling

Year round schooling may result in more efficient use of existing school infrastructure. The general model establishes a series of 45 to 60 day modules or school terms that run throughout the year and requires students to complete a certain number of modules with breaks between. Year round schooling may increase school capacity by 20%. The use of this technique requires resolution of operational, cost and community related (e.g. child care) issues.

Modified School Day

Double shifting effectively doubles the capacity of an existing school. The Dufferin-Peel Board is undertaking double shifting in two of its secondary schools. In both cases, the Board is temporarily accommodating

students from one high school in a second high school, while the first is under renovation. Each shift has a separate set of students, teachers and administration, so that in effect, two schools are run out of a single facility. The Peel-Dufferin Board met significant initial opposition to this technique by the host communities to what was thought to be a permanent arrangement. This temporary solution incurred significant busing costs during the renovation work.

Double shifting on a permanent basis requires consideration of issues such as the impact on school equipment and administration and logistical arrangements with teachers.

5.11.3.5 Regulatory Changes

Length of Education

Ontario's requirement for the provision of education for up to 15 years exceeds what other provinces require to qualify for a post-secondary education, and creates accommodation pressures.

The Credit System

The Dufferin-Peel Board analyzed the impact of repeated credits on the system and found that only a small percentage (under 10%) exceeded the normal 6 to 9 OAC courses. The Board concluded that the elimination of students completing additional credits would have little effect on its accommodation situation. Nevertheless both the Dufferin and Peel Boards may explore the potential for placing limits on credit under certain circumstances, reviewing the number of years of entitlement to education and the number of credits required.

5.11.3.6 Phasing of Development, and Planning Act Amendments

This is an area in which the participants in the Peel Region failed to reach consensus.

The school boards and the Ministry of Education and Training contend that the *Planning Act* should contain a provision requiring the phasing of new development in accordance with availability of adequate school accommodations, placing schools on the same footing with other necessary infrastructure.

Representatives of the development industry attribute the school accommodation problem to a lack of funding rather than from flaws in the current planning process, for example the *Planning Act* can be used to ensure the adequate designation of school sites within a planning area. The development industry contends that adequate vehicles for school funding are already in place: the taxing ability of school boards, and education development charges. These, combined with cost saving measures, regulatory changes, and program related solutions should be

sufficient to meet the accommodation requirements of the boards in the opinion of development industry representatives.

5.11.3.7 Conclusion

It was the conclusion of the working group in Peel Region that no single solution to the school funding and accommodation issues was apparent. Resolution of the problem will require a combination of many solutions, and a cooperative and concerted effort by all parties involved.

5.12 OTTAWA-CARLETON: SEWAGE TREATMENT OPERATION

Municipality: Region of Ottawa-Carleton

Private sector partner: Professional Services Group Canada Incorporated.

Nature of partnership: Operate and maintain an existing facility.

Service provided: Wastewater treatment.

Why did municipality seek partnership?: Volume of work in commissioning a new facility and insufficient time to train staff.

Was partnership successful?: New facility was commissioned in time and is being run successfully.

How was private partner selected?: A Request For Proposals, proposal evaluation and selection.

Why did private sector get involved?: In the business of operating such facilities.

Savings and/or accelerated activities: Introduction of a new facility required new expertise; attempting to create such expertise internally and to learn on the job would likely have resulted in delays.

Downside: Present operations split between publicly operated and privately operated portions resulting in inefficiencies and Region bound to a long term contract which may be financially disadvantageous.

Impact on housing: No direct impact on housing supply, but an increase in operating costs was avoided.

Lessons learned: Partnership successful operationally when both sides are clear as to what each expects from the partnership.

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5.12.1 Introduction

An account of the selection of a contract operator in Ottawa-Carleton was written up in the August 1994 edition of *Municipal World*. Information on this case study was obtained from that article, from telephone conversations with Dave McCartney, the Manager of the Wastewater Treatment Branch, and from reading of Council documents.

Wastewater treatment is essentially the separation of solid material from water, so that the water can be returned to the river or lake from whence it came. Primary treatment uses physical and chemical methods to separate solids, and secondary treatment uses biological and physical methods. At the end of the process, several types of solids are produced. Grit and other solids are returned to landfill sites, while scum and sludge are further processed to prevent putrification. Anaerobic micro-organisms are used to break down the organic material and, after a period of time, the water is removed and the stabilized and de-watered sludge, or bio-solids, are then either disposed of or reused.

5.12.2 The Ottawa-Carleton Wastewater System

During 1991 and 1992, the Robert Pickard Environmental Centre in Ottawa-Carleton was extensively rehabilitated and expanded. In a report dated October 9, 1991, the Commissioner of Environmental Services informed the Regional Council that the new secondary treatment process was scheduled for commissioning in September 1992, with full operational status by December 31, 1992 in order to meet the effluent requirements of the Ministry of the Environment. A new sludge processing facility, including a digester complex and the thickening and de-watering building, would also be commissioned during 1992.

The Environmental Services Department had received a number of Expressions of Interest from companies interested in the design, construction and operation of a bio-solids re-use facility. As that time, bio-solids produced at the Pickard Centre were being landfilled at the Trail Road landfill site and, beginning early in 1992, they would be disposed of at the Laidlaw landfill facility in West Carleton. However, the report noted that landfilling bio-solids is not viewed as an optimal long term solution.

The department proposed that the new digester complex and sludge thickening and de-watering building at Pickard Centre be operated and maintained with a contracted workforce for the following reasons:

- The limited time available made staffing with Regional forces difficult.
- From an organizational standpoint, contracting the workforce would permit the linkage of bio-solids processing with the development of a comprehensive bio-solids management program.
- Contracting out bio-solids processing provides a logical split in the management of the facilities.
- Control of the effluent quality would rest completely with the Region.

- A 3 to 5 year contract would generate documented operating costs which would allow a comparison with the alternatives of staffing with Regional forces in the future.

The main difference between the old and the new systems is the amount of computer operated controllers which are involved. Program logic controllers are responsible for running a number of remote process controllers and experience is required to settle in the operation and to ensure that it runs efficiently. The Environmental Services Department felt that the separation of the one part of their overall operation and contracting it out to the private sector would be feasible as it operated as a distinct and separate component of the total wastewater treatment process.

The Commissioner of Environmental Services further proposed that three persons were required to supervise the contracted operation and maintenance facilities and for the development of a bio-solids management program. These included a Manager, who would be a senior engineer; a Superintendent of Sludge Processing, who would be a technologist with extensive practical experience; and a Contract Coordinator, who would provide technical and administrative support to the superintendent for contract administration.

As the *Municipal World* article noted, there were several reasons for contracting out the bio-solids facility operation. With the expansion and rehabilitation of the Pickard Centre, management was already stretched to its limits and the Region would have been hard-pressed to staff and train additional personnel to the required levels. An experienced operator could handle the system efficiently and cost effectively and would allow the Region to obtain the required expertise while maintaining its tight commissioning schedule.

5.12.3 Selection Process

A further report was provided by the Commissioner of Environmental Services to the Regional Council in April 1992. This report noted that a Selection Board had been set up which consisted of representatives from the Region, from RPA Consultants Limited, and from RV Anderson Associates Limited. This Board had prepared a comprehensive Request For Proposals (RFP) and a Proposal Evaluation System. The mandate of the Board was to find an operator who could not only carry out the operations efficiently and effectively, but also could protect the Region's investment in the context of obtaining "best value for money".

The Board had gathered a number of RFP's and contracts from other cities that currently contract out water and/or wastewater treatment facilities and used these as a base of reference for developing the Region's RFP. Prospective bidders were given 6 weeks to review the information on the Region's requirements and the site was made available on a scheduled basis to each of the firms. As a result of questions raised by some of the

bidders, an Addendum was released and the proposed deadline was extended to give all the firms time to review and respond to the additional information.

A Basis of Payment methodology, including both a fixed and variable fee component, was selected and bidders were required to submit both a technical proposal, outlining proposed scope of services, capabilities and experience, and a cost proposal, outlining the cost of the proposed services. The Board decided that a 5 year contract was sufficient time to ensure good economics and, in the end, competitive proposals were submitted by eight firms.

These proposals were evaluated by criteria which included general corporate capabilities, financial capabilities, management experience and depth, support services, number of projects underway, number of employees, value of operations, safety records and awards, home office of management and staffing plan, on-site staff qualifications and experience, technical understanding, operating approach, creativity, clarity of presentation, overall cost and value to the Region.

A detailed assessment was made of the technical proposals submitted by the eight firms and three firms were short-listed as a result of this analysis. These were Professional Services Group, Operations Management Int., and Air and Water Technologies. Reference checks and interviews with each of the short-listed firms led to clarification of the proposals and approach, and an adjusted technical evaluation.

A comprehensive financial analysis of the cost proposals was undertaken, including an evaluation of start-up and normal operating costs and anticipated inflation-related rate changes. Normal inflated operating costs were used as the basis of comparison, and the low bidder received 50 points, a bid 50% higher than that would have received zero points, and all other bids were pro-rated between the two. Professional Services Group (PSG) was the selected bidder even though their operating costs were, by a slight amount (0.2%), higher than the lowest bidder. However, their value factor was indicative of clear, comprehensive performance guarantees, the most experienced operator, large complex plant experience, excellent references, highly qualified on-site staff, the most comprehensive centrifuge maintenance program, unambiguous commitment to meet the terms of the agreement, and the highest level of confidence of the Board.

5.12.4 The Contract

One of the concerns of the Region in privatizing operations was to ensure that the facility operated at high quality standards, minimized potential odour problems, and maintain the effectiveness of the system components. The operating and maintenance agreement, signed April 21, 1992, sets out the requirements of the operator of the facilities.

The operator shall manage, operate and maintain the facilities, including the provision of repairs and replacements, in such a manner as to comply with all the requirements of the Ontario Ministry of the Environment and all statutes and regulations of Canada and Ontario. During the time of commissioning of the facilities, the operator will work with the Region and the construction contractors by providing staff, technical and other support. The operator will assume all responsibilities for the management and operation of each part of the facility as it is released for operation.

The agreement requires weekly review meetings with the Region, monthly meetings and operation and maintenance reports, and an annual report within 30 days after the end of each year. This annual report summarizes the operations during the year, describes all significant events, and recommends modifications to the maintenance program and for capital expenditures for each of the upcoming 5 years.

A staffing plan has been agreed to with specific qualifications laid down for a number of key positions. It is agreed that the staffing plan is necessary to ensure the safe and efficient operation of the facilities, and the operator shall fill each vacancy within 30 days. Failing to do so, the operator agrees to reimburse the Region for $750 per working day for each staffing position that remains vacant beyond the 30 day period.

The operator is responsible for repair and replacement up to a cost of $25,000 per element. Repair and replacement costs of greater than $25,000 may be jointly paid for by the Region and the operator. Other clauses in the agreement refer to hours of operation, safety program, the sludge disposal, facilities and grounds appearance, public relations, operating manuals, standard operating procedures, testing of laboratory analysis, emergency response programs, accounting and litigation support.

The agreement may be terminated by the Region if insurance coverage lapses, if clauses in the agreement are breached and such failures are not rectified within a reasonable time, or if the Region gives the operator 90 days written notice that a termination will become effective. The operator may terminate the agreement if there is a breach by the Region and the Region fails to rectify such breach within a reasonable period of time.

When the agreement terminates, the operator shall return the facilities in the same condition, ordinary wear and tear excepted, as those facilities existed on the date of acquisition. The operator shall assist the Region in

assuming the operation and maintenance of the facilities, and the operator shall be compensated for the unamortized balance of the cost of equipment purchased by the operator in connection with the performance of the services laid out in the agreement. This includes laboratory equipment, office equipment, and vehicles purchased or leased.

The Region is responsible for a management and operation of the rest of the Pickard Centre in such a manner as to comply with the requirements of the Ministry of the Environment. The Region shall also ensure, to the extent reasonably possible, that the Region's activities at the rest of the Pickard Centre do not impede the operator's ability to perform its duties and responsibilities.

5.12.5 Comments

The contracting out of the bio-solids facility has successfully met the needs of the Region to integrate a new facility into their overall wastewater management system as quickly and as efficiently as possible. PSG's experience in operating a variety of treatment systems has proven to be invaluable. They assisted in the commissioning operations of the facility and identified changes which improved the operations. PSG worked in close cooperation with both the Regional personnel and construction engineers to achieve operational objectives quickly and efficiently.

The Region maintains constant and close scrutiny of the day-to-day operations of the facility. The relationship between the Regional staff and PSG personnel is a good one, and the bio-solids facility works as an integral part of the total Pickard Environmental Centre.

One concern that the Regional staff now have is that the cost to the Region may be unnecessarily high. The difficulty was in estimating the operating costs of a new facility, partially based on experience with similar facilities, and in determining necessary staffing and maintenance levels. Staff requirements for certain operations are stated in the contract and it now appears that the system could operate with fewer staff. However, until the contract is amended, the Region must continue to pay for the higher staff levels. Similarly, a maintenance schedule is specified for the centrifuges and it is now apparent that this work could be done less frequently. Moreover, the entire operation has turned out to be cheaper to run than originally expected, but there is no provision in the contract for any profit sharing with the Region.

Dave McCartney, the Manager of the Wastewater Treatment Branch, who has been associated from the beginning with this facility, believes that, at the end of the contract period, it will probably turn out to be cheaper to have one operator, either the Region or a private firm, run the entire system. There is a certain amount of administrative and operational overlap and lack of flexibility in having two operators each run part of an overall system. While the expertise of PSG was invaluable in setting up

the system, it is now becoming apparent that the Regional personnel will have developed the expertise necessary to run a fully integrated system should that be the decision that is made. Mr. McCartney feels that running an integrated system would be more cost effective whether done by the municipality or a private operator. For cost-effectiveness reasons, the contract was ended as of July 1995, and the Region took over the operations of the bio-solids facility.

Mr. McCartney feels that, intrinsically, there is no reason why government cannot run an operation as efficiently and as effectively as a private firm. There is, obviously, a difference of philosophy between government and private operators. While the public sector is often accused of "gilding the lily", there is a sense that one is running a system for the benefit of future generations. Operators can take pride in their contribution to a healthy environment and can see their job as providing benefit to their families and to the community in the future. A private operator is more likely to be concerned about making a profit on an ongoing basis, and hence is likely to take a shorter term view of the importance of the whole operations. It is necessary, therefore, in an operation such as the bio-solids facility at the Robert Pickard Environmental Centre, to put into place both a contract and Regional monitors who ensure that not only are day-to-day operating standards being met, but also the equipment is maintained and renewed as required to ensure that it continues at the same level of efficiency and effectiveness as it began when the private operator took over the facilities. There is always a fear in the public sector that a private operator may, in a short term contract, save money by postponing maintenance costs and essentially "run the operation into the ground" if not closely monitored. Obviously, if the operator is in the business of operating sewage treatment plants and has a reputation to maintain, such lack of maintenance is unlikely to be a problem.

While a well motivated public sector can run the operations as well as a private sector firm, the difficulty with public operations is that, over time, there may be a tendency to become complacent, to lose interest in applying innovations, and to carry out operations accordingly to fairly static operating procedures. Several years ago, the existing regional treatment plant, built in the 1960's, was poorly run and required an overall expenditure of $360 million to fix it up. Employment in the sewage treatment system was then seen as a dead end job with low status due to the perception that the workers were simply "working with shit". Now the workers see themselves as environmentalists who take pride in their operations. The operating environment is pleasant and the workers take pride in their job. However, while the private sector is constantly motivated by costs and is always on the lookout for new procedures or techniques that would provide cost savings, there is no such ongoing external pressure on a publicly run system to maintain a high level of

efficiency and effectiveness. Thus, public sector operations require more emphasis on a management structure which can maintain morale and encourage innovation. Maintaining an ongoing commitment to maintaining excellence in operations is the ongoing challenge for management whether the firm be run by private or public operators.

5.13 SAINTE-MARIE (BEAUCE) WATER TREATMENT PLANT

Municipality: Sainte-Marie-de-Beauce, Quebec

Private sector partner: Aquatech

Nature of partnership: Operation.

Service provided: Water treatment.

Why did municipality seek partnership?: To control costs and gain access to highly qualified staff.

Was partnership successful?: Municipality has avoided the need to acquire additional staff.

How was private partner selected?: Proposal call basis.

Why did private sector get involved?: Aquatech is in the business of operating water and sewage treatment plants.

Savings: Operating cost savings achieved.

Downside: None to date.

Impact on housing: No direct impact on housing supply, but operating costs reduced.

Lessons learned: Smaller municipalities can share technological expertise.

Contact: Mr. Gilles Fortin
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Cité de Sainte-Marie-de-Beauce
Ste. Marie-de-Beauce, P.Q.

5.13.1 Introduction

Sainte-Marie-de-Beauce, a municipality of approximately 10,500 inhabitants, in conjunction with several adjacent municipalities, has retained the private sector firm "Aquatech" to operate its water treatment plant. Aquatech did not participate in the construction nor the financing of the plant as the company specializes in plant operations.

The municipality was responsible for financing and constructing the plant which remains in their possession. Sainte-Marie is also responsible for furnishing all of the required supplies and equipment parts. Aquatech, for its part, provides full-time technical staff to operate the plant. When circumstances make it necessary, Aquatech is also responsible for providing specialized engineering or other highly skilled services required to solve specific operational problems.

5.13.2 Comments

The difficulty for small municipalities is that modern water and sewage treatment plants require a high level of staff expertise, and this expertise is expensive to obtain and retain if carried by only one municipality. Through use of a private sector firm which provides a similar service to a number of municipalities in the area, each of the municipalities is able to share the cost of these highly qualified individuals and gain the necessary expertise.

Another benefit from the standpoint of the municipality is that it no longer has to deal with the administration of the employees operating the plant. The municipality has no over-time payments to make, does not have to deal with specific operating problems which might require expertise beyond that available in the municipal staff, does not have to deal with labour contracts, and is not responsible for ensuring that vacancies are expeditiously filled with qualified personnel.

On the other hand, Aquatech is required, under the provision of their operating agreement, to provide at least one technician having a minimum of 5 years working experience who would be located in Sainte-Marie's treatment plant over the duration of the contract. In this way, the municipality has the guarantee that their equipment will be operated by experienced staff who are well versed in the details of Sainte-Marie's system.

From the standpoint of Aquatech, the more municipalities that it can involve in its operation, the more it can reduce its unit costs and can hire the very specialized workers that are necessary to provide the highest level of service.

Sainte-Marie had recently installed new equipment in its treatment plant and did not have the track record of experience in working with such equipment. Aquatech was able to provide personnel who had experience in the type of equipment installed in the Sainte-Marie plant and was able to ensure that the new components fit into the overall operation of the system with a minimum amount of disruption.

According to Mr. Gilles Fortin, the Chief Administrative Officer of the Municipality, such partnerships as the one between Sainte-Marie-de-Beauce and Aquatech are profitable to small municipalities if the private sector can provide technical staff that is stable and familiar with the equipment, and can also provide the highly skilled professionals which are occasionally needed when specific problems arise. Because the costs of the highly skilled professionals are spread over a large number of locations where the private firm operates, the difficulties of having an unexpected and non-budgeted cost to deal with an operating problem are eliminated by such an agreement.

5.14 HAMILTON-WENTWORTH SEWER AND WATER TREATMENT

Municipality: Region of Hamilton-Wentworth

Private sector partner: Philip Utilities Management Corporation (PUMC)

Nature of partnership: Operate facilities.

Service provided: Water and sewage treatment.

Why did municipality seek partnership?: Economic development opportunities and reduction in costs.

Was partnership successful?: Implementation has just commenced; $500,000 per year to be saved.

How was private partner selected?: Proposal made by Philip Utilities.

Why did private sector get involved?: Needed an operating demonstration project for sales purposes.

Savings and/or accelerated activities: Savings to Region of $500,000 per year and promises of increased employment.

Downside: None to date.

Impact on housing: No direct impact on housing supply, but operating costs reduced.

Lessons learned: Advantageous to combine a number of mutually supportive goals.

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5.14.1 Philip Environmental Inc.

Dr. Stuart Smith, a resident of Hamilton and a former leader of the Ontario Liberal party, entered into negotiations with the Federal government in the mid-1980's regarding the possible privatization of some of the government's research and development activities. One of these research facilities was the Wastewater Technology Centre (WTC) which was established in 1971 by Environment Canada as a research and development laboratory. This facility is situated in Burlington, Ontario on the far side of Hamilton Harbour. The facility is part of the effort being undertaken by

the Governments of Canada and the United States to clean up the water quality of the Great Lakes.

In 1991, the Federal government contracted out the management of this facility to RockCliffe Research Management, a firm set up by Dr. Stuart Smith. This is a minimum 5 year contract extending to 1996. The philosophical emphasis of RockCliffe Research Management is on the operation of sewage treatment processes as a means of improving the overall health of the public. Sewage treatment is then simply a part of a larger emphasis on developing and sustaining a healthy environment. As part of this approach, in 1992 the Wastewater Technology Centre, Mohawk College and Environment Canada launched the Water and Wastewater Technology Training Program. This is a program that offers management and operational personnel training in state-of-the-art technologies and practices and pursues particular philosophies of sewage treatment.

In the early 1990's, therefore, Dr. Smith felt that he had a concept of sewage treatment which included a positive, pro-health approach which would result in higher worker morale, more advanced management practices, and use of the latest computerized and other technologies. Such an approach, he felt, would improve the operations of municipal treatment facilities and could be done so at a reduction in cost. However, he needed a demonstration project to put his philosophy and approach into practice in order to be able to sell the services of RockCliffe Research Management to other municipalities. In this regard, he approached Mr. Wm. McMillin Carson, the Chief Administrative Officer for Hamilton-Wentworth, to discuss his need for a demonstration project.

5.14.2 Regional Philosophy

Privatizing municipal operations is not new to the Region of Hamilton-Wentworth. For over 10 years now, Laidlaw has been responsible for the handling of solid waste in Hamilton-Wentworth, operating both the waste site and the transfer stations. The rates charged are set by the Region and Laidlaw handles the waste that is delivered to the transfer stations by the local municipalities in the Region.

During his time as the Chief Administrative Officer, Mr. Carson had become increasingly aware that changes were required in the way that governments discharged their responsibilities. He had read the book *Reinventing Government*, and had accepted the thesis of that book that government ought to be in the role of steering the boat, not actually rowing it. In other words, the government's role should be to ensure that certain activities are carried out and are carried out properly, but the actual operations could often best be done by private concerns. Mr. Carson had begun, in the early 1990's, to examine the various operations of the Region which could be contracted out to private operations and he had received directions from the Hamilton-Wentworth Council to report back on criteria that one would use to choose which functions to privatize and also to

indicate the process as to how such a privatization would be carried out. One important criterion is that the "public good" must be emphasized.

Also, starting in 1987, the Region of Hamilton-Wentworth undertook a visioning exercise to try to determine how the Region might best develop over the next 30 years. From this developed a document, *Vision 20/20*, which was a result of a public-political process based on an identification and awareness of social, environmental and economic development concerns.

The report, *Directions For Creating a Sustainable Region*, was produced in January 1993. One of the major goals was to improve the quality of water resources, to clean up the lake, the harbour and the waterfront. Another direction related to the quality of life was to focus the health care system onto health promotion and disease prevention i.e. to address those factors in the environment that affect personal health and well-being. Thus, these goals, coupled with the approach put forward regarding the local economy, which included improving the education and skill levels of the local labour force, providing assistance to local business and encouraging and supporting locally owned business, led to an emphasis on an increase awareness of the business opportunities in the environmental sector. Council adopted a policy of assisting in the export of locally developed quality-of-life products such as water, air and soil quality technologies, and recycling programs.

A companion publication produced by the Region in 1993, entitled *Detailed Strategies and Actions Creating a Sustainable Region*, included, in the section dealing with the local economy, such strategies as:

- provide incentives to businesses which produce or service pollution control and prevention products for local consumption and export;
- assist environmental businesses already located in Hamilton-Wentworth to expand and attract business;
- assist local business to export quality-of-life products such as water, air and soil quality technologies, strategies and recycling programs developed in the Region;
- encourage and support research and development activities of local businesses, especially those involved in environmental products; and
- target specific sectors in the economic strategy, i.e. world leadership in pollution control and waste reduction management and recycling.

5.14.3 Proposal

In 1994, Philip Utilities Management Corporation acquired a controlling interest in RockCliffe Research Management, the private sector firm operating the Wastewater Technology Centre under contract. Philip Utilities Management Corporation is a subsidiary of Philip Environmental Incorporated, which is a large international company involved in waste management and sewage and water treatment. Thus, Dr. Smith, now a Vice-President of Philip Utilities, now had the resources of a large corporation behind him and could make a proposal to Hamilton-Wentworth for the type of demonstration program which he had previously wished to undertake.

The Region of Hamilton-Wentworth was very receptive to the proposal from Philip Utilities that they operate and maintain the Region's sewer and water treatment facilities. Philip Utilities is a local company, the Wastewater Technology Centre (WTC) was located on Hamilton Harbour, and Mohawk College, the local community college, was already involved with the WTC in its training courses. The proposal put forward by Philip Utilities stressed the benefits that would be achieved to WTC and Philip Utilities if a successful demonstration project could be run in Hamilton-Wentworth, as this would be used to show other prospective clients the benefits of the Philip Utilities approach. Moreover, Philip Utilities proposed a guaranteed $500,000 annual saving in the Region's $17 million budget for operation of the water and sewage treatment facilities.

Philip Utilities also proposed that they would agree to invest $15 million in the Region over the next 10 years, that they would bring the headquarters of Philip Environmental Incorporated to Hamilton, and that they would employ at least 100 persons in Hamilton-Wentworth over and above those that they would employ in maintaining the Region's facilities. Thus, the desire of the Region for economic development improvements and the need of Philip Utilities to present an operating system led to a mutually attractive proposal.

Given the circumstances, the Regional Council agreed with the sole source approach and set up three committees to deal with the negotiations. These were a political Steering Committee, with the Regional Chairman as the Chair; a Coordinating Committee, with the Chief Administrative Officer as the Chair; and a Negotiating Committee with a lawyer as the Chair.

In its review of the present operations, Philip Utilities discovered that the existing publicly run operation is not as inefficient as they had first thought it would be and realized that they would not be able, in the first few years, to actually save the $500,000 per year that they had predicted. Nevertheless, they agreed to their original proposal, even it cost them money, as they saw that the demonstration project would be worthwhile to them in selling their techniques and technologies to other communities.

They also proposed to examine a variety of new techniques to both cut costs and to find new markets for some of the by-products of the operations of the system. For example, there is presently a proposal being considered to sell some of the sludge created in the treatment operations to a firm which has a process to mix the sludge with mine tailings so as to produce soil which can support plant growth. In fact, the contract between the Region and Philip Utilities provides that the Region will share in any additional profits from the operation of the treatment facilities beyond a certain agreed upon level.

5.14.4 Fairness Audit

With the sole source approach to the negotiations, there was not a competing bid that could be compared to the proposal by Philip Utilities. Thus, at the time that the Chief Administrative Officer was instructed to undertake exclusive negotiations with the appropriate representatives of Philip Utilities Management Corporation (PUMC), the Region also authorized the issuance of a Request For Proposal for the hiring of a qualified consulting firm, at a cost not to exceed $100,000, to safeguard the interests of the Region and to assess the adequacy of the proposal. This consultant was authorized and instructed to comment directly and independently to the appropriate Committee of Council upon the completion of the final joint venture proposal.

KPMG Management Consulting, in association with R.V. Anderson Associates Limited and Bordon & Elliott, assisted the Region of Hamilton-Wentworth in its negotiations with Philip Utilities. The negotiations between the Region and PUMC, carried out under the direction of the Council resolution of April 19, 1994, led to the development of a Statement of Requirements by the Region in August 1994, and a proposal by PUMC in response to the Region's requirements dated September 12, 1994. The report by KPMG Management Consulting et.al. on the "fairness" of the proposed arrangements was submitted on September 19, 1994.

The scope of the KPMG review of the proposed arrangement was limited to its "fairness" from the Region's perspective; the consultants were not asked and did not assess whether the proposed arrangement is "fair" from PUMC's perspective, nor whether the proposed arrangement is the "best" arrangement that the Region could enter into.

The consultant reviewed a number of other contracts for the management and operations of water and/or wastewater treatment facilities in 14 other locations, all of them in the United States except for one in San Juan, Puerto Rico. They examined the terms of the contracts in each example, described the facilities, outlined the scope of services, discussed the acquisition and disposition of assets, the normal and abnormal maintenance requirements, the type and level of compensation, the economic, community and industrial development aspects, and liability insurance and

indemnification. These were all compared to the proposed arrangement between the Region of Hamilton-Wentworth and PUMC.

The consultants concluded that each situation is unique and that there are significant differences in the cases they reviewed among the objectives of the public sector bodies, the constraints imposed on the operators, the size and scope of the facilities, and the operational conditions of the facilities. Specifically, they noted that the proposed arrangement between Hamilton-Wentworth and PUMC differs from most of the other transactions because of its greater focus on economic development objectives and by the constraints on PUMC regarding the company's ability to downsize the transferred labour force.

Their conclusion, based on the research undertaken as well as their consultant's knowledge of other relevant transactions not involving water and wastewater facilities, was that the proposed arrangement between the Region of Hamilton-Wentworth and Philip Utilities Management Corporation falls within the range of outcomes that could reasonably be considered to be "fair" to the Region.

5.14.5 The Final Recommendation

Philip is responsible for transferring the operating staff and maintaining the current contract for 2 years. Any downsizing in staff is to be accomplished only by attrition. The unionized staff must not be put in a disadvantage position vis-a-vis staff of the Region of Hamilton-Wentworth as a result of their move to Philip Utilities. In fact, due to a profit sharing plan that has been set up by Philip Utilities, the employees will actually benefit from the transfer.

The present water and wastewater technology training program, run in conjunction with Mohawk College, will be expanded and an International Training Centre in Hamilton-Wentworth will be established using the present facilities as a base. This facility will not only assist in training and upgrading the skills of the staff transferred to Philip Utilities, but will also provide them the opportunity of assisting in the teaching of students at the College.

Philip Utilities Management Corporation will be supported by CIBC Wood Gundy Capital and are cooperating with Black and MacDonald Group Limited, who are facilities management experts. Philip Utilities Management Corporation (PUMC), which operates the Wastewater Technology Centre of Environment Canada, is wholly-owned by Philip Environmental Incorporated, which is the largest recycler of commercial and industrial waste in Canada. The Region will continue to own all of the facilities, but PUMC will operate them using the currently employed staff and augmented by specialists from the WTC, Black and MacDonald, and Philip Environmental. The financial backing of CIBC Wood Gundy

would permit the Region, if it so wished, to have PUMC finance and carry out capital improvements to the system as may be required.

The contract guarantees an annual savings of $500,000 per year, adjusted for inflation for the life of the 10 year contract. An additional $203,000 per year, also adjusted for inflation, is to be paid to the Region to fund administrative overheads in the Environmental Services Department and to pay for the cost of a Contract Coordinator. This coordinator will be a senior engineer who will monitor the operations of the plants and the standards of maintenance as required in the contract. In addition, in the first 3 years of the contract the Region will receive an additional $87,000, $58,000, and $29,000 respectively in each of the 3 years to offset the overhead cost being transferred to PUMC for services now provided by the Finance, Human Resources, Legal and Purchasing Departments.

The profits of the operation are distributed in a number of ways. From the gross operating profit (the Region's existing operating cost (indexed) as revenue minus the cost of operations), the City receives the $500,000 (indexed) yearly guarantee of reduced cost plus the $203,000 (indexed) yearly for payment of administrative overhead. In years 1, 2 and 3, the City also receives $87,000, $58,000 and $29,000 per year respectively extra as transition costs. The result after these payments is the net operating profit and cannot be less than zero or else PUMC must make up the shortfall. Assuming there is a net operating profit, 15% is distributed as profit sharing to the employees. If the remaining 85% of net operating profit is less than or equal to $1 million, it all goes to PUMC; if greater than $1 million, the first $1 million goes to PUMC and the remainder is shared 60% by PUMC and 40% by Hamilton-Wentworth Region.

PUMC and Philip Environmental Incorporated (PEI) also agree to construct a 15,000 ft^2 to 25,000 ft^2 office building in the Region commencing by January 1996. One hundred full-time jobs are to be created in the Region within 5 years and, for every job not created, Philip will pay a $10,000 penalty. PEI and PUMC also agree on a minimum spending of $15 million in new capital in the Region unconnected with the Region's wastewater and water treatment facilities over the next 5 years. PUMC will also assist the Region's Economic Development Department in local business development and will provide matching funds, up to $2.5 million, for venture capital in environmental research and development capital partnerships.

The contract is a 10 year contract for the management and operation of the Woodward Avenue water and wastewater treatment plants, and the Dundas and Waterdown treatment plants, and a separate renewable 2 year contract for the day-to-day operations and maintenance of the pumping stations and the high lift pump at Woodward Avenue. The separate pumping station contract provides for the Region's continuing managerial responsibilities for these facilities.

To minimize risks to the Region, payments would be made one month in arrears; Philip Utilities will post a $5 million performance bond; Philip Utilities will maintain $20 million in environmental liability insurance; there will be an annual review of performance, including economic development initiatives; and all employees currently employed by the Region will continue to be employed by Philip Utilities.

The Region will retain its discretion as to whether or not to introduce capital improvements to the facilities. Philip Utilities will maintain the same level of service as the Region presently achieves, the Region will remain as the liaison with the Ministry of Environment and Energy, and will continue to enforce and monitor its Sewer Use By-law and will still receive revenue from its Over-Strength Discharge Agreements.

At the end of the contract period, all of the facilities will be returned to the operations of the Region in the same condition that they were received. Any and all capital expenditures must be approved by the Region. Capital investment projects proposed by Philip Utilities for the purpose of achieving cost savings can be rejected by the Region and where the Region rejects such proposals, Philip Utilities may install them at its own cost. All capital investment for the purpose of demonstrating advanced treatment or operational techniques will be the responsibility of Philip. The Region will be responsible for the cost of equipment made necessary because of failure of the present facilities and will also be responsible for capital investment necessary to meet performance levels beyond those presently in place resulting from changes to laws, regulations, government policies or enforcement practices.

There had been some discussion about Philip Utilities only running part of the system and not being responsible for the major water pumping stations. Philip's conclusion was that it would be more expensive overall if they only managed part of the system rather than the entire system. Staff are integrated and, from time to time, serious problems could arise that would require the resources of the entire maintenance team. Integrated maintenance of the entire system provides flexibility without incurring significant over-time costs. In addition, one of Philip's major thrusts is to reduce the costs of electricity. The pumping stations account for 31.8% ($1.6 million out of $5.1 million) of the total hydro cost. The greater the amount of electrical cost managed by Philip Utilities, the more likely it

will be able to negotiate a better price for electricity, or a more cost effective supply arrangement with an alternative supplier.

5.14.6 Conclusion

The environmental industry is one of Hamilton-Wentworth's major hopes for renewed prosperity. The world market for environmental services is measured in the hundreds of billions of dollars, and this market is now dominated by French and U.K. companies due to the fact that those countries have employed private firms to operate municipal sewage and water works for some decades.

RockCliffe Environmental, now controlled by Philip Utilities Management Corporation, has had a successful experience in introducing the private sector to a previously public sector operation. As the staff at the Wastewater Technology Centre of Environment Canada had learned, working with a private sector firm can be a very broadening experience and can add flexibility and variety which are frequently absent under strict public sector rules.

The proposal by Philip Utilities to operate the water and sewage treatment facilities was seen by Hamilton-Wentworth as having three key points: the development of a successful international utilities management company based in Hamilton-Wentworth; economic benefits to the Region, its employees, and local institutions and firms that would be directly involved in the project; and cost savings to the Region in the operation of its treatment facilities. Philip Environmental would locate its new head office in the Region and expects to reach between $200 and $300 million a year in revenue within 5 years. Additional investments by Philip Environmental would also take place in the Region and more jobs would be created.

Thus, in the final analysis, the operation of the sewage and water treatment facilities themselves is not the main focus of this contract. The Region sees economic development benefits and the establishment of Hamilton-Wentworth as a major player in the world economy for environmental matters. Philip Environmental sees the operation as a means of demonstrating and refining their techniques and technologies in order to increase the total size and scope of their business. This bringing together of a number of goals has made it possible to construct an agreement where everyone benefits.

5.15 LAVAL WASTE MANAGEMENT

Municipality: Laval, Quebec

Private sector partner: To be determined.

Nature of partnership: All matters related to the management of solid waste.

Service provided: Waste management.

Why did municipality seek partnership?: Increase its flexibility in dealing with waste management concerns and to open up the possibilities of participating in profit-making ventures.

How was private partner selected?: Selection process underway.

Impact on housing: No direct impacts on housing supply or cost.

Contact: Mr. Claude Asselin
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Laval, P.Q.

5.15.1 Introduction

The City of Laval, Quebec, with approximately 330,000 inhabitants and located immediately north of the island of Montreal, has, for many years, utilized private sector contractors to aid in the collection of garbage. Recently, however, a bill was passed by the Quebec National Assembly which provides Laval with the powers to enter into a variety of partnership agreements with private enterprises to deal with all aspects of waste management.

5.15.2 A Law Concerning the City of Laval

The law was given final approval in June 1994. It allows the City of Laval to enter into an agreement with a private partner for part or the whole process of waste management, including recycling and disposal of waste.

Laval can create a conventional, i.e. profit-making, company in partnership with one or more private sector concerns. The City of Laval must always hold the majority of the voting shares of the company, City Council members must form the majority of the Administrators of the Board, and the Chairman of the Board must be a City Council member. Once created, the municipality can sign a contract with the new company to deal with any matters related to waste management. The company created can, in turn, hold shares of other companies as long as the other companies are involved in some aspect of waste management. As part of its business, Laval can acquire land or buildings and can sell or rent these pieces of real estate to the company created.

The new company is subject to the regular laws covering incorporated companies in Quebec and, as well, its actions must be approved by the Minister of Municipal Affairs. The time limit of any agreement between the City and the company cannot exceed 10 years. Furthermore, the rates charged by the company must, themselves, be approved by the City Administration.

The company created must provide, annually, financial statements to the Minister of Municipal Affairs regarding its budget, financial statements and other financially related documents which may be demanded by the Minister. Furthermore, the company must maintain an insurance policy covering the responsibilities of its Administrators.

5.15.3 Comments

The City of Laval had originally wished to obtain extended powers in order to develop partnership agreements with private enterprises in a wide range of activities. The final bill, as passed, limits Laval's powers to waste management only. The municipality had felt that it would have more flexibility in the way it provided services to its citizens if its powers were extended to permit a variety of partnership agreements and types. In addition, Laval felt that it would have greater access to new financing possibilities as the private sector partner could provide financing in return for a 10 year contract which would permit it to recover its investment. Such partnership agreements would also permit Laval to work closely with a private firm which was experienced and efficient in one or more of the activities or functions that Laval would normally undertake. Thus, such a partnership would provide an ability to learn new techniques and technologies, and would provide for the transfer of such information to the City's Administration.

At this point in time, the City of Laval is planning to enter into a partnership in conformity with its new powers, but nothing has yet been made public.

5.16 SAINT-HYACINTHE WASTE COLLECTION

Municipality: Saint-Hyacinthe, Quebec.

Private sector partner: Three local garbage collection firms.

Service provided: Garbage collection.

Why did municipality seek partnership?: Municipality has never offered garbage collection service.

Was partnership successful?: For a number of years, yes; recently concerns about rates and quality standards have arisen.

How was the private partner selected?: Self-selected providers of a service chargeable to individual households.

Why did the private sector get involved?: To make a profit providing a needed service.

Savings: Municipality is not required to spend the money on garbage collection.

Downside: Concerns about the cost and quality of services.

Impact on housing: Housing costs or supply not directly affected.

Lesson learned: Some degree of public control is necessary to regulate private sector operations.

Contact: Mr. Alain Rivard
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Cité de Saint-Hyacinthe
St-Hyacinthe, P.Q.

5.16.1 Introduction

The City of Saint-Hyacinthe has never provided garbage collection service. In 1986, Saint-Hyacinthe annexed two adjacent municipalities which, at the time, offered garbage collection service through agreements with private firms. According to Saint-Hyacinthe policy, these agreements were not renewed when they expired, and the citizens then had to deal themselves with private firms in order to obtain garbage collection service. There does not appear to have been any problem at the time, and the privatization of the service to these two new neighbourhoods took place smoothly.

The municipality has a by-law which requires that each household is responsible for the disposition of its own garbage. The service is offered in the municipality by three, small size, local enterprises. These firms set both the level of service, i.e. the collection schedule, and the rates to be

charged. No large waste collection firm has attempted to enter the market in Saint-Hyacinthe and this may be due to the fact the present system requires that the operator contract with each household and bill each household individually.

The illegal disposition of garbage does not appear to have been a major problem in Saint-Hyacinthe. One might fear that people would dispose of garbage illegally in order to avoid paying the collection charge, but there has only been one infraction to the Waste Disposal By-law recorded. The system, in other words, works well even though the municipality is not involved.

5.16.2 Problem

Recently, a Regional Waste Management Administration was set up in the Saint-Hyacinthe area. This authority groups twenty-one municipalities, including Saint-Hyacinthe, in an area with a population of 71,000 persons. While this Administration is related to disposal and not garbage collection, it raised the question to the City as to its procedure of privatizing the collection system. In reviewing garbage collection activities in other municipalities, the City concluded that most of the citizens of Saint-Hyacinthe currently pay more for garbage collection than they would have to pay if the City were to offer the service. In addition, the present rate structure creates a lack of uniformity between the rates charged for households in different parts of the municipality. The rates at the present time also are not scaled to adequately reflect the number of dwellings in a multi-unit building, nor to the type of household user, i.e. a family versus an elderly person.

Being aware of the problems of the present system, the City is now considering two options:

- The first is to take over the operation of garbage collection as a public utility and then to ask for tenders from firms to provide the garbage collection service and to sign a contract with the municipality. It is expected that the lowest offer would likely come from a large waste collection firm from outside of the Saint-Hyacinthe area.

- The second option is to obtain a commitment from the local firms that are now offering the service that they would reduce their rates, create a more uniform rate structure across the municipality, and reflect differences in demand levels in the way those rates are set.

The City has a preference for the second option since they wish to help local enterprises. The City also wishes to develop a local partnership that will produce the expertise and cooperation necessary for recycling programs. The problem, however, is that the municipality cannot conduct

any real negotiations with the three existing firms, nor sign any agreement with them without first asking for public tenders. In other words, the commitment to apply reduced and redistributed collection tariffs must be undertaken voluntarily by the firms concerned.

If the local firms are prepared to undertake necessary changes in their rate structure, the municipal by-law presently requiring that each household be responsible for waste disposal will be amended to further regulate time and location for pick-ups and disposal, and will require that households enter into contracts with disposal firms regarding the actual collection of refuse.

If the local firms fail to voluntarily comply with the municipality's expectations, then the City will have to fall back on option one, make garbage collection a public service, add the costs onto the tax rolls, and call for public tenders to carry out the actual garbage collection.

5.16.3 Summary

In summary, the complete privatization of garbage collection permits a municipality to save the entire cost of the service and provides maximum flexibility by permitting a level of competition amongst competing companies. However, it is not necessarily the case that such competition results in lower costs to the homeowners than would be the case if the municipality were responsible for city-wide collection of refuse. In fact, the municipality cannot leave the garbage collection field altogether; because of health and sanitation reasons the municipality has to ensure that all of the garbage from each property is, in fact, properly disposed of. Thus, no household can opt out of the service and the supplier, or suppliers, of the service have a captive market. While competition amongst a number of suppliers of the service can avoid excessive profits, there is no real incentive for firms operating in a business to engage in aggressive price competition. Moreover, there may be concerns that the rates charged, while fair overall, do not reflect either ability to pay, or differences in volume, or other factors.

5.17 HALTON REGION

Municipality: Regional Municipality of Halton, Ontario.

Private sector partner: None identified at this time but could include private sector and Province.

Nature of partnership: Financial.

Service provided: Water and wastewater infrastructure.

Why did municipality seek a partnership?: Municipality could not finance the high initial costs through development charges and Council would not increase taxes on existing taxpayers.

Was partnership successful? Approach is still in the conceptual stage.

How was private partner selected?: Municipality would likely invite competitive bids from private sector, while actively soliciting Provincial contribution.

Why did private sector get involved?: A private sector partner would conclude that its potential return on investment was worthy of the risk. The Province might get involved to achieve policy objectives.

Downside: Not known at this time.

Impact on housing: Impact on housing supply, cost and taxes are not known.

Lessons learned for future partnerships: Very large capital projects such as the $550 million Halton Water and Wastewater infrastructure program may require provincial participation as well as private sector partners, which will protract the process.

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5.17.1 Background

Much of the following description has been adapted from *Financial Analysis, Implementation Plan & Final Recommendation, Halton Urban Structure Review Phase Two Study,* Halton Region, June 1994.

The Region of Halton, west of Toronto, includes the municipalities of Oakville, Burlington, Milton, and Halton Hills (Georgetown). Unlike other regional municipalities in the Greater Toronto Area, Halton has not been a

beneficiary of major Provincial expenditures in servicing and transportation infrastructure.

When in 1974 Halton assumed responsibility for water and wastewater services, it inherited three stream and well-based systems in its northern urban areas, and fragmented systems in Burlington and Oakville. All systems were at or near their operating capacities.

During the 1970s expansions to the water and wastewater servicing systems to facilitate growth in the region were essentially incremental in nature and were largely financed through debentures, user rates and the tax base.

Following decisions of the Ontario Municipal Board (OMB) which expanded the urban areas of some municipalities, Halton utilized front end financing which was utilized during the 1980s to finance more than $70 million of water and wastewater infrastructure.

After the mid 1980s demand for additional growth areas, combined with servicing capacity limitations, as well as other planning issues convinced Halton Council that a comprehensive urban structure review (HUSR) was required. The Phase One Study investigated a number of growth scenarios, concluding that the best option was the expansion of the existing Milton Urban area central around the existing core, followed closely by the southern part of Halton area between Highways 5 and 403 (excluding the already designated Alton Community in Burlington).

The Phase One Study identified a number of servicing options but concluded that further studies would have to be done under *The Environmental Assessment Act*. For its part the Ministry of the Environment indicated that commitment to the lake-based (Lake Ontario) system would be required before approvals for system expansion would be granted.

In 1989, Halton Council decided to embark on a HUSR Phase Two Study in the Milton and North Oakville/Burlington areas. It is important to note that a financial analysis had indicated that the costs of the water and wastewater infrastructure required for development were more than Halton could finance on its own. There was a need, therefore, to prepare a comprehensive fiscal impact assessment. In this regard Halton Council determined that no development approvals would be considered in the Phase Two Study urban areas without the necessary commitments to financing the infrastructure needs without impacting on the existing residents and taxpayers in Halton.

5.17.2 Seeking a Solution

5.17.2.1 Financial Analysis

In 1994, a Financial Analysis, Implementation Plan & Final Recommendations were completed as part of the HUSR Phase Two Study process. The financial analysis addressed the affordability of the water and wastewater infrastructure by reviewing capital and operating cost implications, identifying the level of financial burden placed upon Halton residents through user rates, and the potential impact on developers through development. Alternative ways of financing the HUSR Plan were also examined.

The total capital cost of providing water and wastewater infrastructure necessary to service the target growth on the HUSR Plan is $550.4 million ($ inflated). More than half ($291 million) must be expended in the first five years (by 2000). However, it is anticipated that development will proceed such that additional housing units and non-residential growth will not begin until 1998.

The HUSR Plan assumes population growth within Milton and North Oakville of 100,000 by the end of 2011. Employment and commercial demand that should support the release of almost 50 million additional square feet of non-residential construction.

A very significant challenge confronting Halton is that very considerable expenditures must be made before development can occur. In the event that development does not occur at the pace projected, then existing rate payers could incur substantial rate increases.

Another important factor in the Halton context is the portion of total development assigned to the non-residential sector. The allocation for non-residential is 55% for water and 50% for wastewater. This compares to a current Region-wide allocation of only 30%.

5.17.2.2 Fiscal Impact Analysis

The fiscal impact analysis indicated the requirement for a residential development charge of $5,839 per single family residence in the growth areas (vs. current $2,710) for water and wastewater; and non-residential development charge of $6.08 per sq. ft. (vs $1.65 sq. ft. elsewhere in Halton which was recently reduced by 15% to $1.46 per sq. ft. to enhance economic competitiveness).

Even if the Region recovers full development charges, there still remains the timing difference between the expenditure for infrastructure and the release of new development. In addition, once development is released, the debt charges to be funded from development increase over time such that development charge revenues would not always be sufficient to fund debt charges on an annual basis. For this reason, Halton would have to

fund development charge shortfalls on an interim basis until sufficient revenues materialize. The funding of these shortfalls would be most pronounced on non-residential debt charges.

The fiscal impact analysis determined that the HUSR Plan could be self sustaining with 2-5% increases (above the rate of inflation) in the Region-wide user rate in the first five years, assuming the Region could address short-term financing requirements during this period. However, this is based on three crucial assumptions: the Region can collect full-recovery development charges; the HUSR Plan growth assumptions occur; and the water and wastewater user rate revenue (particularly non-residential) will materialize in accordance with the flow projections in the engineering forecast.

In summary, the analysis shows that, in the absence of external funding/assistance, conventional financing would result in the following impacts:

- by 2010, the annual debt charges for the infrastructure would grow to $64 million, which compares to the Region's debt charges for existing water and wastewater infrastructure of $13 million. However, if the development materializes as planned, $58 million of this amount will be financed from development charges;
- the HUSR non-residential sector would be required to sustain water and wastewater revenue at twice the amount of the existing non-residential base; and
- the required level of debt would be five times the Region's current level.

The fiscal analysis included a number of sensitivity analyses. Regardless of the method pursued, a capital infusion of some $250 million would be necessary in the early stages of the Plan.

5.17.3 Private Sector Approach

Halton carried out an assessment of the possibility for private sector involvement in the provision of the infrastructure.

The examination concluded that this type of project appeals to organizations (or consortia) that are interested in deal-making and are prepared to accept above average risk in a project, with the expectation that they will earn an appropriate return for taking the risk.

In many arrangements, the private sector capital comes mostly from fixed income financing (similar to debenturing) as opposed to equity (e.g. shares) financing. However, for this project a significant contribution of equity may be required. Accordingly, a prospective proponent would be prepared to accept a high degree of risk; and would have the financial strength and capacity to contribute significant equity to the project.

The standard approach in evaluating risks and returns is to construct a cash flow model that identifies all of the inflows and outflows (both operating and capital) associated with the project to determine what the likely net cash flow will be to the investor. Risk is evaluated by conducting sensitivity analyses to test the impact on the net cash flow of various unfavourable (and favourable) scenarios.

Although the investor is in the business of taking risks, not all risks are acceptable. For example, the investor will have no control over the amount of development charges or planning/EA approval, and may therefore try to hedge against risk through a guarantee or other mechanism for passing this risk back to Halton, or may alternatively build in a sufficiently high risk premium and/or contingency in their proposal.

In this particular undertaking, it was concluded that Halton is in a position to mitigate certain risks in a partnership with the private sector (e.g. ensure development charge rates, negotiate a streamline of the EA process, etc). Mitigation of these risks would result in a coincident lowering of the rate of return needed for the private sector partner to view this opportunity as attractive.

It was concluded that the private sector would not achieve its target rate of return on investment without an upfront cash contribution (with no requirement to pay a return on that contribution) from the Region or an external source.

5.17.4 Role of the Province

Halton has concluded that an external funding partner, the Province, is required for its water and wastewater management plan to be achieved.

5.18 WINDSOR TUNNEL

Municipality: Windsor, Ontario

Private sector partner: Windsor-Detroit Tunnel Corporation

Nature of partnership: Build and operate.

Service provided: Road tunnel.

Why did municipality seek partnership?: Private sector prepared to fund the cost of construction of the tunnel, operate, and transfer to City.

Was partnership successful?: Tunnel built and operated for 60 years; problems only occurred at the end of the agreement period; but in the end, the transfer to the City was made.

How was private partner selected?: Private partners approached the City for the necessary permission to construct the tunnel.

Why did private sector get involved?: Toll operations on an international tunnel were seen as a profit-making venture.

Downside: Inadequate maintenance, particularly in latter years of the contract; legal battle to gain municipal ownership.

Impact on housing: No impact on the supply or cost of housing.

Lessons learned for future partnerships: Must clearly specify maintenance requirements in the original agreement; also helpful for municipality to own the land with private sector operation, as opposed to private sector owning the land with a promise to transfer at the end of the agreement period.

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5.18.1 Introduction

In the late 1920's, a group of businessmen in the Windsor-Detroit area concluded that a tunnel connecting the two cities would be a profitable enterprise. As such a tunnel would go under city streets and would connect at either end into the city road system, an agreement was needed with the respective cities to permit the tunnel to be constructed. The cities did agree to the undertaking and an agreement was signed which permitted the tunnel to be constructed and to operate under city streets and other public land. The agreement was limited to 60 years, at the end of which

time the tunnel ownership would revert to the Cities of Windsor and Detroit. This ownership was to include all the lands and buildings and equipment associated with the tunnel and there would not be any payment or compensation from the municipality to the Tunnel Corporation at the end of the agreement.

The opening of the tunnel was November 3, 1930. Under the terms of the agreement, Windsor and Detroit would gain ownership of their respective halves of the tunnel on November 3, 1990. The agreement was very sparse in comparison to present-day agreements and at the time that it was signed, 60 years was seen to be almost forever.

5.18.2 End of the Agreement

Approximately 15 to 20 years ago, developers in Detroit were in the process of finalizing their designs for the Renaissance Centre which is next door to the Detroit-side plaza entrance to the Windsor-Detroit tunnel. Those developers required some concessions from the Tunnel Corporation for their construction. As a result of these negotiations, a new agreement was struck that extended the Tunnel Corporation's operation on the Detroit side for an additional 20 to 40 years. No such extension to the agreement took place regarding the lands on the Windsor end of the tunnel.

In 1985, Windsor formally informed the Tunnel Corporation that it did, in fact, wish to exercise its option and to acquire ownership of the tunnel in 1990. The Tunnel Corporation attempted to persuade the City that it ought not to acquire the tunnel as it would be a drain on the City's resources. The Tunnel Corporation mounted a lobbying effort to attempt to persuade the City not to exercise this option. They also argued that the original agreement was neither valid nor enforceable and, as a result, the City of Windsor undertook a legal battle to have the agreement enforced. During this time, a variety of cosmetic repairs were undertaken by the Tunnel Corporation at the U.S. end of the tunnel, but a similar investment did not take place on the Canadian side.

The tunnel was never the money-maker that the businessmen had first envisaged. Being constructed between 1927 and 1930, it coincided with the beginning of the Depression. During the 1930's and the later war years, there was not a surplus of funds available to carry out major maintenance on the tunnel. By the late 1980's, the electrical, mechanical and ventilation equipment was nearing 60 years of age, some parts of the tunnel had deteriorated, and there were areas of the property that were roped off for safety reasons. It was only in the 1970's, with a significant increase in cross-border shopping, that the tunnel became a profitable undertaking. Thus, the Tunnel Corporation was not pleased to have to turn over the entire undertaking to the City of Windsor for no compensation just at a time when it was becoming profitable.

In the late 1960's and early 1970's, the Tunnel Corporation had bought

other parcels of land in Windsor, remote from the Tunnel Plaza itself, for such activities as truck custom clearance and other truck operations. When the Tunnel Corporation resisted the City take-over, the City took the position that all of the Tunnel Corporation's assets, including the remote lands, should be turned over to the City along with the tunnel. Of ten remote sites, the trial judge awarded the City the ownership of eight of them and later, after an appeal was heard, the City received one more. Thus, the City gained ownership of several pieces of land, including a duty-free shop, customs and maintenance building, toll booths, ventilation buildings, etc., but the equipment and condition of the premises were not in the state of repair that the City would have wished.

5.18.3 Comments

As a result of the experience with the tunnel, the City of Windsor has become convinced that a technique must be put in place to ensure a high level of maintenance of facilities in those instances where the transfer of ownership to the City will take place at the end of an extended period of time. Even in the cases where ownership of a facility is transferred to the municipality at the beginning of an operating contract, it is still necessary for the municipality to put into place a procedure that will ensure that the required maintenance is undertaken.

Such techniques include a clear description in the agreement of what facilities will be maintained and to what standards that maintenance will be carried out. A City employee is given the responsibility to monitor the operation to ensure that the maintenance schedule is being met. Penalties, payment hold-backs and agreement termination are the types of penalties that can be invoked should the maintenance not be carried out in the prescribed manner. In addition, a sinking fund can be set up in order to provide a pool of money necessary to make major repairs and equipment replacement which, from time-to-time, are required.

Not having ownership of the facility compounded the difficulties that Windsor faced in the Tunnel Corporation case. Because of an argument that the original agreement was flawed and that, therefore, the Tunnel Corporation was not required to turn over the assets to the City, the City had to undertake a lengthy and costly court battle. Obviously, the circumstances attendant on the ending of a contract must be clearly delineated in the agreement. The City's position would have been strengthened had they owned the tunnel and had the Tunnel Corporation been simply given the right to operate the tunnel and collect toll fees for a given length of time.

The acquisition of additional assets by the Tunnel Corporation to carry on facilities which, while not part of the tunnel, were nevertheless related to trans-border truck movements, introduced further uncertainties into the Windsor case. Agreements must specify what activities the private sector firm can undertake in relation to the agreement, particularly in regard to

the purchase of real property. If such property is to be transferred to the City at the end of the agreement, then the agreement should clearly so specify.

In summary, Windsor has had the experience that few other cities have had: a public-private partnership has been entered into, it has run through the agreement period, it has come to an end, and the assets have been transferred to the city. As such, the lessons that Windsor learned should prove valuable to other municipalities. A carefully thought out agreement dealing with maintenance, amongst other matters, needs to be put into place. Responsibility for repairs, staffing levels, statutory and regulatory concurrence, and the disposal of assets at the end of the agreement all need to be considered at first.

6.0 EVALUATION

6.1 INTRODUCTION

The art of government in a western democracy, particularly a pluralistic society such as Canada's, is a difficult one. People have competing objectives and priorities, and all wish the government to, as closely as possible, follow their agenda. Programs desired can include: roads; sewers; recreational facilities; police and fire protection; education; health care; welfare; and regional economic development.

The main difficulty that governments face is how to pay for all these programs; making priority decisions amongst competing demands and doing so in a way that does not alienate either those whose demands are not met, nor those who are concerned that they are paying for services they neither want nor need. Rather than having to choose between financially demanding programs, it would be easier if somehow all could be funded and this funding done in such a way so as not to lose votes from those who would be concerned about increased taxes. Fortunately, for many years there has been a way.

6.2 DEBT

The concept of borrowing money to invest in an enterprise that will return an ongoing benefit is both logically and fiscally attractive. The return on the investment has to be sufficient to cover the cost of borrowing the necessary money as well as providing a return commensurate with the risk involved. Municipalities have, for a long time, borrowed money to invest in major facilities such as arenas, roads and sewer and water systems, and then have repaid the bonds issued for such purposes over a 20 or so year period. Such borrowing and subsequent repayment over time can be justified on the grounds that those who pay are the beneficiaries who, in the years ahead, live in the municipality and utilize the roads, arenas and water and sewage facilities so funded.

While debt financing is limited for municipalities to the purchase and construction of capital facilities, the same limitations do not apply to senior levels of government. Increasingly over the last several decades, senior levels of government have responded to the conundrum of how to fund programs while not increasing taxes by borrowing money such that future generations will be called upon to pay the bills. Unfortunately, there is a difference between borrowing for capital investments and borrowing for current expenditures. Capital investments benefit the area served over the length of time that the money is repaid. Borrowing for current expenditures simply provides benefit to people today, while forcing future residents to pay for a service which provides them no benefit as it was undertaken, ie. consumed, years before. The other problem with borrowing for current expenditures is that the problem or demand is not resolved once the payment has been made. There is an ongoing need for such expenditures.

Thus, borrowing for current expenditures locks the government into a constant cycle of having to continue to borrow if the government is going to continue to provide the same level of services without raising taxes. Moreover, as time goes on, the government's ability to fund new and ongoing programs is eroded as the expenditures on repayment of previous debt continue, year by year, to increase. Thus, at some point in time, senior levels of government are forced to either curtail expenditures on programs or to raise taxes.

Now, strapped for cash, senior levels of government are both down-loading responsibility of programs to more junior levels of government and looking to the non-government sector to provide assistance in raising revenues and reducing expenditures.

6.3 PRIVATE SECTOR INVOLVEMENT

To some degree, the interest in the private sector's operations is based on the belief that the private sector has found a way to do things cheaper and faster than government while simultaneously making large profits.

But why should private firms be able to carry out a function faster or cheaper than government? Governments, because of their size and ability to control, to a large degree, their revenues and expenditures, can borrow money at a lower rate than can private firms. It is true that, in some instances, a private firm may be able to take advantage of capital cost depreciation, but this is not really a source of funds. Rather, it is simply that private firms pay taxes while government agencies don't, and private firms may, therefore, be able to reduce taxes paid through capital cost allowances, or other means, while government agencies, who don't pay taxes in the first place, cannot avail themselves of such reductions. In fact, the use of capital cost allowances or other write-offs in programs and projects paid for by municipal levels of government is simply a transfer of funds from federal and provincial levels, through a reduction in their revenues, to municipal and regional levels.

The ability of the private sector to carry out operations more efficiently is also not related to the calibre or abilities of the work force. In instances such as Hamilton-Wentworth's sewer and water systems, a private firm proposes to take over and employ existing civil servants and to do so at less net cost to the municipality than their present operations.

The difference between the two sectors is generally not related to lower input costs. Purchases of supplies and services by government agencies are usually no more expensive than by private firms. In fact, large government agencies may be able to purchase supplies at a lower price than small private firms. On the other hand, large, private firms, serving more than one municipality, may have economies of scale and lower costs than a small municipality.

If the difference between the public and private sectors is not the cost of borrowing money, the calibre of the labour force and the differential in input costs, then the higher levels of efficiency of private sector firms must be due, in some sense, to management.

6.4 MANAGEMENT

Management includes not only the organization and direction of workers to carry out a task, but also finding ways of improving the productivity of workers. Thus, the training of employees, the introduction of new processes, equipment and procedures, expansion of the customer or client base, improvement of employee morale, and the setting up of strategic alliances with other firms are all part of management.

In the private sector, the way things are done must be constantly reviewed with one eye on competitors and the other on internal efficiencies. Speed becomes important. To compete successfully, decisions must be made not only well, but quickly. The delegation of responsibility down the company hierarchy is not only a way of improving employee morale through empowering workers to have more control over their work place, but it also results in decisions being made faster and closer to the elements concerned.

It is more difficult in government operations to delegate responsibility. Political agendas, which may change each election, must be reflected throughout the organization. While it is a relatively simple matter to empower an employee to make decisions where the bottom line is the difference between the revenues received from a particular operation and the cost necessary to carry it out, a similar simplicity of direction is not possible in empowering employees to make decisions in politically and ideologically motivated circumstances. Moreover, certain widely broadcast political statements regarding goals, values, priorities and policies may be made more for show than for substance. Some policies may be made to be talked about but not implemented, while others are to be implemented but not talked about. This highly politicized environment leads to a need for a high proportion of senior management time being spent in policy type meetings where priorities are made and work effort is allocated. One eye must be kept on the political masters, one on other ministries, departments, branches and sections which are attempting to intrude on ones own turf, a third eye on the future should any different political persuasion come into power, and a fourth eye on one's own employees who, in a politicized environment, can "go around" their own management and appeal, on politically motivated grounds, to higher levels of authority. One can hardly, in such an environment, start to be concerned with efficiency and either reduce staff or introduce new procedures, with all the turmoil that such actions would produce.

The motivation required in private sector firms from the need to compete with other firms constantly forces not only top executives, but workers

6.5 COMPETITION

throughout the system, to amend and modify their actions and procedures so as to remain competitive. A private sector firm can fail and all can lose their jobs; a similar fate is unlikely (or has until now been considered to be unlikely) to befall to governments. Not only does the competition and the risk of failure motivate firms to amend their own behaviour, but industries as a whole can be forced to change as new entrants into the system bring new procedures and ways of doing things.

All large bureaucracies are victims of their own history. Forms of behaviour worked out over many years become entrenched in operating procedures and union agreements. Those responsible for advances and breakthroughs in earlier years have now progressed to senior levels of power in organizations where they are unlikely to repudiate the very procedures that made them successful. Bureaucratic inertia is not restricted to governments. IBM, controlling some 70% of the computer market, began to find itself slow and ponderous in relation to smaller, newer computer competitors. General Motors, in fact the North American auto industry in total, had a sense of complacency based upon an almost complete control of the market. Japanese imports soon changed their perception of the future. Large steel plants, with millions of dollars invested in equipment and in training workers to operate that equipment, suddenly found that the competition came from smaller firms with different steel making processes.

Until recently, governments did not have such competition. Governments not only are monopolies where "if you want the service you have to buy it from me", but also are monopolies which can force their customers to buy such services (through taxation) whether or not the customers need or use the service. Senior levels of government, as exemplified by centralized and command economies of eastern Europe, but also including, to some degree, socialist and semi-socialist economies of the western world, believed that they had the ability, through fiat and the imposition of law, to create jobs; to determine levels of production; to ensure employment; and to manage the country in a way that everyone benefitted. Such a sense of the control of the environment, the economy, the work force and the culture of a country can only lead to the development of a sense of arrogance whereby governments believe that they are, to all intents and purposes, omnipotent. Obviously, such an environment is not a fertile feeding ground for innovation, criticism and risk taking. Therefore, over time, government bureaucracies become over-staffed, over-regulated, inflexible, risk adverse, low on innovation and burdened with a complex, multi-layered system of consultation, review and decision-making. Private sector firms are forced, not because the members of the firm are in any way superior in training, intellect or ethics, but because of competition to be risk-taking, efficient, fast-moving, innovative and lean in administrative structures and numbers of staff.

Why, then, do public-private partnerships arise? More to the point, given the government's need for reductions in expenditures and greater sources of revenues, why do private sector firms become involved?

6.6 PARTNERSHIPS

The first attribute to recognize about a true partnership is that it is a win-win situation. Both sides must see benefits in the arrangement. Mutually beneficial solutions tend to be more achievable when more factors are put on the table. Certain things may be of little importance to me, but very important to you. While other things that I value highly, you do not. Therefore, I give you something of small value to me and you do likewise, and we both benefit. The more factors involved, the more likely it is that we can establish a mutually beneficial arrangement which works over time and which we both find a benefit in continuing. This is not to say that simple successful arrangements do not exist. You may be able to do something cheaper than I can, so it is to my advantage to employ you to do it rather than do it myself. However, there is always the thought that I could learn to do what you are doing, so I would not need to purchase your services but could internalize your profit into my own organization.

6.7 COERCED PARTNERSHIP

One reason for private sector involvement in the provision of municipal services is coercion. It is highly unlikely that Tridel really wanted to give $500,000 to the Scarborough Library Board. However, something they did want, a rezoning to permit the development of apartments, was conditional upon, amongst other things, such a contribution. For such a partnership to be feasible, the private sector must factor such costs into their pro formas and this cost will then affect both the price that they are prepared to pay for land and the amount of profit that they will attain. Should such costs be too high, then the project would not proceed. In the Scarborough case, the contribution to the municipality for municipal purposes, including the library, was about $3,000 per unit. Such a cost can be internalized in the sale of $150,000 condominium units, particularly in a sellers market and in circumstances where competing developments are required to pay similar contributions. In fact, the amount paid is very similar to the amount that now would be required as a matter of course under the municipality's Development Charges By-law.

In the case of the arterial roads in Waterloo Region, a condition in the Subdivision Agreement was that such roads had to be in place before final approval would be given. This developer had no option but to ensure that those roads were in place. While the developer could have waited until the year when the Region had budgeted that those roads would be built, this would not only have incurred further costs through ongoing carrying costs of the land, but there was also no guarantee that the Region would not, at some point in the future, reschedule the road construction to a still later date. To some degree, the expense of front ending the cost of the roads could be internalized by the developer as the land had been purchased a number of years before at a lower price. Such financial requirements can

also be internalized if known in advance through a reduction in the price that is paid for raw land. Where such contributions are paid by development charges, these are known ahead of time, can be reflected in the original pro form, and would apply, as well, to competing developers.

6.8 EDUCATIONAL FACILITIES

To some degree, the involvement of the private sector in the construction of schools is also a coerced partnership: no schools, no development. However, in Ontario, recent Municipal Board decisions in the Etobicoke motel strip (municipalities cannot ask for large land takings for school purposes in circumstances where intensified urban development is planned) and Peel-Dufferin (while the Planning Act requires that developers can be required to ensure that land is available for schools, the funding for such schools is the responsibility of the School Board and cannot be a reason to refuse development applications) have forced School Boards to attempt to find ways of reducing their expenditures. In Toronto, School Boards cooperated with the City of Toronto in providing schools in the St. Lawrence development. Costs were reduced through the use of public park space for school yards, through sharing facilities between two School Boards and the municipality, and through sharing construction costs among the School Boards, the municipality and a non-profit housing company. While the operational complexities of the first St. Lawrence school have led to less complicated physical designs in subsequent developments, the sharing of facilities continues to be an accepted solution. In the City of Toronto Railway Lands, the developer has also agreed to contribute to school construction costs. This is partly a coerced contribution, i.e. one of the conditions of approval of the development as a whole, and partly a recognition that the sale of housing units will be improved if schooling is available in the neighbourhood. Similarly, in the Springdale solution to the Peel Region school problem, the developer is contributing to the school construction costs through carrying part of the financing over a period of time.

An example of a completely non-coerced public-private partnership involving the provision of educational facilities is the North York example where Tridel built a school and donated it to the School Board. This was a situation where a zoning permission has low value to one party and a high value to another. Under the North York zoning regulations, the site of an obsolete primary school was zoned for residential development as well as for a school. The residential zoning was of no benefit to the School Board. However, the zoning was valuable to Tridel, provided it could be transferred onto an adjacent property that Tridel owned. The value was high enough that the costs of constructing a new Arts School for the Separate School Board could be funded by the returns from the development of the residential project. This type of partnership is only possible if the zoning regulations in force do two things: regulations must restrict the overall development of either offices or residential for which there is a sufficient demand that a developer would be prepared to pay to

gain the development rights; on the other hand, the zoning must have conferred on the institutional property the rights to construct apartments and/or office space which the institution has no desire or ability to utilize. If the government or institutional property does not have such transferable development rights, or if there is no unmet demand in the locality for the residential or office use, then such a mutually beneficial partnership would not be possible.

6.9 DELIVERY OF SERVICES

A second type of partnership occurs when a private sector firm enters into an agreement to carry out the delivery of a public service. The Hamilton-Wentworth Sewer and Water Treatment partnership appears that it will be a very successful example of this type of partnership. Several lessons can be learned from this example. A municipality thinking of contracting out some of its operations must first gain a clear understanding of what the present operation costs are. While still provided by government, the operation must, in some sense, be "commercialized". In other words, the full cost of carrying out the present operations must be known. A "fence" must be put around the operation and all transfers of money and services across that fence between the subject operation and other aspects of the municipal organization must be clearly identified. Building space, heating costs, telephone and electricity costs, use of the personnel department, use of the legal department, use of meeting rooms, educational allowances, etc., must all be broken down so that the cost of the present operation is known and can be compared to the cost of privatizing it. In addition, once an operation is privatized, some other government employees may lose some or all of their present job responsibilities. The transition costs of reducing non-privatized departments and re-deploying work force must be featured into the total equation.

All of this was done in the Hamilton case and the final contract contains a fixed reduction in total municipal costs for the operation, plus a fixed payment from the private sector partner for the necessary costs of monitoring the contract, plus a payment for transitional costs in the first three years.

But the Hamilton-Wentworth case is also an example where many factors were brought together in the final partnership. This is not simply an example of a municipality privatizing its operations. Hamilton-Wentworth has a vision of the future which includes being a centre of excellence in the whole field of environmental maintenance. The private sector partner agreed to locate its head office in Hamilton and to undertake investment in the Hamilton area over and above its requirements for the sewage and water treatment operations. Thus, an economic development goal was met by this partnership. On the other hand, the private sector firm has a need to have an operating demonstration system in order to sell the firm's expertise, equipment, and management to other municipalities throughout the world. There may, in fact, be a loss to the private sector partner in the

first few years, but this can be seen as business development cost that will benefit the firm in the future. In a sense, neither side really wants to run a sewer and water treatment operation: the region wants the economic development encouragement; and the private sector partner wants a demonstration showcase.

Another example where circumstances led to a mutually beneficial partnership is the Highway 14 Water Supply project in the County of Strathcona in Alberta. The municipality could have borrowed the money, acquired the necessary easements, built a water supply line, and billed customers for water, but for a number of reasons it was more beneficial to have this undertaken by Canadian Utilities. First of all, Canadian Utilities already owned a right-of-way, being used for gas and electrical transmission purposes, and therefore could construct a pipeline faster and cheaper than it would take a municipality to acquire an easement and to construct its own operation. Secondly, Canadian Utilities was already in the business of supplying gas and electricity to individual properties and had set up a billing system and a meter reading system. Thus, the addition of supplying water to households would not necessarily lead to any greater cost in meter reading. On one visit, a meter reader could read two meters instead of one. Likewise, billing can be handled by the same system and the various overheads associated with move-ins and move-outs could be handled through one system. Thus, the benefit here is that the private sector can apply certain economies of scale which would otherwise require the setting up of similar systems by the municipalities involved.

A similar benefit of economies of scale can be seen in the operation of the Sainte-Marie-de-Beauce Water Treatment Plant. New treatment facilities require highly skilled operators to ensure maximum efficiency in operation and, from time to time, require the sudden application of even higher levels of skills in times of breakdown or emergencies. It is very expensive for a small municipality to attempt to acquire, train and maintain such skills in its own staff. Emergency situations would probably require some outside assistance in any case. A private sector firm can share the costs of expensive and highly skilled staff among a number of municipalities if they run several treatment plants in the same region. Being in the business, such firms are more aware of technological innovations in the field, changing requirements for employee skills, and the availability and price of such skills on the market. Thus, privatizing the operation provides Sainte-Marie-de-Beauce with these skills and expertise while the cost is spread over a number of other users. Sainte-Marie-de-Beauce also benefits from the fact that the private operator is closely tied into the environmental network and is aware of new technologies. The operator, in turn, is motivated to maintain the highest level of efficiency and technological skills as there are competing firms that might, at the time of contract renewal, wish to take over the Sainte-Marie operation.

Ottawa-Carleton is an instructive example in a number of ways. Basically, the need was for additional management and expertise for a short period of time. The part of the sewage treatment system which has been privatized includes state-of-the-art machinery and finely honed computer operations. Attempting to gear up in a short period of time for a new system required that the municipality had to seek outside assistance. The contract is for 10 years to ensure that whatever risks the private sector firm faced in dealing with a new operation could be spread over a reasonable period of time. However, it is now the belief of the municipality that at the end of the contract period, it would be more efficient to have the entire system either privatized or run by the Region. Splitting an operation involves inefficiencies in administration and operations.

Another aspect of public-private partnerships which is coming to the fore in Ottawa-Carleton relates to profit being made by the private operator. The facility is, in fact, more efficient that originally anticipated and the profit to the private sector partner is correspondingly higher. There is some concern from municipal employees that the profit may be "too high". However, one must keep in mind that even though the profit may be high now because the plant is operating well, at the beginning of the contract there was a risk that the new facilities would not run as well as anticipated and that there would be a period of time of low profits or possibly an operating loss. There can be a tendency, from the public standpoint, to view private losses as acceptable because the operator knew what he was getting into and maybe because they result from mistakes or inadequacies of the private operator. On the other hand, where things run better than anticipated, this can be seen to be a result of superior equipment purchased by the government agency leading to unearned private sector profits.

6.10 CONSTRUCTION OF FACILITIES

With regards to the construction of municipal facilities and infrastructure through a public-private partnership, there must clearly be a benefit for both partners. That benefit usually involves circumstances more than simply the construction of the specific facility. For example, in Richmond, British Columbia, Honda built, at its expense, a year round soccer pitch which is operated by the municipality. The municipality gained a facility at a time when there was great demand; competing priorities for capital expenditures, and at no cost to itself. Honda had extra land for expansion and was planning to use this for employee recreational purposes in any case. In return for expanding the operation and making it available to the general public, the City supported Honda in a reassessment of the land value and a corresponding reduction in yearly property taxes. Over time, this reduction has more than repaid Honda for the capital costs of the facility.

In another example in Richmond, British Columbia, a developer was prepared to construct a municipal arena on his land. While other developers had proposed joint arena construction and operation

partnerships, these had always been on land that the City owned. Arenas are facilities for which user-pay charges can be made and privately owned arenas can, or almost can, be profitable ventures in their own right. However, in providing the land, the developer was providing a subsidy which made this particular partnership more attractive for the municipality. The landowner's benefit went beyond the mere provision of arena facilities as the arena acted as an added attraction for the development of other land he owned in the same industrial subdivision.

6.11 LEARNING EXPERIENCES

But not all partnerships are successful. One can learn from the non-successes as from the successes. In Pittsburgh Township, a joint Separate School Board, municipal, private developer project did not proceed. At the beginning, the School Board saw a reduction in its capital and operating costs through sharing a facility with municipally provided recreation facilities and with a senior citizens housing development. Shared parking and shared heating costs would help operating costs, while sharing the price of the land would reduce land acquisition costs. A fixed construction price lower than normally experienced in the municipality would benefit the School Board, while the developer would gain efficiencies through constructing all three sets of facilities.

The first lesson for a successful partnership is that all participants in a partnership must go into the negotiations with their eyes wide open. Each potential partner must understand what benefits one hopes to achieve and what costs, including operating difficulties or loss of control, are acceptable. In Pittsburgh Township, there was an expectation, at first, that this partnership would be a win-win-win situation all round with significant cost savings for everyone concerned. As negotiations ensued, it became apparent that there would not, in fact, be significant reductions in cost. It might be better in such negotiations to assume that the cost will be the same, but to look for additional benefits at no additional cost. If the capital cost then turns out to be lower, this is an added benefit.

The second point to realize is that in a partnership one gives up a certain amount of control. In the Pittsburgh Township case, people would be on the school property who would have nothing to do with the school, but would be beyond control of school authorities. An agreement that provides the ability to utilize someone else's facilities at certain times of the day also includes the giving up of the use of one's own facilities at other times. Thus, the sovereignty of each of the participants, who might otherwise have constructed individual projects, is reduced in a partnership.

Having gone into the process with the knowledge that there would be both costs as well as benefits, it is also necessary to provide sufficient time to hammer out the negotiations. Questions of access, of liability, of usage, and of maintenance must be spelled out in legal documents and this can take time. The Toronto School Board's experience is that if agreements

are not worked out in detail ahead of time, they can lead to ongoing maintenance and liability disagreements, hassles and inefficiencies. In the case of Pittsburgh Township, there was not sufficient time to hammer out the details, particularly the financial details, and still meet the need to have the school in operation in September 1995.

The other lesson from Pittsburgh Township is that negotiated solutions of public-private partnerships fall outside of standard operating procedures. While the government agency involved may be prepared to deal in a novel way, there are often regulations at the provincial level which inhibit such flexibility. In Pittsburgh Township's case, the Province was responsible for providing between two-thirds and three-quarters of the construction cost of the project, and had a guide as to how the tendering and design of such schools should take place. To dispense with an open tendering process and to negotiate with a sole source construction company requires significant exceptions to the standard rules. Even if, as in the case in Pittsburgh Township, it is possible to gain ministry approval for such an agreement, there is still the difficulty that at the local level there will be some concern that the open tendering process has been replaced by negotiations.

Another example of a failed project is the provision of the sewage treatment plant in Rockland, Ontario. The failure in this instance is largely a result of the cooling of the housing market in the Ottawa-Carleton area. While developers would be reimbursed at building permit time for their investment in the upfront cost of the facilities, the longer it takes to build out all 3,500 benefiting units, the greater would be the amount of accumulated interest that needs to be paid. While the hook-up charge would increase yearly to compensate for the carrying costs, in a very few years the increase in connection fees could begin to be a deterrent to further sustained development. The more the rate of development slowed down, the longer would be the repayment period and the higher would be the per household hook-up charge which increases each year by 12%. Thus, the scheme was one where it would be wonderful if all of the units could be built in the first 8 to 10 years. If not, the increase in the hook-up charge could result in a slower and slower rate of development and possibly at the end of the 20 year agreement, not all of the 3,500 homes would have been built. At that point in time, the developers would just lose out.

One of the difficulties with this proposal is the one-sided orientation of the municipality. A new sewage treatment plant, replacing a lagoon system, would increase the total environmental quality for the Town. A new system would allow growth to continue, which would benefit the existing residents through economies of scale and operation, through employment and construction, and through increased customers for local businesses. However, it was the position of the Town that although the citizens may benefit, not one cent of the capital cost of the new facility should be borne

by the present inhabitants. Not only the cost, but all of the risk, should be borne by development companies and the operator of the new system. However, in this example it was necessary for the municipality to co-sign the loans necessary for the facility to be constructed. To ensure that there would be no risk to the inhabitants, the municipality had to secure performance bonds or first mortgages against the participating developers. It was at this stage that negotiations broke down.

6.12 DIFFICULTIES IN PARTNERSHIPS

Municipalities must be aware of potential downsides in public-private partnerships. There was, after all, a reason why municipalities got involved in the provision of services in the first place. If a service can be totally user-pay, then it is difficult to understand why it is being municipally operated. The reason for public services can be due to the monopolistic nature of the service provided, i.e. lack of meaningful competition can lead to unacceptable private sector profits, or to social welfare considerations, i.e. it may be a service that everyone has to purchase, but the burden of cost on some individuals is considered to be too great. In St. Hyacinthe, the collection of garbage is carried out by a number of private firms. Such a circumstance would seem to provide all of the benefits of competition and the possibility of a variety of service levels with a resulting variety of service costs. Unfortunately, due to health reasons, garbage collection is not a service which any individual household can opt out of. Thus, problems arise if the cost of the service becomes onerous for certain individuals. While this can be handled by subsidies of some individuals, such subsidies involve means tests and the setting up of a separate and expensive function in the bureaucracy. This is not to say that garbage collection should not be privatized, but only that the system must be closely monitored for social welfare and operational abuse.

The Windsor-Detroit Tunnel provides an object lesson of finding ways to ensure that where a facility is to be returned at the end of the contract period to the municipality or government agency, that the required levels of maintenance are, in fact, undertaken. Both Ottawa-Carleton and Hamilton-Wentworth have municipal staff, paid for by the private operator, whose job is to monitor the ongoing operation of the system. Maintenance standards and levels are built into the contract and should the private operator fail to maintain these schedules, penalties can be enforced up to and including the termination of the contract. The original contract must contain provision for dealing with all future eventualities, and the drawing up of such a contract is a difficult, detailed, time consuming and expensive operation.

The provision of new housing in Canada has traditionally involved a private-public partnership. Subdividers who turn raw or agricultural land into developable urban and estate lot land are usually responsible for the construction of municipal roads, sidewalks, curbs, sewers, water supply and

6.13 PARTNERSHIPS AND HOUSING

electrical systems within the subdivision. This construction is carried out according to municipal specifications and under municipal supervision, but at the expense of the subdivider. The cost of such work is reflected in the cost of serviced land and ultimately in the cost of housing.

The benefit to the subdivider of this arrangement is that any savings in construction costs will result in either greater developer profit and/or a competitive advantage in selling serviced land. Furthermore, the timing of such servicing and, more importantly, the timing of servicing costs, is under the control of the subdivider and can be timed to occur in conjunction with the construction of the housing.

For the municipality, the alternative to a developer provided infrastructure system would be to collect additional taxes or fees, arrange for infrastructure construction, assign priorities for the timing of such work, and ensure that the work was completed on time. By letting the subdividers carry out the work at their expense and according to their timetables, the municipalities avoid the hassles of arranging schedules and priorities of work and avoid either having unused expensive infrastructure in place or housing constructed without the necessary services.

Over and above local infrastructure construction, municipalities have usually required money from subdividers for off-site services. These can include boundary road improvements, contributions to recreational facilities, and sewer and water system expansion fees. Lately in Ontario, these off-site fees have been collected through Development Charges By-laws. In any case, although these fees might be negotiated in return for increases in permitted uses or densities, they do not constitute a "partnership" in the same sense as subdivision servicing as they offer no scope for private sector innovation, efficiency, or advanced techniques.

In this regard, examples such as the Tridel contribution to a Library in Scarborough, Ontario, or a subdivider advancing the money for the construction of arterial roads in Waterloo, are not partnerships in the same sense of the construction of subdivision infrastructure; i.e. the developer does not build or operate the facilities, but rather just hands over the money.

The combination of school and recreational housing project in Pittsburg Township would have been a partnership had it progressed, as would have been the sewage treatment plant in Rockland. In both of these examples, the developer had both an element of risk and and an element of control. Both gave the private sector partner the opportunity to use innovation and rewarded efficiency in construction.

6.14 SUMMARY

Several questions were asked at the beginning of this paper:

Do partnerships result in lower costs? In the case of operations such as Sainte-Marie-de-Beauce and Hamilton-Wentworth water systems, the answer is "yes". This is the result of economies of scale in one case and the demonstration value to the private operator in the other, as well as the expertise and experience of the private sector operator in both cases. In the Ottawa-Carleton Sewage Treatment System example, the answer may be "yes" in the short term due to an immediate need for extra staff and expertise, and "no" in the long term due to the extra costs resulting from a split operation.

In the case of joint development of different facilities such as schools and recreational facilities in Toronto and Cumberland, the answer is "yes" as there are savings in land costs, in the elimination of duplication of heating and support facilities, and in the sharing of other facilities. In the examples of construction of facilities by the private sector, there are savings to the municipality in cases where the private partner has external benefits to achieve (reduced taxes on land in Richmond, B.C., which Honda wished to hold anyway for future development or the development of an Ice Centre as a selling tool for other land the developer owned, also in Richmond) or can achieve economies of scale in both construction and operation. (In Edmonton, Canadian Utilities already owned a right-of-way and were already providing a gas service to households so that the additional cost of constructing and operating a water supply system was not as great to them as it would be for the municipality to acquire the land and operate an independent system).

In Nova Scotia, there may be lower costs in providing schools due to innovative design, and better coordination between the designers of the school on one hand and the providers of computer systems and ongoing maintenance operations on the other.

Do partnerships transfer costs from the public to the private sector? In the examples of the Richmond Ice Centre, the Richmond Soccer Pitch, and the Edmonton Highway 14 Water Supply System, the costs are transferred to the private sector but are then offset by other private sector benefits. However, in the case of the Scarborough Public Library construction, the Waterloo Regional Roads, and the Rockland Sewage System, costs either are, or would have been, simply transferred from the public sector to the private sector where they are either absorbed as reduced private sector profit or passed on in the increased price of homes. In the case of Nova Scotia schools, the costs are effectively passed from the public sector (reduced capital requirements today) through the private sector (design, build, operate) to the public sector in the future (ongoing lease payments).

Do partnerships facilitate development? Where essential facilities are lacking, anything that gets them built will facilitate development. Without the Waterloo Roads, development would not have been possible. Without sewage treatment facilities in Rockland, development will not be possible. Some form of joint funding of facilities will be necessary to maintain development in Halton Region. In the case of schools, development can proceed in their absence, but the resulting costs and inconvenience of bussing and portables can reduce the selling attractiveness of new homes. In the case of the Scarborough Library, the municipality used its power to refuse the necessary rezoning as a bargaining tool to acquire the land and financial contribution for the library.

Are there liability problems? In the operations of a sewer or water system, the liabilities and responsibilities of each partner can and must be spelled out clearly in the agreement. In the absence of such a comprehensive agreement, the Toronto Board of Education and the City of Toronto have had ongoing disagreements with regards to maintenance and responsibility. In the type of partnership where facilities are to be returned to the public agency at the end of the agreement, a detailed maintenance schedule should be included in the agreement. The absence of such a schedule resulted in Windsor acquiring a road tunnel on which virtually no maintenance had been performed over the previous ten years.

How do partnerships affect the price of housing? Housing costs have two components: original capital costs and ongoing maintenance costs, including taxes. Thus any partnership that reduces municipal costs can potentially reduce housing costs through lower taxes. Cost savings through joint use of facilities (Toronto and Cumberland, and potentially Pittsburgh Township) reduce public sector costs; private sector construction of ice centres and soccer pitches (Richmond, B.C.) also reduce municipal costs, although the reduction of taxes for Honda in the soccer pitch example in Richmond may actually cost the municipality more in lost revenues than it gains in reduced expenditures.

Reduced municipal expenditures on operations of a sewage or water treatment plant (Ottawa-Carleton, Hamilton-Wentworth, or Sainte-Marie-de-Beauce) can also reduce ongoing housing costs through reduced taxes, although the inefficiencies of splitting the operation of the Ottawa-Carleton system may, in the long run, be more expensive than the short term gains through acquiring private sector skills and expertise. In the case of the Scarborough Library, Waterloo roads, Peel Region schools and, potentially, Rockland Sewage Treatment, the partnerships will likely result in reduced municipal costs and reduced taxes, particularly for existing residents, but at the expense of capital costs for new residents.

Public-private partnerships do not appear to reduce the price of new housing. The exception might be the provision of local municipal

infrastructure by the subdivision developer rather than the alternative of paying a levy to the municipality and having the municipality carry out the infrastructure construction. Where the partnership involves the provision of money from the developer to the municipality in order to overcome a deficiency in infrastructure, the cost of such a contribution must come out of either a reduction in the price of raw land, a reduction of developer profits, or an increase in house costs. Where one developer has to bear such costs and his competitors don't, it is likely that such costs will come out of developers' profits. However, where all developers have to bear such a cost, such as where development charges are prescribed in a by-law, then it is likely that the additional costs will be passed on and reflected in a higher price of new housing. Of course, such homeowners, having had to pay the cost of their own services, will benefit in the future as they won't have to pay, through taxes, the capital costs associated with other new development.

In summary, public-private partnerships are not a panacea. However, there are times when the public sector can benefit from the expertise and experience of private sector partners in the construction and/or operation of public facilities. However, partnerships where the public sector simply gains private sector funding through either coercion or an agreement to repay over time do not appear to reduce costs, although they may benefit the public sector through the reduction of immediate capital needs (but with increased ongoing repayment expenditures) or may shift the cost from ongoing taxes to increased capital costs of new development.

Appendix

POSSIBLE FUTURE PARTNERSHIPS

Vernon, B.C. Recreational Complex - a Build/Own/Operate proposal

VLC Properties Ltd.; Social Housing - a partnership of private sector pension funds, the City of Vancouver, and non-profit housing associations

GVRD Wastewater Treatment projects

Calgary Utility Privatization

York Region (Ontario) Waste Works

City of Orillia, Ontario recreation complex

City of Montreal wastewater system

Halifax, N.S. Halifax Harbour clean-up