Arena Feasibility Planning Part II - Administrative Review

Submitted to

New Arena Steering Committee

March 2007

Medicine Hat
The Gas City

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The following assumptions and recommendations are based on an analysis of the Graham Edmunds Cartier Architecture (GEC) Arena Feasibility Planning Study Part II report and an administrative review of operating and capital key indicators and measurements.

ASSUMPTIONS & OBSERVATIONS

1) The 36-year old Medicine Hat Arena (Arena) is in very good physical condition and serves the basic needs required of an ice sheet for youth and adult skating activities as well as a 4,006-seat arena for Western Hockey League (WHL) games. The life expectancy of the Arena is anticipated to be at least another 15 years.

2) The regional population of southeastern Alberta is sparse and currently does not contain the population base in comparison to other WHL cities, to support at the same level, a new multi-purpose events centre and the events hosted in such a facility. This will impact the attendance (revenue) as well as the number and diversity of special events.

3) Medicine Hat's WHL hockey attendance is near the average of other mid-sized WHL cities, which falls between 3,000 and 6,500 seats per game. This is important when considering the optimal seating capacity of a new multi-purpose events centre. The WHL has indicated that 5,000 to 5,500 seats plus standing room is an appropriate size for today's WHL product (average paid attendance of mid-sized arenas is approximately 4,000). Any number of seats higher than this amount creates challenges for the hockey clubs in maintaining an adequate season ticket base.

4) It is anticipated that with continued life cycle and preventative maintenance planning, current ice facilities will have a life expectancy of at least 10 years and 15 years for the Arena.

5) The GEC projected per event attendance is optimistic for events other than WHL hockey. This has a significant effect on the projected annual revenues and net operating deficit.

6) Advanced planning may negate some of the real impact to ice user groups of reduced community ice time in a new multi-purpose events centre while increasing the economic benefits to the community through hosting more special events. These special events must significantly contribute to the economic development strategy to meet increased operating costs.

7) The administrative review has determined that while current prime time ice demands are near capacity, there is not sufficient quantitative data to confirm that current users are not served at a higher level than peer communities on a per team/week basis. The administrative review determined that the community has a reasonable supply of ice time to meet the current and short-term demand for ice activities.

8) The need for an additional community ice sheet at an estimated cost of $8.5M may be reasonable to meet future special events and longer-term ice demand needs (future growth and demand, inflationary controls, population growth). However, a more extensive study, verifying user requests and comparing weekly utilization rates with other mid-sized Alberta centres, as well as evaluating the ice facility replacement requirements, is optimal before building additional ice sheets should be contemplated. An option to continue the operation of the current Arena for 10 years, although increasing operating subsidy costs, could meet current increased community ice growth interests, opportunities for alternative use, and allow for a more detailed assessment and monitoring of future demands and other arena replacement requirements within the city.

9) GEC's information regarding Concept Design meets the "Made-in-Medicine Hat" requirements for a new multi-purpose events centre. GEC was successful in aligning the proposed site with the area needs to introduce a modern design that has economic potential and is visually appealing.

10) Operating expenses for a new 6,500-seat facility are estimated at $1.55M and revenues at $1.39M (2010 projection). There does not appear to be financial advantage to Medicine Hat to seek a 3P partnership on this project due to: a) the City of Medicine Hat's (City) preferred borrowing rate; b) operating experience; and c) City controlled risk.

11) The financial models prepared by City Administration (Administration) presume that between $25M and $42M in capital funds could be generated from government grants and third-party funding, and that the balance of funds required for the project could be financed through a combination of borrowing and other funding sources over four years. This would result in a significant annual debt payment attributable to the new multi-purpose events centre and necessitating tax revenue to address the debt-servicing and operating costs for the facility. GEC has conducted detailed research on the "real" costs of constructing a new multi-purpose events centre in today's economic climate.

RECOMMENDATIONS

The administrative review of the information and recommendations provided in the GEC report support the following recommendations:

1) That a new multi-purpose events centre be built as soon as possible due to rising costs of a major project in the current Alberta construction marketplace.

2) That a new multi-purpose events centre be constructed at the:
   a. Maple Avenue site if the economic impact (due to retail opportunities and downtown sustainability) is deemed to be paramount; or
   b. FLC site if lower on-site construction costs are more critical.

   There were five sites compared but no one site stands out over the others. The selection of the "the best site" depends on the weighting of the various factors.

3) That the seating capacity of 6,500 (plus 500 standing room) meets current and future needs (25 years) based on projected demographic growth. The 6,500 seats will accommodate most special events, hockey events and ice shows, curling functions and other community events. Phasing the development from 5,500 (plus standing room) to 6,500 (plus standing room) seats could be considered in support of meeting current demand, however, neither capital nor operating costs are significantly altered.

4) That the building design includes top loaded seating from a single concourse, event floor amenities for concerts, community ice use, 15 to 24 private and community suites, restaurant, lounge, club seating, press box, commercial/retail space, support facilities, event level services, administration and hockey team facilities, within a gross building area of 175,000 square feet.

5) That a new second ice sheet is not recommended by Administration at this time due to capital costs, incomplete data, and site issues. A new second community ice surface housed in a 30,000 square foot building with up to 300 spectator seats could be adjoined to the building or located in another area of the city dependent on continued review of ice demand and demographics.

6) That the current Arena can be slightly modified and used as a community ice surface until a more complete analysis and financing plan can be completed. This will save the value of the project $9.25M (includes demolition costs) or $666,000 per year in annual debt repayments.

7) That the option of retrofitting the current Arena not be considered for $30M, which would only offer limited, or no additional seating. A retrofit was not supported as an option by either of the consultant groups nor by any of the users or groups consulted in the market analysis. Issues of capacity, which directly affect the ability to attract special events and increased revenue opportunities, would not be addressed. If a new facility is not considered within the foreseeable future, Phase 1 of a major capital retrofit plan should be considered to improve the multi-use requirements and accessibility needs of the current Arena (seating capacity remains at 4,006). This option would require further analysis and review.

8) That an arms-length society or City-operated strategic business model be adopted to ensure that the new multi-purpose events centre operates in an economically sustainable manner.

9) That a capital-financing model be adopted that offers a combination of debt financed, borrowing, grants, City reserves, and public and corporate fund-raising.

10) That the Municipal Public Works Project and Construction Management model be adopted to build the new multi-purpose events centre and the process of design, financing and land assembly be initiated in 2007 to complete the project by 2010 and limit escalating inflationary costs.

11) That an allocation of $1M be included in the project costs for project management and planning.

The City is currently engaged in further planning and analysis to provide City Council with information and recommendations regarding the feasibility of a new multi-purpose events centre. The city has a population of approximately 56,000 and has an inventory of six ice surfaces including one twin ice facility, two recreation ice arenas, one Olympic size ice surface and a 36-year old, 4,006-seat spectator arena that houses the WHL's Medicine Hat Tigers Hockey Club (Tigers) along with other sporting and public events.

November 2005, Nustadia Recreation Inc. (Nustadia) completed an Arena Feasibility Study for City Council. March 2006, Administration completed an internal review and analysis of this report and presented its findings to City Council. The two reports concluded that a new multi-purpose events centre was needed by the community to replace the existing facility. A number of potential sites were reviewed, and capital and oper ating costs were projected.

City Council subsequently approved the appointment of a New Arena Steering Committee and approved Administration initiate the next step in the feasibility planning process (Part II).

The project scope of Part II was to provide City Council with recommendations regarding a new multi-purpose events centre based on the following: the development of a functional plan for a new multi-purpose events centre, the confirmation of operating expenses, the exploration of sources of grant funding and obtaining expressions of interest from the private sector to invest in and/or operate the facility based on the functional plan.

SUMMARY OF SPECIFIC OBJECTIVES AND PROJECT REQUIREMENTS OF PROFESSIONAL SERVICES (TERMS OF REFERENCE)

1. Explore and analyze partnership options involving private and public funding and operating models.
2. Compile potential funding sources including government grants and private funding sources to determine realistic external revenue sources for a new multi-purpose events centre.
3. Prepare and compile data from community and stakeholder consultation through workshops/open houses.
4. Provide a Functional Study (requirements analysis phase) to analyze and determine the building amenities, parking, and site and space requirements. Content would include, but not be limited to, the following qualitative and quantitative information: activity/program overview, area requirements, design guidelines, component information, development cost estimates and a conceptual plan laying out potential components of the site and building.

5. Critical site analysis to determine the best site.
6. Review and analyze financing, fund-raising, operating and capital options to recommend the most cost-effective method to operate and finance a new multi-purpose events centre.
7. Develop an updated 10-year capital plan for current ice facilities.
8. Prepare a capital construction cost analysis prior to finalizing capital budget estimates based on data from the Functional Study process.
9. Complete a critical analysis including a S.W.O.T. (Strengths, Weaknesses, Opportunities and Threats) analysis for various options and scenarios.
10. Recommend the next development steps and complete a revised time schedule for detailed design and construction.
11. Present the final Arena Feasibility Planning Part II report to City Council.

In September 2006, GEC of Calgary was retained by the City to provide City Council with recommendations regarding the construction of a new multi-purpose events centre.

GEC submitted their draft report to the New Arena Steering Committee and City Council in December 2006. Administration was requested to analyze in detail the contents of the report and provide recommendations to the New Arena Steering Committee.

This report comprises the administrative review and analysis of the GEC Arena Feasibility Planning Part II report. Each section of the report has been reviewed in detail and comments, concerns and further analysis have been provided.

GEC conducted a review of 11 sites as part of the study process and prepared a site analysis matrix. Various administrative staff representing the Parks and Outdoor Recreation, Land & Properties, Electric Utilities, Gas Utility, Finance, Corporate Asset Management, Information & Computer Services, Human Resources, Fire and Disaster Services, Community Development, Municipal Works, Environmental Utilities and Planning, Building & Development Departments have also met to discuss the impact of a proposed major facility on municipal land planning, infrastructure, recreation and finance within the City.

GEC has indicated that third and current generation facilities have a broader vision than in the past of community development and modernization for their community. Urban planning principles are used to recognize that urban/downtown facilities often serve as an anchor of a district and assist with the need to drive future commercial development and co-exist with the private sector for before-and-after event activities. This has been a common determinant in such facilities as London, Victoria, Oshawa, Kelowna, Winnipeg, St. John's, Spokane and Everett.

On November 6, 2006, direction from the New Arena Steering Committee and City Council narrowed the scope to three potential sites: FLC, East Southlands and the current Arena site in the North Flats district.

1. Family Leisure Centre (FLC) – a suburban site in the north portion of the city

An evaluation of existing development plans, service requirements, retail land values and the timing of the project concluded that the north site near the FLC would be the easiest site to develop. The Land & Properties Department has verified that the land in the north area near the FLC is currently not in high demand, nor are there major services and infrastructure plans in place that would be affected by the project. GEC has cautioned the City that, in their opinion, there would be limited or no economic development spin-offs if a new multi-purpose events centre was built at this site. It is expected that the proposed operating revenues such as retail, lounge and restaurant revenues would be less if this were the final site for a new multi-purpose events centre. Estimated impact has been calculated to be a minimum of $50,000 each year (10%).

This site is also not centrally located within the community, is not the preferred option of the Tigers, and may have additional development costs for parking and traffic management.

Administration has reviewed the land immediately west of the current FLC and determined that there is sufficient land to build the proposed building and parking lot (2,100 cars). There is room between existing gas wells and the site is outside the perimeter of the 1.6 km industrial buffer zone that has been recognized in the Municipal Development Plan. This land is adjacent to commercial/industrial activity and north of a residential neighborhood. There is limited potential for commercial growth for complementary services like lounges, hotels, shopping centre, and restaurants in the immediate area.

It is expected that the predicted egress routes from an event in this site would be:

a) 23rd Street NW / Box Springs Road / Trans-Canada Highway
b) 23rd Street NW / Division Avenue North / Altawana Drive / Maple Avenue
c) 23rd Street NW / Parkview Drive (extended) / Maple Avenue
d) 23rd Street NW / 10th Avenue NW / Brier Park Road / Box Springs Road or 3rd Street NW

City population growth and future development in the northeast sector of the city will increase the need for planned transportation upgrades (roads and intersections) on 23rd Street NW, Box Springs Road, Parkview Drive, and Division Avenue North. Financing for these projects would come from such sources as off-site levies, government grants, and the City.

Based on the City of Medicine Hat 2005 Census, the current population of East Crescent Heights, West Crescent Heights, and Riverside is ~13,900 or 25% of the city's total population. The report goes on to say that there has been no significant growth in West Crescent Heights and an increase of 1,302 persons in East Crescent Heights, which reflects the development north of 20th Street, and the opening of the Ranchlands subdivision. Riverside has grown 723 persons mainly due to the developments of River Ridge Estates and Axxess Developments. Land & Properties projects that an additional 8,000 persons will reside in the north once full development of this sector is complete.

Currently, there are two ice surfaces located in this area of the city. The FLC and the Hockey Hounds Recreation Centre, both single pad arenas.

2. East Southlands – a suburban site in the south portion of the city

City departments have indicated that planning and conceptual design details in the south (Phase 6) are nearly complete and the planned infrastructure and services have not taken into consideration the planning and servicing needs of a new multi-purpose events centre. However, the project could be located on private land along the highway or in the southeast corner of City-owned land next to the Black & White Trail. Administration has learned that there is an 18-acre commercial site located along Strachan Road immediately west of the Home Depot property. This land is a valuable portion of commercial property but would be preferred as a potential project site over land that is currently designated for residential development (Black & White Trail site).

Similar to the FLC site, this site (Black & White Trail) is not centrally located within the community but has significantly more commercial and economic potential than the FLC site with nearby hotels, restaurants, and shopping centres. It is believed that significant traffic management issues would exist related to road capacity and access as most of the traffic would cross the Trans-Canada Highway on South Boundary Road.

It is expected that the predicted egress routes from an event in the Black & White Trail site would be:

a) Black & White Trail / South Boundary Road / Dunmore Road
b) Black & White Trail / South Boundary Road / Trans-Canada Highway
c) Black & White Trail / Strachan Road / 13th Avenue
d) Black & White Trail / Strachan Road / South Ridge Drive
e) Collector Road A / South Boundary Road

City population growth and future development in the southeast sector of the City will increase the need for planned transportation upgrades (roads and intersections) to roads like South Boundary Road, Strachan Road, and Dunmore Road. Financing for these transportation upgrade projects would come from such sources as off-site levies, government grants, and the City. An overpass for the Trans-Canada Highway in this site has been discussed however, this is a provincial jurisdiction.

Based on the City of Medicine Hat 2005 Census, the current population of South Ridge is ~11,000 or 20% of the city's total population. The report goes on to say that, "the southern part of the city continues to be the city's boom area with an increase of 4,435 persons … with more to come". Land & Properties projects that an additional 29,000 persons will reside in this area once full development of this sector is complete. South sector lots are selling 2:1 compared to residential lots located in the north end of the city.

Currently, there is no ice surface located in this area of the city.

3. North Flats (current Arena location) – an urban site centrally located

Three potential sites were reviewed in this area. The benefit of the recommended site is the opportunity for increased economic development in the Maple Avenue and downtown areas. Major sport venues in other cities have proven to improve the local area economically and leverages increased spending activity. A new facility may act as a catalyst for centre core renewal (commercial activity, government offices, residential living), and supports Smart Growth principles. Suburban sprawl over time requires indirect expenditures to extend municipal services.

GEC has indicated that this is the best site in terms of supporting the long-term viability of the building (i.e. naming rights, retail, restaurant, and lounge). The proposed site can make the best use of existing parking rather than building a large parking lot at a suburban site. Approximately 75% of all new event centres built are located in a downtown/urban location. With its central location, it could anchor the east end of the downtown district just as the Esplanade Arts & Heritage Centre (Esplanade) anchors the west end of the downtown district. This site is historically where Tigers fans have been attending hockey games for the past 36 years and is the preferred site of the Tigers, the venue's main tenant.

The major disadvantage is the potential traffic management and parking issues as well as traffic congestion preventing emergency vehicles accessing the Crescent Heights area of the city by traveling north on Maple Avenue. It is reasonable to expect that about 70 to 80 times per year there would be increased traffic congestion when the building occupants exit for approximately 30 to 60 minutes following an event. Issues related to

Emergency Service access and egress to Maple Avenue have been included for consideration in the Transportation Study, which is contained as part of this report.

It is expected that the predicted egress routes from an event in this site would be:

a) Maple Avenue / Altawana Drive / Parkview Drive or Division Avenue North
b) Maple Avenue / Allowance Avenue / South Railway Street / Sholten Hill
c) Maple Avenue / Allowance Avenue / Dunmore Road
d) Maple Avenue / Allowance Avenue / Kipling Street
e) Maple Avenue / River Road or 1st Street SE
f) South Railway Street / 2nd Street SE or 2nd Avenue NE or Hill Road or Kingsway Avenue (if parked west of the CPR tracks)

City population growth and future developments in the north flats/downtown sector of the city will increase the need for planned transportation upgrades (roads and intersections) in this area. It should be noted that Maple Avenue is also a major north-south traffic corridor that crosses the South Saskatchewan River. Financing for these projects would come from such sources as government grants and the City, but off-site levies are unlikely.

Other risks are the possible additional time required for land assembly. A process that may involve expropriation will add about a year to the construction timeframe. Based on a one-year delay for construction, the capital cost implications could be 10% or $6M added to the project. An abandoned gas well is located on the east portion of the block being considered. Initial response from the consultants is that this can be accommodated.

4. Box Springs Business Park (BSBP) – a suburban site located in the northwest end of the city immediately adjacent to the Town of Redcliff.

On February 6, 2007, GEC and City staff met with a representative of the Box Springs Business Park at the FLC. This was in follow-up to a media release January 26, 2007 in which BSBP indicated that they would offer to the City, a $5M parcel of serviced land, free of charge. In the meeting, it was indicated that there was interest in the area and they are negotiating with hotels, restaurants, and other commercial venues. Costco is planned to be open in the area by November 1, 2007.

A follow-up meeting with BSBP February 26, 2007, clarified that their proposal is serviced land west of the industrial buffer, at no cost to the City. They have further explained that as part of this donation they would prefer the City sell the adjacent land to BSBP but it is not a condition of the offer. In addition, if there were more significant off-site costs to this proposal than what they (the developer) have budgeted for or paid in off-site levies, the City would be required to compensate for these costs. The City would be required to pay the off-site levies for the donated land. BSBP were checking into some traffic issues to see if there are some other site options further to the northwest, however these final reports are not available at the time of this report.

The proposal has some appeal regarding highway visibility and potential adjacent commercial activity for complementary services like lounges, hotels, shopping centres, and restaurants that the FLC site will probably not offer should a site be determined that is not downtown or in the south sector of the city.

It is expected that the predicted egress routes from an event would be:

a) Broadway Avenue / Trans-Canada Highway or West Boundary Road to Trans-Canada Highway
b) Broadway Avenue / Box Springs Road / 23rd Street or Brier Park Road or Trans-Canada Highway
c) Box Springs Boulevard / Box Springs Road

City population growth and future developments in the northwest sector of the City will increase the need for planned transportation upgrades (roads and intersections) on Box Springs Road, West Boundary Road, and Broadway Avenue. Financing for these projects would come from such sources as off-site levies, government grants, and the City.

The challenge is that there are limited sites available that are not within the 1.6 km industrial buffer zone that has been recognized in the Municipal Development Plan. This land is adjacent to the Town of Redcliff and commercial/industrial activity.

5. Bunt & Associates – Traffic Engineering Report on the North Flats (Maple Avenue) and Family Leisure Centre (FLC) Sites

Bunt & Associates(Bunt) was retained to undertake a macro level review of the general traffic impacts and associated high level transportation infrastructure necessary to support the facility in the above two sites. Bunt did a traffic forecasting exercise to estimate (a) the amount of traffic expected to be generated by the facility during a peak load event, and (b) the amount of that traffic that would reasonably be expected to be present on the local and regional road network in the street peak and event peak hours.

The impact of the traffic generated by a sold out event was reviewed at a high level for each of the two sites using the 95,000 population T-model traffic forecasts as a basis for analysis.

The results confirmed that the choice of either site will result in additional traffic volumes on critical road links which will in turn result in specific road links functioning at-capacity during some or all of the evening (p.m.) street peak, inbound event peak or outbound event peak hours. Improvements identified in the 2005 Earth Tech 65,000, 75,000 and 95,000 population horizon traffic forecasts will need to be constructed sooner if the City seeks to maintain the non-event levels of service on the critical road links.

The details regarding specific queuing activity, delay to inbound and through traffic as well as the time required for outbound site traffic dispersion should all be assessed as part of a comprehensive Transportation Impact Assessment. Such an assessment will be required by the City as part of the typical approval process.

Key Points:

- The presence of the existing Arena facility in the downtown area currently results in congested traffic conditions on the above noted road links in a manner similar to what could be expected if the Maple Avenue site were to be selected, albeit at a higher level given the increased seating capacity and assumption of a sell out event for analysis purposes.
- To date, the City has not identified a need to expand the road network in the downtown area to accommodate the event traffic surges as the forecasts for the 65,000, 75,000 and 95,000 population horizons have all been developed on the basis of weekday p.m. street peak hour operating conditions.
- The development of the Maple Avenue site will have a significant impact on Maple Avenue, requiring significant improvements to the corridor between the river crossing and Prince Street. It is noted that these improvements are technically required today.
- The development of either the Maple Avenue or FLC sites will result in increased congestion on the Maple Avenue river crossing given the use of this road as a main access route.
- In both sites, traffic could congest both the Maple Avenue and Trans-Canada Highway river crossings, thus affecting emergency response accessibility to areas across the river and thus both sites are rated as equal. Our administrative assessment is that the Maple Avenue site has greater emergency access issues due to traffic congestion northbound on the Maple Avenue river crossing.
- In both sites, traffic to these sites will not be affected by railway traffic.
- The development of the FLC site will result in the need to improve Division Avenue north of the river as well as 23rd Street and the Trans-Canada Highway river crossing. These improvements are currently scheduled for the 65,000 to 95,000 population horizon and so the development of the FLC site would accelerate the need for these improvements.
- The Maple Avenue site will have a lower average travel time since approximately 80% of the residents live south of the river.
- An examination of the area within walking distance to the Arena confirms that there is ample opportunity for shared parking in this area. If the Maple Avenue site were to be selected, then there would likely be little or no need for the construction of new parking stalls. However, there is the possibility of parking spill-over into the adjacent residential areas. This would have a negative impact on the quality of life for the residents and would need to be addressed as part of the development of the site. A Residential Parking Permit Program could be instituted in the areas that are likely to be impacted by the parking spill-over to ameliorate this situation.
- At the FLC site, most of the 2100 parking stalls required to service the project would have to be constructed either on a surface lot or in a structure. There is limited opportunity for shared parking as this site is isolated and at a considerable walking distance. In the case of parking, the benefits in terms of cost appear to favour the Maple Avenue site assuming that the issues of residential parking spill-over and walking distance are workable in the context of the overall plan.

Conclusions:
The results of this analysis suggest that the pros and cons of the two sites are quite balanced. That is, there are approximately equal benefits to either site, albeit in different areas. This assumes that each criteria would be weighted equally. In Bunt's opinion, however, the benefits to dispersion of traffic, the reduced cost of providing parking and the fact that Maple Avenue is accustomed to accommodating existing event traffic suggests that the Maple Avenue site may represent a better opportunity for the placement of the new multi-purpose events centre.

Obviously this position could vary if the items were not weighted equally and/or if additional items were developed for consideration. However, the fact that the two sites appear to be so equally balanced suggests that other criteria beyond the transportation criteria assessed within this report should be considered when addressing the issue of selecting the most appropriate site.

After the initial high level analysis that included traffic levels on selected roadway links, parking needs and availability, and general pros and cons related to transportation issues, Bunt has concluded the following:

- The transportation network appears to be better able to absorb the additional event traffic on the regional road network if the Maple Avenue site is selected for the new multi-purpose events centre and associated uses, though there may be a need for increased local road improvements associated with the Maple Avenue site. There are more accesses to the Maple Avenue site than to the FLC site. This allows for more evenly distributed traffic on the road. There are only two major accesses to the FLC site, which may cause the Maple Avenue and the Trans-Canada Highway river crossings to experience reduced levels of service during the p.m. peak hours and in the hours preceding/after an event.
- Substantial new parking may not be required if the Maple Avenue site is chosen. If the FLC site is chosen, approximately 2100 new parking stalls may have to be built. The Maple Avenue site encourages the efficient use of available parking in the vicinity and within walking distance of the facility. The FLC site does not provide any opportunity for shared parking. The Maple Avenue site may encourage parking spill-over into the adjacent residential communities, but this could be ameliorated by instituting a Residential Parking Permit Program.
- After examining the pros and cons critically, and having given due consideration to the ability of the road network to handle the event traffic, during the p.m. peak and during the surge immediately after an event, it is Bunt's opinion that the Maple Avenue site would be expected to offer a better overall (regional as opposed to local) transportation level of service than the FLC site. There will be costs associated with local and regional improvements, but the information provided suggests that this will be less extensive for the Maple Avenue site than for the FLC site.

- Event traffic conditions are significant regardless of which site is selected. The details regarding specific queuing activity, delay to inbound and through traffic as well as the time required for outbound site traffic dispersion should all be assessed as part of a comprehensive Transportation Impact Assessment. Such an assessment will likely be required by the City as part of the typical approval process. However, it continues to beg the question regarding how or if the event surge conditions should be sought for full mitigation; or whether event conditions at either site should result in additional network improvements being developed in advance of their current target population horizon as this could technically result in a need to include additional improvements at the 65,000 to 95,000 population horizon that were not identified in the 2005 Earth Tech study as they would not have been required until after that horizon in the absence of the event surge being considered.

6. Scheffer Andrew Ltd. – Traffic Engineering Report

The City retained the services of Scheffer Andrew Ltd. to identify at a very preliminary level improvements to existing municipal infrastructure required to support a new multi-purpose events centre at the five proposed sites. The purpose of the cost estimates was to provide a better understanding of the costs and the risks associated with each site. The time constraints to complete the work did not allow for a comprehensive analysis. It is recommended that once a site is selected, that an engineering study(s) be conducted to better determine improvements, evaluate options, and refine costs associated with the improvements for budgetary purposes.

Key Points:

- It is typical that large public gathering facilities such as the proposed new multi-purpose events centre have trips entering the facility over a longer period of time prior to the start of an event than leaving after the event. Therefore, the larger traffic problems are typically seen when the event traffic attempts to leave the facility over a much shorter period of time than it arrived.
- It is generally impractical to provide a road network with sufficient capacity that some portions of the network will not be below what is generally considered a desirable level of service during the discharge of traffic from a major event.
- Major events at this type of proposed new multi-purpose events centre are typically scheduled to finish after the p.m. peak or on weekends where the traffic does not interfere with the p.m. work based traffic peak. Typical practice is to allow the road network's performance to fall below what is generally considered acceptable for a short time period during event discharges.
- For all sites, the off-site road network will have to accommodate WB-21 vehicles (largest single trailer semi allowed on Alberta Highways without special permits) into and out of a loading dock at the new multi-purpose events centre. For the FLC site, Southlands sites and BSBP site this requirement is easily met. At the Maple Avenue site, road and intersection improvements will be required.
- On-site accommodation of event support vehicles will require an area dedicated for parking of these vehicles. It is estimated that to provide this parking will require an additional 0.3 ha of land not accounted for in the GEC report.
- No parking provisions for the accommodation of vehicles dropping off and picking up patrons have been made. Three classes of vehicles have been identified under this category:

- Public Transit
- Accessible transportation
- Private vehicles

While these vehicles do not typically park at the site for the duration of the event or reduce the parking requirements, they do contribute to the traffic on the road network and park for short periods of time, usually as close to the facility as possible. It is therefore desirable to have facilities at the site to accommodate these vehicles.

- Pedestrian traffic crossing Maple Avenue also adds delays in discharge times on Maple Avenue as pedestrian crossings must be accommodated at the Maple Avenue intersections further reducing the capacity of these intersections.
- Significant delays on the road network on Maple Avenue have been identified as a problem to Fire Department response times. In addition, delays on Maple Avenue and the road network east of Maple Avenue will adversely affect the Police Department to ingress and egress to their site and the Remand Centre. If this site is selected, minimizing the discharge times from this site will reduce the negative impacts on the Police and Fire Departments. *The City has an approved capital project for traffic light synchronization of Maple Avenue and Dunmore Road, which will assist traffic flow.*
- Improvements to accommodate WB-21 vehicles will likely be required to either 2nd Street or 3rd Street, dependant on the location of the loading dock. Also, both streets may require improvements based on the layout and location of the loading dock. As well, the intersections of:
    - Maple Avenue and 2nd Street,
    - Maple Avenue and 3rd Street,
    - Birch Avenue and 2nd Street
    - Birch Avenue and 3rd Street

  will require improvements to accommodate the larger commercial vehicles and higher traffic volumes.
- The actual location of a new multi-purpose events centre at the FLC site will determine the costs of off-site improvements. The specific site selection should be done in conjunction with an Area Structure Plan for the whole FLC quarter section and the quarter section to the east.
- The existing road network does not have connections currently to the proposed site in the FLC area due to the heavy industrial setback. It is assumed that the extension of Brier Park Road north to 23rd Street will be required for this site.
- The extension of Brier Park Road north to 23rd Street will create about 100 acres of new commercial/industrial lots that can be sold by and benefit the City.
- Extending Brier Park Road with two intersections at the site will direct traffic to eastbound 23rd Street, southbound on Division Avenue and westbound 23rd Street and southbound on Brier Park Road. The improvements associated with extending Brier Park Road include the signalization of the intersections with the site as well as the new intersection with 23rd Street.
- Upgrading of 23rd Street to a four-lane road is not anticipated (solely for the new multi-purpose events centre) to be required as the limiting capacities are based on the intersections. *NOTE: City administration included the costs of this option as well as upgrading Parkview Drive in the financial analysis for comparison purposes.*

- The specific site selection for a proposed Southlands (Black & White Trail) site should be done in conjunction with a revised Area Structure Plan for the Southlands Phase 6 area as the introduction of the new multi-purpose events centre would require a substantial change to the adjacent land uses to make them more compatible with the facility. The current conceptual layout and utility servicing proposed for Southlands Phase 6 would not be conducive to the development of a new multi-purpose events centre. A potential transportation issue at this site is the peak traffic time for the commercial sites in this area may coincide with the traffic at the new multi-purpose events centre.
- This Black & White Trail site also may have an access issue, as it may be limited to all left turn access to the road network, which may not have the capacity to allow for suitable egress times from this site, especially as the dominant movement from the site will be onto Black & White Trail.
- It is recommended that a linkage road could be built between the site and South Boundary Road, but this linkage could create an undesirable situation for a residential community currently planned for Southlands Phase 6.
- The Southlands (west of Home Depot) site requires a large parking facility. Parking at this site will be below the desired 2100 stalls due to the size of the site. This site is 6.94 ha (17.1 acres) and it is estimated that there will be approximately 5.7 ha (14 acres) of parking which will yield approximately 1540 stalls. The shortfall in parking can be mitigated by:
    - building a parking structure,
    - introducing public transit type mitigation measures
    - accept the shortfall, which will impact the businesses and residential development in the area
- Strachan Road is currently constructed as a four-lane divided arterial. It is impractical to upgrade this road further, so the capacity of this road will be the constraint on discharge times from this site.
- The BSBP site requires a large parking facility and therefore the egress from this facility can be designed so that the road network will operate at acceptable levels of service during the traffic discharge from an event. The trade off is longer times to exit the parking lot instead of costly improvements to the road network.
- A potential transportation issue at this site is the high traffic volume times for the commercial sites in this area may coincide with the traffic at the new multi-purpose events centre (evenings and weekends).
- It is assumed that there are at least three accesses to the site and that the accesses are on Box Springs Boulevard and a collector road that ties to Broadway Avenue; and West Boundary Road from Box Springs Boulevard to the Trans-Canada Highway with an associated upgrade of the intersection of the Trans-Canada Highway to dual left turn lanes for southbound traffic on West Boundary Road.

Several clear trends emerged during the analysis of the sites and associated options:

- Turning movements typically provide the most critical bottlenecks in the system. Capacity dramatically improves when additional lanes are added to the turning capacity.
- From a cost perspective, it is preferential to have the majority of the traffic making right turning movements.
- Ideally, a suburban site should have at least three accesses to distribute traffic to the network and at least two different roads to discharge traffic.

- Generally the more alternate paths for egress from the site, the lower the discharge times.
- Regulations require that all new large sites are designed to manage their stormwater runoff and safely convey it to a receiving water course, whether through a direct connection to the water course or through a planned City storm drainage system.
- There is no adequate existing storm sewer for the Maple Avenue site. A new storm sewer and outfall to the South Saskatchewan River will have to be constructed. Fortunately, this site is in close proximity to the South Saskatchewan River.
- The FLC site does not have any overall plan for the site development of the adjacent area. An Area Structure Plan complete with the requisite preliminary engineering should be completed to determine the most economical and sustainable servicing of the area and a new multi-purpose events centre. The FLC site has three principal options:
    - Expansion of the existing FLC system
    - Creation of a stormwater management facility that ties into the future storm trunk north of Brier Park Road
    - Infiltration system / evaporation system
- The Black & White Trail site would be required to build a fairly large flow attenuation facility to reduce the flows from a largely impervious site to a level that could be managed by the downstream facilities that are currently designed to accept runoff from single family residential sites.
- The west of Home Depot site abuts Southlands Pond 2. There would be minimal storage requirements for this site as the storm system was designed with this site being a largely impervious commercial site. Storage would likely only require parking lot storage.
- At the BSBP site, there would be minimal storage requirements for this site as the storm system was designed with this site being a largely impervious commercial site. Storage would likely only require parking lot storage.
- Further points regarding sanitary sewer, water system, gas supply, and electrical supply are addressed in the report and there are no major issues identified.

Conclusions:

- All sites have some limitations or require considerable off-site infrastructure improvements to accommodate the large traffic discharge. The more traffic improvements made, the more the off-site costs will be, and lower discharge times the result. Based on the analysis, the Southland sites have very poor discharge times (99 and 74 minutes) as compared to the FLC (55) and BSBP sites (55), and the Maple Avenue site (49). It is anticipated that as the city grows in population, the discharge times at the FLC and BSBP sites will improve with the creation of more arterial roads whereas the other sites will likely get worse.
- A larger site footprint will be required to accommodate a 2100 stall parking lot as recommended in the GEC report. A practical minimum size is likely in the 22 to 25 acre range depending on the site layout unless a multi-level parking structure is constructed.

- The transportation improvements required for the sites are the most subjective and represent the largest cost requirement of the off-site improvements.
- It is generally impractical to provide a road network with sufficient capacity that at least some portions of the road network do not become bottlenecks during the peak traffic discharge events from a site of this size.
- As anticipated, it is evident that the sites with multiple discharge directions provided the fastest discharge times.
- A Traffic Impact Assessment should be performed to determine traffic impacts and management strategies for the new multi-purpose events centre.
- Sites with on-site parking can be designed to control the traffic discharge rate from the site so the off-site road network does not become overwhelmed. Although this strategy increases the time to leave the site, it can reduce or postpone the requirement for off-site expensive road network improvements.
  Transportation improvements have been categorized by funding sources:
  a) improvements required to support the new multi-purpose events centre that are directly attributable to the new multi-purpose events centre; and
  b) improvements that were planned for the future but will have to be brought forward and constructed sooner than planned to support the new multi-purpose events centre. This second type of improvement is generally referred to as "off-site levies projects" as they are generally development driven. Scheffer Andrew indicates that based on historical growth, major off-site improvements for some sites, like the northern sites, may be 20 years into the future.

  The costs identified in a) are directly attributable to the project while those in b) are municipal costs outside the scope of the project.

7. Other Consideration – Noise

One consideration in the final site selection may be noise levels associated with events at the new multi-purpose events centre:

a) generated by the activity from within the building (i.e. concert noise), and
b) pre-event and post-event external noise from the building occupants (i.e. ticket holders arriving and leaving a concert).

Internal noise generated from within a building can be controlled by the retaining of a professional sound consultant and by constructing the building with the proper acoustical treatment to keep the noise contained. This may be a significant budget item to any project and has been considered in the capital cost of this proposed project.

External noise (i.e. pre-event/post-event pedestrian and foot traffic) may become an issue based on resident complaints about noise generated from an event held in the facility.

Historically, the current Arena has not received many complaints regarding noise but the proposed new multi-purpose events centre Maple Avenue site is closer to private residences. The current design for the Maple Avenue site mitigates this risk somewhat by the loading and parking lots being located northerly away from the residents.

Noise may also be an issue at the proposed Southlands and FLC sites but is not expected to be a problem at the BSBP site, which is a more commercial/industrial location.

Recommendation:

That City Council approves a new multi-purpose events centre be constructed at the:

a. Maple Avenue site if the economic impact (due to retail opportunities and downtown sustainability) is deemed to be paramount; or

b. FLC site if lower on-site construction costs are more critical.

There were five sites compared but no one site stands out over the others. The selection of the "the best site" depends on the weighting of the various factors.

The Maple Avenue site is one of the preferred sites due to its historical and central location, opportunity/potential to support the long-term viability and sustainability of this major community-financed project, and to become the potential catalyst to improve the local area economically and leverage increased spending activity on shopping, food and beverage industries that are complementary to a major events centre. This has been successfully proven in many other cities in Canada and in the United States.

Maple Avenue site has been evaluated by GEC to be the best when considering existing development plans, service requirements, retail land values and timing of the project, in comparison to the sites selected at the south and north ends of the city. The costs for off-site transportation and parking mitigation upgrades, such as intersection improvements, emergency vehicle access, bus transportation systems and adjacent paid parking are comparable to some of the other sites analyzed. Whether or not these costs should be directly attributable to the new development is currently under review.

The FLC site is also one of the preferred sites due to less costly total project costs when deleting the accelerated infrastructure off-site costs. The site also offers increased opportunities for commercial and industrial development if the Brier Park Road extension is completed. However, comparatively, site development is more costly for accelerated road, site services, and intersection upgrades.

The administrative review confirmed that regardless of what site is selected, the City would have to consider the completion and funding of off-site improvements to assist with the success of the project. In some cases, there are off-site costs that are directly attributable to the new multi-purpose events centre, whereas in other cases, potential off-site levies may be brought forward as servicing and roads will be accelerated ahead of any previous long-range plans and budget forecasts.

GEC's report stresses that a new multi-purpose events centre will not only accommodate the growing demand of sporting teams like the Tigers but a growing desire for residents to be able to enjoy special events such as large concerts, ice shows, and large theatre productions as opposed to traveling to Lethbridge, Calgary or Regina.

There is also a growing trend to install a second sheet of ice for community use and accommodation of the WHL hockey tenant with the increased activity (event days) in the new multi-purpose events centre. GEC has identified that community groups could be impacted by up to a 66% loss of a single sheet of ice time if the community ice was substantially removed from the new multi-purpose events centre. This would not meet future ice demand based on population growth and the user groups' current interest in increasing weekly ice time frequencies.

1. Number of Seats

Building size (number of seats) usually determines if a spectator arena is a single bowl configuration or a double bowl configuration (the cutoff is approximately 7,000 seats). Public amenities in new facilities, which are lacking in the current Arena, are a proper restaurant and bar service, storage space, loading facilities, accessible seating and washrooms, suites, club seating and retail/commercial space. GEC has determined that the size of a new multi-purpose events centre should be based on the expected regional market condition at the midpoint (12.5 years) of the expected life of the building (25 years).

The following information is for consideration when determining the number of seats or capacity of a new multi-purpose events centre:

a) The Arena (4,006 seats) is the fourth smallest venue in the WHL out of 21 teams. The average seating capacity of all 21 WHL venues is 6,714.
b) The median range of all WHL venues is in the 5,000 to 6,000-seat range (seven centres).
c) The average seating capacity of the WHL is 6,826 if you remove Calgary plus the three smaller venues of Moose Jaw, Prince Albert, and Swift Current.
d) The average seating capacity of the WHL is 5,850 if you remove the five larger American venues.

e) Considering the ratio of current seating capacity per population (Medicine Hat in 2001 is 78.2 seats/1,000 population, 71.5 in 2006), if the supply of 80 seats per 1,000 population was standard, then a 5,760 seat venue would be needed in the year 2018 (the mid-life of a new venue). The Arena ranks fourth highest out of ten mid-sized venues and is 10 seats/1,000 population below the average identified in the GEC report. Based on the ratio of seats per capita, the current Arena ranks higher than cities like Lethbridge, Kamloops, Regina and Kelowna (average 88.3 seats/1,000 population; median 77.1 seats/1,000 population; Medicine Hat 78.2 seats/1,000 population). Using the survey average of 88.3 seats per 1,000 city population ratio would project a seating capacity of 6,357 based on a population of 72,000 in 12 years from now (2018).

f) Memorial Cups have occurred in venues that seat in the range of 5,000 to 15,399. In recent history, the average venue size is 8,564.

g) The Scott Tournament of Hearts has been hosted in venues that seat in the range of 4,500 to 9,100. In recent history, the average venue size is 5,840. The Canadian Men's Curling Championship (The Brier) has been hosted in a smaller facility like Regina (2006) but has normally been held in venues that hold 10,000 or more seats. (Edmonton, Saskatoon, Halifax, and Calgary)

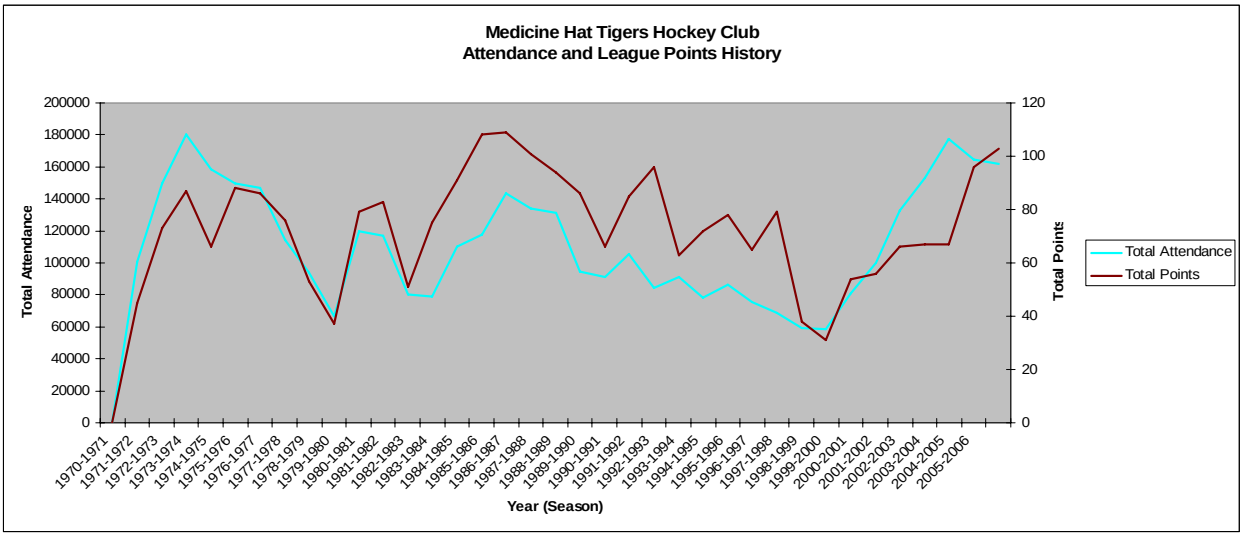
h) Concert promoters have indicated to GEC that a venue size of at least 6,000 seats is preferred for the Medicine Hat market area. (It should be noted that the Lethbridge Enmax Centre is smaller than 6,000 seats and accommodates twice as many events as the Arena.)

i) The average 10-year (1996-2006) regular season game turnstile attendance for a Tigers WHL hockey game has been 2,789. During this time, the Tigers missed the playoffs five years in a row.

j) The Tigers have indicated that they have a 1,500 plus waiting list for season tickets. Tigers game tickets have been in high demand as the club continues to compete and excel in the WHL. The venue has been sold out for the past four years and attendance has doubled since the mid 1990's. There is an obvious correlation between attendance and team success (See Table 1). Based on 2/3 of the people on the season ticket waiting list requiring two tickets per game, the demand for seating capacity would be estimated at 6,000.

Table 1: Medicine Hat Tigers – Attendance and Team Success

(Source: City of Medicine Hat)



k) Nustadia provided a graph on page 16 of the Arena Feasibility Study (Part I), which displays the average attendance per regular season game in the WHL. Data shown begins in 1990 and continues to the 2005 season. If the large venues such as Calgary and Vancouver are removed from that graph, per game average attendance falls within the range of 3,000 and 6,400.

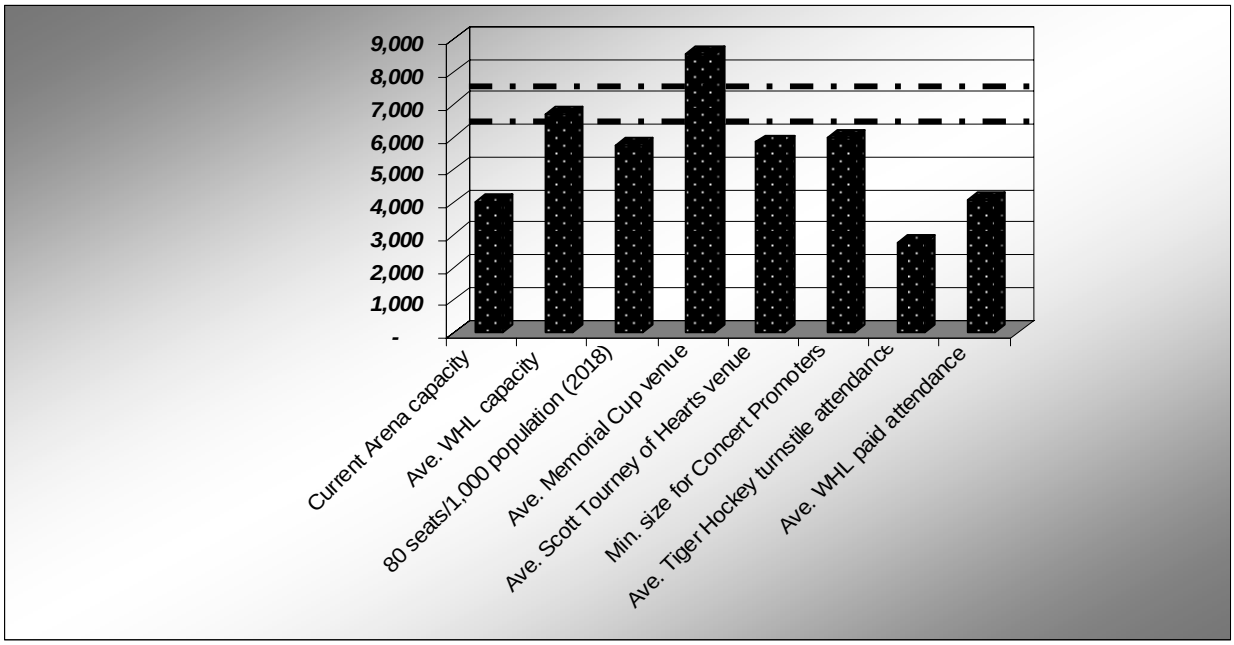
l) The Commissioner of the WHL indicates in the WHL 2006-2007 guidebook that there has been "amazing growth" of the league recently due to factors of high standards and entertainment value, loyal fan bases, new broadcast partnerships, expansion franchises (Chilliwack 2006 and Edmonton in 2008) and internet streaming and expanded television coverage. Administration has contacted the WHL's senior administration and they indicated that 5,000 to 5,500 seats plus standing room is an appropriate size for today's WHL product. Any number of seats smaller or larger creates huge challenges for their hockey clubs especially concerning season ticket base lines. They also indicated that if you remove the larger attendance centres of Calgary, Portland and Vancouver and the smaller attendance centres of Moose Jaw, Swift Current and Prince Albert, the average paid attendance for WHL hockey is in the low 4,000's. They do not recommend renovating the current facility without expanding the number of seats.

It should be noted that the Tigers ownership group has expressed concern to GEC and the New Arena Steering Committee that a facility with a high seating capacity will have a negative effect on business plans, specifically regarding a sustainable season ticket base. An excess of seats will result in a reduced demand for season tickets. The GEC report indicates, "Any size beyond the present 4,000 seats is a significant risk".

Table 2: Seating Capacity Review

(Source: City of Medicine Hat)

Description	Seating Capacity
Current Arena capacity	4,006
Ave. WHL capacity	6,714
80 seats/1,000 population (2018)	5,760
Ave. Memorial Cup venue	8,564
Ave. Scott Tourney of Hearts venue	5,840
Min. size for Concert Promoters	6,000
Ave. Tigers turnstile attendance	2,789
Ave. WHL paid attendance	4,100
GEC Report Recommendation	
hockey	6,136 - 7,136
concerts	7,000 - 8,000



2. Regional Market Conditions

Medicine Hat's regional market conditions and demographics indicate that the regional population of southeastern Alberta is sparse and does not have as large of a population base (compared to other WHL cities) to support at the same level a new multi-purpose events centre and the events hosted in such a facility. The GEC report identifies the current city population and regional trading area that could support a new multi-purpose events centre and its events. Medicine Hat has a current trading area of less than 200,000 people (168,000), while other successful WHL cities with highly active special events calendars have a market population of nearly 300,000 or more (i.e. Lethbridge's market population is approximately 275,000). This would affect projected attendance (revenue) for major events as well as the number and diversity of special events.

Recommendation:

The administrative review confirmed that the GEC recommendations regarding the number of seats for a new multi-purpose events centre set at 6,500 is a reasonable amount that meets the needs of the community for the next 25 years. 6,500 seats (plus standing room) will accommodate most special events, hockey events and ice shows, curling functions and other community events. Phasing the expansion from 5,500 to 6,500 could assist the WHL hockey tenant in keeping the high demand for hockey season tickets and support. However, there are no significant cost savings by building for 5,500 seats now and expanding to 6,500 seats later.

3. Functional Requirements

The building design is proposed to include top loaded seating from a single concourse, event floor amenities for concerts, community ice use, separate but simultaneous events for the main venue and the community ice sheet (if approved), 15 to 24 private suites and community suites, restaurant, lounge, club seating, press box, commercial/retail space, support facilities, event level services, administration and hockey team facilities, within a gross building area of 175,000 square feet.

The New Arena Steering Committee (3) and Administration (6) toured comparable CHL venues. A 175,000 square foot gross building area facility (excluding the 30,000 square foot community ice sheet) can accommodate the desired features (26 to 33 square feet per seat is within a standard of buildings recently constructed).

4. Community Ice Demand Analysis

The GEC report has extensive data regarding the ice demand to assist with future decision-making. Usage information was generated through a combination of surveying key user groups and City-provided demand information to determine areas of need.

GEC has assumed that community ice at the Arena will decrease due to the increased number of special events. They have indicated that if the community ice is substantially removed from a new multi-purpose events centre, 2/3 additional ice sheet time will be needed. Adding an extra 20 to 30 event days to a new multi-purpose events centre would result in approximately 100 to 250 hours of prime time lost. Based on a regular season of 2,042 hours of prime time, the administrative review has determined a community impact of 5 to 13% thus not impacting available times to a level necessitating 2/3 of an additional ice sheet.

Community Development has been working with user groups to coordinate and meet their needs. Currently, all six sheets of ice are fully used during prime time and weekends for tournaments and special events. Some of the challenges the groups have indicated are too much shared practice ice (limits learning of skills), not enough weekly ice times to accommodate the increase in the number of house teams, each division hosting a tournament of only eight teams when there is demand and potential for more teams, teams are now larger (number of participants) to limit the number of teams for ice scheduling, not enough ice time available to create double A “rep” teams at the younger age levels (i.e. Atom), can’t expand the number of female hockey teams due to a lack of available ice times, prime-time ice for midget/juvenile hockey and figure skating demand is increasing annually in the areas of youth and adult learn-to-skate programs. The GEC report indicates that by the year 2016, 2.0 to 4.7 additional sheets of ice are needed.

Community Development is currently preparing an updated Recreation Development Plan. This plan will assess and recommend the longer-term future needs of arenas, aquatics, and dry land activities in the city. A review of a City of Calgary and two other studies (one by the Alberta Recreation and Parks Association) all indicate that hockey participation by household has decreased by approx. 17 to 20%. The cohort who play hockey (5-14 years of age) in Medicine Hat (2005 Census) has growth of about 0.4% over the past 10 years. Medicine Hat Minor Hockey has indicated to GEC that they project a 4% annual increase in demand. Their request for an additional 160 hours per week or 4,500 hours per season will require about $360,000 in additional ice fees or about $360.00 per participant (2006).

There has been a decline in rentals early in the morning and later in the evening (non-prime times). This has added to the pressure of prime time ice. Most groups want to recreate between 7:00 pm and 10:00 pm weekdays.

It is anticipated that with continued life-cycle and preventative maintenance planning, the City’s current ice facilities will have a life expectancy of at least 10 years (Arena 15 years).

Recommendation:
The administrative review confirmed that GEC's report recommendations regarding ice demand for more than one extra ice sheet is high. Although current prime time ice demands are near or at capacity, there is not sufficient quantitative data to determine if current users are over-served on a per team/week basis compared to like-sized municipalities. It has been shown in numerous surveys and supported by a recent study by the Municipality of Wood Buffalo - Fort McMurray (see Table 3) that the city has a reasonable supply of ice based on population to ice ratios. More review is required but a more realistic outcome based on Alberta trends is that a slight demand increase of no greater than 1% would likely occur. This would indicate that current and short-term demand for ice activities is as good if not better than other mid-sized Alberta cities.

The future development or retention of an additional community ice sheet attached to the new multi-purpose events centre (other than the FLC), or as a stand-alone facility, or as future twinned facility, is reasonable to meet both special event and longer-term demand and population growth. A more extensive study, verifying user requests and comparing weekly utilization rate, and other prevalent data with other mid-sized Alberta centres is needed before more than one additional ice sheet should be contemplated.

Additionally it may be possible to minimize both the real impact to user groups with advanced planning and coordination and the economic benefits to the community by hosting increased special events. The net operating cost for the proposed new multi-purpose events centre could be positively impacted because of promoting more special events, while still maintaining a reasonable balance of "regular" subsidized community ice rentals. Past practice with special events held at the Arena has shown that revenues from concessions, ticket service charges and show rentals generate more revenue than that of the regular users of youth and adult ice.

An alternative to the development of a new second ice sheet at this time could be the retention of the current Arena. This would require considerable planning and coordination, however, based on a 10 year plan could reasonably accommodate demographic growth and program driven expectations for more prime time ice.

Table 3: Recreation Facility Inventory/Provincial Comparisons

(Source: City of Fort McMurray 2006)

	Population	Arenas
Regional Municipality of Wood Buffalo	79,810	3
Fort McMurray	64,441	3
St. Albert	56,310	5
Red Deer	82,971	7
Lloydminster	23,646	5
Medicine Hat	51,000	6
Lethbridge	78,713	6
Grand Prairie	44,631	4
Strathcona County	81,000	8

Population Ratio

	Population	Arenas
Regional Municipality of Wood Buffalo	79,810	1:26,603
Fort McMurray	64,441	1:21,480
St. Albert	56,310	1:11,262
Red Deer	82,971	1:11,853
Lloydminster	23,646	1:4,729
Medicine Hat	51,000	**1:8,500**
Lethbridge	78,713	1:13,118
Grand Prairie	44,631	1:11,158
Strathcona County	81,000	1:10,125
Average Standard Ratio (ideal)	--------	1:9,920

The Arena enjoyed one of its busiest years ever in the 2004-2005 WHL season with approximately 64 event days. Major highlights included the Continental Cup (curling) and a Nickleback rock concert. That same year the Tigers played seven playoff games, finished first in the Central Division and lost out in the Conference Final. In 2005, 52 event days occurred and in 2006, the number was 50 event days. As was indicated in the previous Nustadia report and confirmed by GEC, the 36-year old Arena does not have the amenities and structures necessary to accommodate special events and concerts.

GEC reports that a new multi-purpose events centre will host 70 event days in its first year of operation (an additional 20 days as compared to 2006) and at least 90 (+40 days) within five years. In comparison, the following event centres have experienced between 100 and 300 event days:

Table 4: Major Spectator Event Centre – Annual Event Days

(Source: City of Medicine Hat)

Toronto Air Canada Centre	300 Event Days
London John Labatt Centre	170 Event Days
Spokane Arena	138 Event Days
Saskatoon Credit Union Centre	135 Event Days
Everett Events Centre	120 Event Days
Victoria SOFM Centre	120 Event Days
Saint John Harbour Station	110 Event Days
Lethbridge Enmax Centre	100 Event Days
Medicine Hat Arena	50 Event Days

GEC's projections include modest growth over a five-year period. A new multi-purpose events centre would attract potential promoters and events to the city and the southern region of Alberta and would complement the current success of the Esplanade, which holds a maximum of 700 seats per event. A well-designed multi-purpose events centre, with various configurations, can host events as few as 1,000 and as many as 7,500 participants. As indicated by GEC, a business approach (i.e. co-sponsor shows) and a strong marketing team would be required to make the new multi-purpose events centre financially successful.

The Tigers currently make up 94% of all Arena events. It should also be noted that they use 24% of all Arena ice demand. With a new multi-purpose events centre, it is anticipated that the WHL hockey tenant would drop to 52% of all event days and 48% of events would be other sporting events, family shows, concerts and community events.

The administrative review has determined that the per event projected attendance appears to be optimistic for events other than WHL hockey. This affects the projected annual revenues and has been included in the administrative review projections. One model Administration reviewed indicated a conservative estimate of 66 event days totaling 250,000 in attendance, 63,000 (20%) less than the 2010 total projected attendance.

The conceptual design is based on developing a 6,500-seat (plus 500 standing room) facility for hockey and up to 7,500 for concerts and special events depending on the setup configuration. This would be hosted in a 175,000 square foot gross building area that can be accommodated on a three-acre site, which is equivalent to a standard city block. GEC also included a second 30,000 square foot community ice sheet, which could be added later. It should be noted that the current Arena is approximately 70,000 square feet (gross building area of two levels).

1. Site Planning (Maple Avenue)

GEC has indicated that they would intend that the design incorporate the historic nature of local materials such as brick and sandstone. A main entrance and retail components facing north and west is best suited to support the building business plan and neighbouring commercial properties.

2. Building Organization

A single concourse with limited vomitories (seating bowl exit/entrances) works well to eliminate "wasted" (and high demand) space and to separate the public/concourse areas from the event/participant spaces within the building.

3. Imagery & Massing

The scale of the building respects and fits in appropriately with the surrounding commercial and residential neighbourhood. The asymmetrical roof form is an excellent proposal from a building component and visual image perspective.

4. Sustainable Design Principles

An energy efficient and high performance building envelope and enhanced mechanical and electrical systems will be required to maintain a long-term sustainable business model for the proposed new multi-purpose events centre. This component meets City Council's "Top Priorities" of environmental stewardship.

Recommendation:

The administrative review confirmed that GEC's report regarding Concept Design meets the "Made–in-Medicine Hat" requirements for a new multi-purpose events centre. GEC was successful in aligning the proposed site with the area needs to introduce a modern concept that has economic potential and is visually appealing.

GEC and Administration have met with a number of key stakeholders and user groups of the current Arena to discuss current and future utilization, identifying the need and support for a new multi-purpose events centre. Amenities such as training facilities and meeting space were some of the recommendations for improvements that were identified.

GEC will include a report on the public consultation process and results.

Administration has completed a review and assessment of the financing options and sustainability of a new multi-purpose events centre based on the operating and capital assumptions outlined in the GEC report.

The following assumptions have been used in determining costs for the future development of a new multi-purpose events centre:

1. Assumptions

a) Construction would commence in 2008 and full operation in 2010 subject to:
   i. City Council's decision regarding the building and timelines for a new multi-purpose events centre (spring 2007).
   ii. Fund-raising and design completion prior to construction (2007).
b) Construction escalation rate of 30% as indicated in the GEC report.
c) Capital cost projections for a 6,500-seat new multi-purpose events centre including land (retail value in East Southlands) and all servicing costs (water, sewer, gas, electric, access roads, etc.).
d) If the current Arena is demolished it would be at a cost to the project; the site would be sold or used as parking. Revenues collected have not been allocated to the new multi-purpose events centre costs. Equipment salvaged and transferred to a new multi-purpose events centre is not included.
e) Capital borrowing occurs in 2008 for construction purposes and the first year of operating costs for a new multi-purpose events centre would be 2010.
f) A 1% increase in taxes would generate $340,000 in additional revenue.
g) Tax level assessment growth of 2% each year.
h) Land costs include infrastructure and servicing costs (and off-site levies) to the property line and building costs include all services on the property.
i) Government grants and fund-raising sources contribute conservatively towards the total capital cost.
j) The City acquiring Debenture Debt over a 25-year period at 5.25% towards the balance of capital funds is needed to complete the project.
k) Operating revenues/expenses are at Alberta Consumer Price Index inflation rates.
l) An Arena Use Agreement with the anchor tenant(s) for a new multi-purpose events centre would achieve higher revenues than the present Agreement.
m) Additional maintenance and staffing costs would be required for a new multi-purpose events centre.
n) For the purposes of this analysis, the proposed new multi-purpose events centre would be owned and operated by the City.
o) Traffic management measures, storm and sanitary sewer upgrades, and utility upgrades reported separately in Table 11.

2. Operating Analysis

Operating revenues for a 6,500-seat new multi-purpose events centre (one sheet) are estimated at $1.4M rather than the $1.6M in the GEC report. This more conservative number recognizes local conditions of ice rates, number of special events, projected suite rentals and advertising, as well as the net food and beverage sales rather than those that occur in other Canadian and American markets. Compared to the current operation of the Arena, $0.9M in new revenues is projected to be generated mainly through agreements, contracts, commercial leases, special events, building advertising and suite and club rentals. It should be noted that $112,000 is derived from paid parking.

Operating expenses are estimated to be $1.55M rather than $1.9M. This reduced number reflects less wages and benefits, materials, repairs and utilities. $758,000 in additional expenses over the current Arena operating budgets would be required for wages, materials, repairs, special event expenses and utilities.

The projected 2010 operating savings of a new multi-purpose events centre (operating revenues and expenses only) are anticipated to be $138,000 in comparison to the City's projected 2010 Arena budget. (See Table 5.)

The GEC report identified that an operating deficit of $118,000 could be projected, excluding any contributions towards borrowing (debt-servicing) or capital replacement reserves by the year 2014. The GEC report indicated that the second ice sheet would reduce the annual operating deficit by up to $100,000.

The administrative review determined that a proposed new multi-purpose events centre (one ice sheet) could lose approximately $154,000 annually before any borrowing expenses or reserve transfers. Borrowing expenses would amount to $5.6M each year based on borrowing approximately $77M of the funds required over 25 years, financed at a rate of 5.25%.

Table 5: 2010 Projected Operating Revenues and Expenses ($000)

(Source: City of Medicine Hat)

Description	CMH Operations Existing Arena (1 ice sheet)	Changes Related to New Arena	CMH Operations New Arena (1 ice sheet)	GEC Study Projections (1 ice sheet)
Revenues	495	896	1,391	1,603
Expenses	787	758	1,545	1,883
Net Operating Surplus (Deficit)	(292)	138	(154)	(280)

3. Capital Analysis – On-Site

GEC's report indicated that the Maple Avenue site would require 800 parking stalls to be developed whereas 2,100 stalls would be needed at the FLC, BSBP, and East Southlands sites. Several of the options include the addition of a community ice sheet whereas a second sheet on the FLC site was not recommended, as there are currently two ice sheets in this area of the city.

GEC has indicated that the construction market in Alberta is "experiencing unprecedented pressures in terms of both availability of labour and materials which has resulted in monthly escalation rates in excess of 1.25% which are compounded over the length of any project". Estimated construction values in Medicine Hat are similar to that of Calgary. This has been confirmed by recent City public works projects.

Recommendation:

The administrative review of the capital, operating, and debt financing costs for each site identified by GEC confirms that the Maple Avenue site in the centre of the city or the Family Leisure Centre site are the most economically feasible dependant on the level of off-site service costs included. Land and servicing costs are lower in these sites (using City book values) compared to the higher retail (sale opportunity) values for the East Southlands or the higher off-site service costs of the BSBP site. The capital costs of the identified sites range from $88M to $100M. A substantial escalation allowance of 30% accumulated over two years has been carried in addition to a 5% project contingency. Capital expenses and funding sources are identified in Table 6.

Table 6: Capital Expenses and Funding Sources ($000) – Debt Financing Only Information Presented at Open Houses

(Source: City of Medicine Hat)

Description	Maple Avenue 1 sheet	Maple Avenue 2 sheets	East Southlands 1 Sheet	East Southlands 2 Sheets	Family Leisure Centre (FLC)
EXPENSES					
Direct Construction Costs	65,654	71,979	72,485	78,810	71,219
Indirect Construction Costs	18,392	20,147	15,333	16,281	13,593
Contingency	4,202	4,606	4,391	4,755	4,241
Total Anticipated Capital Costs	88,248	96,732	92,209	99,846	89,053
FUNDING SOURCES					
Government Grants/Donations	11,000	11,000	11,000	11,000	11,000
Debenture Debt (25 years) 5.25%	77,248	85,732	81,209	88,846	78,053
DEBT/TAXES/ANNUAL AVERAGE HOME INCREASE					
Annual Debt payments	5,562	6,173	5,847	6,397	5,620
% Tax Increase	16.36%	18.15%	17.20%	18.81%	16.53%
Annual Increase per Home (assessed value of $203,000)	149.19	165.57	156.84	171.59	150.74

Administration has reviewed a number of different options to finance this project in an effort to lower the debt. The following table indicates the balance of funds, future commitments, available funds, and the source of funds and impact that it would have if funds from these sources were considered.

Table 7: Funding Sources – Options to Finance ($M)

(Source: City of Medicine Hat)

Description	Current Balance ($M)	Commitments ($M)	Available Funds $(M)	Notes
1. CAMRIF (Federal Grant)	$176	$2.85	0	This funding is available to municipalities in Alberta. There are three priorities for projects eligible for this funding and recreational facilities fall into the third priority. On January 25, the City was notified that there were applications totaling $900M for these funds. The total amount available was $176M. It was determined that a municipality would not receive more than $6M. Medicine Hat will be receiving $6M. The City submitted proposals valuing $32.9M
2. AMIP (Federal and Provincial) New Infrastructure Funding	$54	$27	$4	This funding has been granted to the City. Projects eligible for use of this funding are prioritized by type of infrastructure. Recreational Facilities are included in the second classification of priorities and the municipality must certify that its Core Infrastructure is in good condition to have funding approved for this classification. If these funds were used to finance a new arena, debt would have to be issued to meet core infrastructure needs. Another $10.2M will become available April 1, 2009 and another $10.2M available April 1, 2010. **Details of new Provincial Infrastructure funding have not been announced.
3. Gas Depletion Reserve	$154	$80-100	$54-74	The objective is to reinvest these funds in the purchase of oil and gas reserves. The long-term plan for Gas Utilities indicates that new reserves must be purchased to ensure the City's ability to provide gas to the citizens of Medicine Hat. Funds are required to be available to meet this need as opportunities for re-investment are realized.
4. Land & Properties Contribution	$3.6 deficit (Nov)	$41 over next 2 years	$12 surplus estimated by 2010	The objective is to reinvest these funds in Subdivision and Land Development. The use of a large amount of the surplus that is projected may negatively affect the City's ability to remain in the Land Development business. The surplus estimate is one year old and needs to be updated to recognize the escalation of costs in the construction sector.
5. Infrastructure Reserve	$3 (projected at Dec 31, 2006)	$13 (2007 and 2008)	$3.5 Estimated Balance at Dec 31, 2009	The objective of this reserve is to provide a source of funding for capital projects valued at less than $1M. The goal was to have $6.3M in this reserve by December 31, 2009. This would give the City flexibility to meet unforeseen demands. Use of these funds would result in the need to debt finance municipal projects.

Table 8: Capital Expenses and Funding Sources ($000) – Financing with Other Sources – Information Presented at Open Houses

(Source: City of Medicine Hat)

Description	1	2	3	**4**	5
Debt (Recommended Site)	85,731	85,731	85,731	**85,731**	85,731
Other Sources	0	10,000	20,000	**24,140**	30,000
Revised Debt	85,731	75,731	65,731	**61,591**	55,731
Annual Debt Payments	6,173	5,453	4,733	**4,435**	4,013
% Tax Increase	18.15%	16.04%	13.92%	**13.04%**	11.80%
Annual Increase per Average Home (Debt only)	$165.57	$146.26	$126.95	**$118.95**	$107.63

Table 9: City of Medicine Hat Community Buildings – Financing and Tax Impacts ($000)

(Source: City of Medicine Hat)

Source of Funding	Family Leisure Centre	Esplanade	New Multi-Purpose Events Centre Maple Avenue Site (1 ice sheet)	
			Scenario 1	Scenario 2
Funding	19,000	42,800	25,000	42,140
Project Value	19,000	42,800	88,248	88,248
Debt (Debenture Borrowing)	**0**	**0**	**63,248**	**46,108**
Annual Debt Payments			4,554	3,320
% Tax Increase			13.39%	9.76%
Annual Increase per Average Home (Debt only)			$122.15	$89.05
Monthly Increase			$10.18	$7.42

The above tables show the costs of the project as indicated in the GEC report and summarizes some of the funding options previously presented to the public at the open houses. For each site, an amount was designated for off-site infrastructure (road and utility improvements) but was not a major component of the scope of their study.

Table 10: City of Medicine Hat Community Buildings – Funding Sources and Scenarios ($000)

(Source: City of Medicine Hat)

Source of Funding	Family Leisure Centre	Esplanade	New Multi-Purpose Events Centre Maple Avenue Site (1 ice sheet)	
			Scenario 1	Scenario 2
Federal/CAMRIF		4,334	6,000	6,000
Provincial/AMIP/ New Funding		5,274	4,000	17,000
Sponsorship / Fund-raising	2,000	3,429	5,000	5,000
Gas Reserve		15,000	5,000	5,000
Land Reserve	17,000	12,000	5,000	5,000
Other (interest, sale of building, infrastructure reserve)		2,763		
Land Donation				4,140
Sub Total	**19,000**	**42,800**	**25,000**	**42,140**
Debt (Debenture Borrowing)		0	63,248	46,108
TOTAL FUNDING (rounded)	**19,000**	**42,800**	**88,248**	**88,248**

Upon further review by Administration, it was determined that more information regarding off-site infrastructure was needed for a project of this magnitude. City staff retained the services of Bunt & Associates and Scheffer Andrew Ltd. to identify, at a very preliminary level, the required improvements to existing infrastructure to allow for a better understanding of the costs and the risks associated with each site. A number of engineering parameters were reviewed that contribute towards the success and/or failure of the building and its determined site. Parameters such as transportation (site discharge times, accommodation of large vehicles, public transit, handicap transportation), storm run-off management, sanitary sewer, gas service, electrical service (street and area lighting, building capacity), and escalation costs were reviewed and are summarized in the following table.

Table 11: Capital Expenses – On-site and Off-site Costs ($000) - Single Ice Sheet

(Source: City of Medicine Hat)

	N. Flats (Downtown).	FLC	Southlands (Black & White Trail)	Box Springs Business Park	Southlands (West of Home Depot)
ON-SITE CONSTRUCTION COSTS					
Direct Costs	65,021	70,748	69,955	70,748	69,954
Indirect Costs	22,938	18,211	19,674	18,001	19,674
Sub Total	**87,959**	**88,959**	**89,629**	**88,749**	**89,628**
OFF-SITE CONSTRUCTION COSTS (up to and including Option 3)					
Roads & Transportation	12,917	30,151	6,320	29,389	3,131
Parkade	0	0	0	0	2,905
Storm Water Management	883	719	420	270	270
Sanitary Sewer	607	27	27	27	20
Water	61	61	61	61	61
Gas Service	200	200	200	200	200
Electrical	200	200	200	200	200
Off-site Escalation	2,045	4,312	994	4,145	534
Sub Total	**16,913**	**35,670**	**8,222**	**34,292**	**7,321**
REVISED TOTAL PROJECT COSTS (TOTAL TAXPAYER IMPACT)					
Total	**104,871**	**124,628**	**97,849**	**123,040**	**96,949**
Change from lowest cost	7,992	27,679	900	26,091	
Ranking (from low to high)	3	5	2	4	1
REVISED TOTAL PROJECT COSTS (OFF-SITE COSTS – POTENTIAL LEVIES REMOVED) IMPACT)					
Total	**104,871**	**93,628**	**96,049**	**94,040**	**96,349**
Change from lowest cost	11,243		2,421	412	2,721
Ranking (from low to high)	5	1	3	2	4

4. Other Funding Options

GEC was requested, as part of the Terms of Reference, to research other possible funding sources for consideration for large community projects like a new multi-purpose events centre.

A ticket surcharge for example of $1 per ticket/event is one source of revenues that has the potential of raising $400,000 each year that could be used to contribute to debt-servicing costs. This is one method in which the facility user, rather than the general taxpayer, contributes to the debt-servicing costs and/or capital reserve. Currently, the City has the ability to charge a surcharge on all tickets sold by the City. The Tigers sell tickets for their events. An agreement would have to be in place with the Tigers for this option to be feasible.

Destination taxes (improvement fees and accommodation levy) are another form of generating revenues that have been justified in other communities by the economic spin-offs created due to events hosted at the events centre. This tax has potential to generate $1.8M in yearly revenues that could contribute to the debt-servicing costs or a capital reserve. The proposed new multi-purpose events centre could add to the business of the local hoteliers, based on 70 events per year. Local hotels also benefit from year-round tournaments hosted in City sporting facilities that are currently subsidized and supported by the general taxpayer. Further review by Administration has determined that a room tax on lodging industries in Calgary and Edmonton of 5% is used, like in other provinces, for destination marketing and tourism promotion. These funds are not used for capital financing or debt-servicing of a major community recreation facility and would not be a funding source for this project in Medicine Hat. There may also be legal limitations to a business tax bylaw, which further prevents the use of this approach.

Administration has researched the following alternatives used by cities in Alberta for the purposes of funding community and recreation infrastructure.

In St. Albert, Servus Credit Union Place is the city's newest leisure centre that opened in September 2006. The tax levy for Servus Credit Union Place is a property tax. On the tax notice, it is shown as a separate line item. Council has a policy that the amount raised from that levy must be applied to costs of the facility. The point of the separation of the charge from the general overall tax levy was to allow residents to clearly see how much of their "taxes" were going to pay for the new leisure centre. With success in fund-raising and sound budget planning, residents and businesses will see the Servus Place Tax Levy drop to $63.85 per $100,000 of assessment in 2007 and $61.78 per $100,000 of assessment in 2008. Over the life of the debenture, this amount should decrease as the assessment base of the municipality grows and new residents are participating in the capital costs. The levy will cease entirely when Servus Place borrowing is repaid (up to a 20-year term). It could be a consideration for Medicine Hat.

The City of Calgary has a Community and Recreation Levy in their 2006 standard development agreements. New development generates revenues that help to pay the costs of growth. The incentive to assume these costs is the economic prosperity and lifestyle benefits that growth brings. This has taken place after negotiations with the development industry to address the capital-funding deficit for community and recreation infrastructure. An agreement has been reached where the current Recreation Levy, at $2,000 per hectare established in 2000, has been changed to the Community

and Recreation Levy, and is set at $40,082 per hectare for 2006. This acreage assessment is to be applied to all new subdivisions including residential, commercial and industrial. These acreage assessments will be utilized for contributions towards capital cost of infrastructure including fire stations, police stations, EMS stations, regional recreation facilities, libraries, and transit buses. The City of Calgary's framework for accommodating growth and coordinating the municipal capital investments from 2005-2024 indicates that recreation centres should be financed by a combination of the city tax base, senior government, developer and homebuyers, and other sources. This levy has been reviewed by Administration (Legal and Planning, Building and Development) and indicated that the Calgary levy was a negotiated levy with the development industry (UDI) and appears to have no support under the MGA. Calgary, under the current extreme growth conditions, could expect the developers to agree to such a levy. This option would be more challenging to obtain in Medicine Hat.

It should be noted that Airport Improvement Fees is a financing tool that airports, like Calgary, use to finance improvements and expansion of facilities (on both the airfield and air terminals) and manage their long-term debt. Projects are endorsed to maintain safety standards and meet their growing facility needs. It is argued that with airport improvement fees, the traveler receives something tangible and real in return.

Recommendation:
Debt is an important method of financing and represents deferred taxes and fees which is appropriate for large-scale projects with a long asset life and when most of the spending needs to be done before any of the benefits of the infrastructure can be enjoyed. The proper use of debt allows municipalities to balance the payments from taxpayers over time and assists in matching the payment for infrastructure with the consumption of the benefits (City of Calgary).

The administrative review confirmed the value of considering other financial initiatives and researching other funding sources to assist with the large capital and operating (debt-servicing) dollars required to finance this project. The revenue options become part of this new initiative.

The financial models prepared by Administration presume that minimally $24M to $42M of all capital funds would be generated from government grants and third-party funding and that the balance of funds required for the project would be borrowed or partially financed through other sources. This would result in a significant annual payment attributable to the new multi-purpose events centre and significant increase on the tax revenue required to address the debt-servicing and operating costs for the facility. There appears to be municipal precedence in the introduction of a recreational service tax levy that is applied to all properties within the community. GEC has conducted detailed research on determining the "real" costs of constructing a new multi-purpose events centre.

5. Other Options – Renovate the Current Arena

In the Nustadia report, the consultants reviewed the functionality, limitations and deficiencies of the current Arena. Nustadia and PBK Architects performed a walk-through and met with operations personnel, stakeholders and users to complete an assessment of the overall building deficiencies and limitations. Nustadia also reviewed the Realty Asset Management Plan that was recently commissioned by the City. Based on that review Nustadia provided a phased renovation cost estimate for the Arena. The report indicated that the 36-year old facility is in very good physical condition and that it serves the basic needs required of an ice sheet for youth and adult skating activities, as well as for a 4,006-seat arena for WHL hockey. Based on its condition and the current life-cycle/preventative maintenance program planned by the City, the facility is anticipated to be functional for at least another 15 years.

In the report, 19 points were made regarding the deficiencies of the current Arena. Key areas of concern included lack of circulation, concession and washroom space and barrier-free access. The maximum capacity of the 36-year-old arena is 4,006 seats and it is often at full capacity and unable to meet the current demand for major events (i.e. WHL hockey). Concerns relating to the lack of electrical capacity, storage, staging area, fire code regulations limiting ice level seating capacity, non-retractable score clock and non-removable rink boards and rink glass are major limitations to hosting special events and concerts.

It was confirmed in the Nustadia report that the Arena could be renovated to a more modern and improved standard for a 4,006-seat spectator facility with capital dollars invested (equivalent to an estimated 35% to 45% of the cost of a new 6,000-seat facility based on Nustadia's 2005 estimate). They had indicated that the capital costs (Preliminary Class C Estimate) was $16.5M (2005 dollars) without adding significant additional seating.

Discussions with GEC have also confirmed that the current Arena can be renovated (modernized) to improve the amenities required to watch spectator events such as hockey and concerts. It would be expected to add another 25 years to the life of the building. A "doughnut" exterior expansion ring (~25 feet) around the entire building would add the necessary space to allow for increased circulation, washrooms, concessions, storage, handicapped accessibility, and added exits and egress points to add media space and private suites. Renovations within the building would replace the concrete ice pad, rink boards and glass, and allow more flexibility to host concerts and other events on the event floor. Total estimated cost for this project is $43M (includes escalation and consulting costs) which is 48% of the total replacement value of the $88M proposed new multi-purpose events centre (single sheet). It should be noted that a project of this magnitude would likely displace the Tigers and other users for an entire season (one calendar year).

Table 12: Capital Cost Comparison: New Multi-Purpose Events Centre versus Renovation of the Current Arena

(Source: City of Medicine Hat)

Description		Maple Avenue Site One Sheet of Ice	Retrofit Current Arena
Direct Costs	construction	$51,900,000	$30,000,000
	escalation Yr 1	$7,785,000	$4,500,000
	escalation Yr 2	$5,968,500	$0
Indirect Costs	site remediation	750,000	0
	FF&E	1,960,000	980,000
	soft costs/design	9,848,025	5,175,000
	land costs	5,834,000	0
Contingency		4,202,276	2,032,750
Project Value		**$88,247,801**	**$42,687,750**
	% of New		**48%**
Financing			
Grants/Donations		$11,000,000	$5,320,985
Debt		77,247,801	37,366,765
Annual Debt Payments		**$5,561,842**	**$2,690,407**
% Tax Increase		**16.36%**	**7.91%**
Monthly Increase for Average Home for Debt Charges Only		$12.43	$6.01
Annual Increase for Average Home for Debt Charges Only		**$149.19**	**$72.17**

The current Arena has 380 feet of rail on the upper concourse. 253 standing room spots could be sold if exterior exits are built to egress from this site. Extra seating along the ice level may accommodate an additional 132 seats if the seats that were removed years ago were added back in and the proper exterior exits are built. Renovating the ice level with new exits and removable rink boards and glass would likely reduce the total amount of seats by 200. To add more seats becomes cost prohibitive due to the low roof, which would interfere with sightlines.

This option, if considered, would require further review and cost analysis by GEC and would be subject to fire department and building code review. It is expected that a building designed and constructed in 1969 would not meet current building codes and would result in significant challenges.

Recommendation:
The administrative review has confirmed that the option of some minor renovations, but not a full scale modernization of the Arena be considered (requiring further engineering and architectural study), if there is a decision not to build a new multi-purpose events centre at this time.

6. Consultant Project Cost Comparisons

Many questions have been raised about the difference in the project costs of constructing a new multi-purpose events centre between the two consulting firms Nustadia and GEC. The following table summarizes the two reports.

Table 13: Consultant Project Cost Comparisons

(Source: City of Medicine Hat)

	Nustadia ($ 2005)			**GEC ($ 2010)**
	6,000 Seats	6,000-8,000 Seats	6,000-10,000 Seats	6,500 + community ice
DIRECT COSTS				
off-sites				$500,000
building	$34,460,000	$42,230,000	$50,048,213	$49,000,000
second arena - community ice				$5,000,000
parking & related site work	Included	Included	Included	$2,400,000
escalation to midpoint construction				$15,078,500
Subtotal	$34,460,000	$42,230,000	$50,048,213	$71,978,500
INDIRECT COSTS				
site remediation/demolition	Included	Included	Included	$750,000
operating equipment FF&E	$1,140,000	$1,140,000	$1,136,310	$1,960,000
soft costs - legal, permits, design	$1,690,000	$2,020,000	$2,285,802	$10,796,775
land costs	Extra	Extra	Extra	$6,640,000
project contingency	$1,070,000	$1,300,000	$1,604,110	$4,606,264
Subtotal	$3,900,000	$4,460,000	$5,026,222	$24,753,039
TOTAL PROJECT VALUE	**$38,360,000**	**$46,690,000**	**$55,074,435**	**$96,731,539**

The difference in costs between the two studies is related to:

1. Off-site costs +$500,000
2. Second sheet of ice of $5M but with all costs added in it is $8.5M.
3. GEC is projecting 2010 costs whereas Nustadia was 2005 costs.
4. GEC has added in a 25% (29% compounded) escalation cost to the midpoint of construction to cover the current Alberta construction market.
5. Operating equipment (FF&E) adds about $800,000 more in the GEC report.
6. GEC's soft costs are estimated 15% of the total direct construction costs which is within range. Nustadia was only 5%.
7. Nustadia's report indicated that land costs were extra. Adds $6.6M to the project value.
8. Nustadia's contingency was 3% of the total direct construction costs, GEC is 6%.

7. Other Options – Keep the current Arena as a community ice sheet

As indicated earlier in this report, the future development or retention of an additional community ice sheet is reasonable to meet both special event and longer-term demand and population growth. An alternative to the development of a new second ice sheet at this time could be the retention of the current Arena. This would require considerable planning and coordination, however, based on a 10-year plan could reasonably accommodate demographic growth and program driven expectations for more prime time ice. Administration has assessed the financial impact of such a plan over a 10-year period. See Table 14.

Table 14: Capital and Operating Options – Community Ice Requirement ($M)

(Source: City of Medicine Hat)

		A. New Community Arena	B. Retrofit Current Arena	C. Repair Current Arena
10 YEAR TOTALS (values are rounded)	CAPITAL			
	Project Value	**$8.5**	**$3.0**	**$0**
	Debt	$7.7	$2.8	n/a
	OPERATING			
	Debt Repayments (25 Yrs)	$5.5	$2.0	n/a
	Operating Costs (2.5% CPI)	$1.2	$4.5	$4.5
	Extra Upgrades & Repairs	n/a	n/a	$0.6
	Total Operating Costs	**$6.7**	**$6.5**	**$5.1**

Option A Construct a new 30,000 square foot community arena.

Option B Retrofit existing Arena to modernize and enhance to meet a revised operating model of community ice use. $3M project value. Would involve the removal of 2,000 seats, upgrade dressing rooms, lounge, office spaces, and replace the concrete slab and boiler.

Option C Continue with existing Arena with an extra budget of $50,000 per year (indexed) for necessary repairs and upgrades. Same as above but phased over a six-year period.

Based on a 10-year total operating cost analysis:

a) The capital debt repayments on a $8.5M new community ice sheet arena (Option A) would be offset significantly by the expected increased operating costs of the older, larger (2X) current Arena with the $3M Arena retrofit project cost (Option B), with the new arena having an increased net operating cost of $0.2M during the time period.
b) Operating cost comparisons between a new $8.5M arena versus the current Arena repair allocation of $50,000 per year (Option C) shows an estimated net operating savings of keeping the current Arena at $1.6M.
c) Operating cost comparisons between the current Arena with a $3M retrofit versus the current Arena repair allocation of $50,000 per year shows a net operating savings keeping the current Arena of $1.4M.
d) All three options reviewed indicate a total 10-year net operating cost (impact) to the taxpayer of $5.1M to $6.7M. In the two current Arena options (B or C), at the end of the 10-year term the Arena would be 49 years old, whereas a new arena would be 10 years old with 15 years of debt still owing.

Delaying the construction of an $8.5M ice sheet in 2009 for 10 years, would require an estimated $13.8M (escalation rate of 5%/year) in 2019.

It should be noted that the current retail value of the 5.5 acres of the current Arena land and the 1.3 acres of parking south of the Remand Centre is worth an estimated $1.6M if the current Arena was demolished and sold by the City for another commercial/medium density residential project. (Site remediation/demolition of existing building is included in the capital project values)

8. Other Options – Twin the Family Leisure Centre EnCana Arena for use as an additional community ice sheet

Another option is to twin the existing FLC EnCana arena. Twinning of ice facilities has been proven to reduce annual operating costs by the resultant synergies of shared staffing and equipment, added traffic to improve concession/lounge revenues, and attract potential pro-shop and other retail/sport medicine opportunities. Currently the annual net operating cost of the FLC (arena + aquatic) is $1.3M. The addition of another sheet of ice would increase traffic and may save the operating budget annually. A second NHL standard ice sheet with approximately 500 seats attached to the current ice surface would enhance opportunities for more tournaments, rejuvenate the concept of the FLC as a potential centre of athletic excellence and encourage more retail and wellness opportunities as was envisioned in the conceptual planning of the FLC a decade ago.

Recommendation:
To meet the long-term interest and demand for additional community ice is best served by the twinning of the FLC EnCana arena at a project cost of $8.5M. This amount is subject to further review regarding additional seating, parking lots, joining the ice sheet to the existing structure, etc.

The option of retaining the current Arena to meet the immediate interest and demand for community ice is financially feasible. This option will save $8.5M (plus $750,000 in demolition costs) in upfront capital. Operating the current Arena would save an estimated $1.6M in operating costs over a 10-year period. This option would require considerable program planning however it offers a short-term solution to meet prime ice demand interests in the absence of clear quantitative data to forecast future ice demand and a future determination of what to do with the current Arena should a new multi-purpose events centre be built.

There will likely be a need for at least one new ice sheet (twinned possibly) within 10 years to meet replacement (Hockey Hounds Recreation Centre and Moose Recreation Centre) and/or growth requirements for community ice within the city.

9. 10-Year Ice Facility Condition Review

Administration has reviewed the Realty Assessment Management Plan (RAMP 2004) and assessed the financial impacts for consideration regarding the costs of capital upgrades, life-cycle planning, preventative maintenance, and future ice facility replacement. See Table 15.

Table 15: Ice Facilities - Capital and Facility Condition Review ($000)

(Source: City of Medicine Hat)

	The Arena	MRC	HHRC	Kinplex 1	Kinplex 2	FLC
Gross Bldg Area (1,000 sq. ft.)	47.0	29.2	26.5	64.4		90.5
Year Built	1969	1961/1985	1961/1987	1974	1986	2000
2006 Net Operating Budget	240	137	152	193		1,260
Capital Budgets (Approved)						
2006	40	30		165		
2007	580	50		100		400
2008		175		340		100
2009-2010P	230	80	275	230		40
Ramp Study (2004)						
Deferred	319	65	67	82		129
0-5 yrs	1,639	308	207	425		99
6-10 yrs	337	161	179	363		83
10 +	333	325	303	326		223
Overall Rating out of 10	**6.6**	**5.7**	**6.3**	**6.5**		**8.8**
Comments/ Concerns	Old compressors, requires new flooring, dressing rooms and storage inadequate, need new boards/glass, acoustical treatment, domestic water and plumbing, header replaced.	Old compressors, concrete ice slab has major cracks, lack parking, inadequate dressing room space	Old compressors, concrete ice slab has major cracks, lack parking, inadequate dressing room space	Lighting is poor, inefficient concessions, lack of storage for users, crowded lobby, seating in Kin 2 is poor, score clocks outdated, lower roof replacement, wall insulation and acoustical treatment, inadequate dressing room space		Requires a preventative mtce. Program, and life-cycle planning as major components will soon reach end of life-cycle

Total capital budget requirements for 2006 to 2010 are $2.84M. The RAMP study estimated that $3.34M is required up to 2009 to maintain the above facilities at a standard operating level from a structural, mechanical, and electrical perspective. Additional funds to meet functional requirements or public/user group needs and opportunities for energy conservation measures are not included. This results in a capital deficit situation of at least $0.5M. Adding to the expenses to operate recreation facilities is the increasing user demand and activities that happen in each facility. Downtime for necessary repairs and maintenance is shrinking as user demand increases, in some facilities user demand is at or near 12 months a year.

Recent spikes in construction costs deplete the supply of project money for infrastructure repairs and upgrades. Cities need to protect existing facilities by making necessary repairs and upgrades. As facilities get older, buildings get to a point where if proper maintenance does not occur, they will not be available.

Capital projects undergo a capital ranking process as one of the steps used for identifying those projects that benefit the City the most. Capital ranking criteria is weighted heaviest for emergent needs, health and safety, urgent maintenance or if current equipment has failed. Projects that improve the social well being of the community, quality of life, and opportunities for physical and recreation activities rank significantly lower.

Recommendation:
Ongoing capital maintenance to existing infrastructure is required to continue to provide a high standard of service that the citizens of Medicine Hat expect and enjoy. As the current infrastructure continues to age, this mandate will become an increasing challenge. There will be a need for at least one new ice sheet (twinned possibly) within 10 years to meet replacement (Hockey Hounds Recreation Centre and Moose Recreation Centre) and/or growth requirements for community ice within the city.

1. Development Model

GEC have indicated that there is a variety of models to choose from when building, owning and operating public assembly facilities. This was evident on the tour that Administration and the New Arena Steering Committee recently undertook to view other venues.

GEC has recommended that the Municipal Public Works Project model be used in building a new multi-purpose events centre. The City has been successful in using this model recently during the construction of the Esplanade and the South Ridge Recreation & Wellness Centre. They have indicated that a private sector finance / design / build / operate model may reduce the capital and operating risk to the municipality, however, the potential drawbacks of the private developer wanting to compensate for their higher borrowing/investment rates and control over design and building may not meet the high standards that the community has enjoyed in the past.

2. Construction Procurement

GEC is recommending a Construction Management – Sequential Tender model, which is a variation to the conventional construction method. In this case, a Construction Manager is selected earlier in the design stage and packages of "work" are sequenced out earlier than in the conventional method of a stipulated sum bid. This approach allows the project to start earlier resulting in less cost escalation for the project. GEC has indicated that savings can be substantial using this approach for this type of project in today's over heated construction market place.

Administration has confirmed that the traditional Stipulated Sum process is a poor method of controlling costs in today's market place. Contractors are too busy and in high demand, and there are high risks for labour and materials. Often the result is to add generous margins to their bids. A construction management model should be explored especially for the construction of a building as sophisticated as the new multi-purpose events centre being proposed.

The general steps in this model are:

1. Expressions of Interest – The project team would receive requests from construction managers/general contractors (Construction Managers) for the construction of a new multi-purpose events centre. In this step, the applicants will evaluate if they can get bonding, insurance, and if the timing of the project meets with their workloads and goals. The project team finds out which companies are interested in performing the work and has a general review of their qualifications. This process either can be done by a wide sweep public request or by a short list

of those companies that the project team feels would meet this pre-qualification process. It is important that competent builders are chosen and not just the lowest bid for a project of this scope.

2. Request for Proposals (RFP) – In this step, the project team reviews key areas of need, the company's ability to understand the building that is to be built and their ability to execute the work. What personnel does the company have dedicated towards the project and what qualifications and experience do they have for similar buildings. The commercial terms or bid indicates what their costs would be. The Construction Manager would submit two fees: general conditions and fees. It is very important that the documents be prepared properly to ensure clarity in what information is required in the RFP (i.e. Maximum target price, shared savings, cost control measures, etc.).

In Calgary, there are a number of larger companies that perform construction management work in southern Alberta. They are Stuart Olson, Graham Construction, PCL, Ellis Don, Cana Construction, Bird Construction, and Clark Construction. By following the above two steps, the project team limits their risk by selecting a qualified Construction Manager rather than the traditional hard bid approach which may result in a less experienced company with the low bid. The trend has been towards construction management over the last 10 to 15 years as a result the entire industry - owners / builders / designers - wishing to move away from the adversarial climate of design-bid-build into more of a team approach to completing projects. In the current Calgary market, there are companies no longer hard bidding on work because they want to control their risks.

Once the above two general steps are completed, the project team is joined by the Construction Manager to form an expanded project team for the balance of the project. This group then has the advantage of a qualified and experienced builder on the team to assist with the innovative design and development of the project. A result likely to occur in this model is that change orders will be less as the Construction Manager has input into design and looks for cost saving measures. This results in less surprises and mistakes in the design/cost process. It is recommended that the City still requires a Project Manager as part of the project team to ensure that the interests of the Owner is maintained during the design and construction phases for a project of this magnitude.

An advantage in using construction management is that the Construction Manager will prepare construction cost "estimates" as the project proceeds through design and contract documents and can be a second set of eyes if you use a cost consultant. Many clients simply use the Construction Manager to complete all budgeting.

Once working drawings or bid packages are completed, the Construction Manager begins to "lockup" trades by contacting their "regular" trades that they have worked with on previous projects (and have a solid business relationship with) or by a competitive tender process in a sequential manner. Regular contractors provide fairer, competitive pricing as they value the long-term security (steady pipeline of work) and working relationship they have with a reputable Construction Management company. Critical in today's construction market is to secure labour and materials early in the development to avoid costly delays and/or sole sourcing. Contracts can be issued for areas like excavating and site development, steel, mechanical, and electrical earlier in the process than in a conventional stipulated sum option. This reduces the risk and normally results

in bidding that is more competitive. Companies are bidding on work that will happen a lot sooner than the traditional model of bidding.

This model allows the start of construction to be brought forward earlier resulting in less cost escalation by approximately six months which can be a substantial savings for larger projects.

Once all sub-trade contracts have been let and final price is established the construction management contract - CCA No. 5 (with modifications) may be converted to a lump sum contract - usually in the form of a CCDC No. 2. It has been confirmed that the stipulated contract CCDC No. 2 is old fashioned and not recommended for the scope of this project.

The risk to the owner is that the final construction cost is not known until all tendering is complete which can be 25% to 50% into the project. However, if the RFP has requested a maximum target price from the Construction Manager, the project team will know at the start what the maximum guaranteed price will be.

3. Operating Model

GEC has reviewed three options: City, private, and an arms-length society operating model approach. Private company operating models are becoming a common trend in new spectator arenas especially in larger centres. Certain companies have the expertise and resources to do the job but also require a guaranteed subsidy or a strong business case to ensure management fee recovery can be generated. The City-operated model is currently used at the Arena and the Esplanade. An arms-length society model would be similar to the Medicine Hat Public Library and is successful in the cities of Spokane and Saskatoon. GEC recommends either the City-operated or arms-length society model.

Administration has reviewed four external models:

<u>Spokane Arena, Spokane, Washington</u>
Capacity: 10,366 seats
# of Event Days (2005): 138 major events and 429 minor events
Gross Ticket Sales: $7.9M
Revenues: $4.8M
Expenses: $4.2M
Total Attendance: 643,337
Operating Model: The Spokane Veterans Memorial Arena, the Spokane Opera House, and the Spokane Convention Centre are owned and operated by the Spokane Public Facilities District. The board is comprised of five members (two appointed by the City, two by the County, and one Member at Large who is elected by the members and is representative of the Hotel Association, which provides $2M a year in a hotel/motel tax). Each member serves a 4-year term in a staggered manner and may serve a maximum of two terms. A senior management team reports to the Board and has a core of 32 staff (non-unionized). Contracts are issued for areas such as security, food services, janitorial, parking, and ticket sales.

Harbour Station, Saint John, New Brunswick
Capacity: 7,800 seats
# of Event Days (ticketed): 110
Operating Model: Harbour Station is owned by the City of Saint Johns. A commission has been established representing the City of Saint John and three rural municipalities. The City has four appointees and each rural municipality has one each for a total of seven. (Currently two of the seven are elected officials). Every three months the board meets with the senior management team to discuss policies and procedures as well as financial information, and have little to no involvement in the day-to-day operations. The annual operating subsidy of $285,000 each year is shared amongst the four municipalities on a property tax pro rated basis. The City is responsible for all capital expenditures. It includes a union shop which is separate from the City which provides services such as concessions, ushers, security, and custodial.

Credit Union Centre, Saskatoon, Saskatchewan
Capacity: 11,310 seats
# of Event Days (ticketed): 130-140
Operating Model: Credit Union Centre is owned by the City of Saskatoon and managed by a Board of Directors (Board). The Board, who meet seven to eight times each year, is responsible to supervise the management of the business and affairs of the corporation. The Board will discharge this responsibility by developing and determining policy by which the business and affairs of the corporation are implemented. The Board's role in the process is to support and oversee management and to hold management accountable, and is not to manage the business. There are three elected officials on the Board and the rest are appointed by Council. City union staff are used for maintenance and box office duties. Contracts are issued for janitorial, security, ushering, and concessions. The City is responsible for all capital and the building has established an equipment stabilization reserve for future replacements. They indicated that the past four to five years have been profitable.

Talisman Centre, Calgary, Alberta
A facility for sport and wellness. It was built in 1983 to host the Western Canada Summer Games.
Operating Model: The Lindsay Park Sports Society manages Talisman Centre on behalf of the people of Calgary. A non-profit society, the LPSS Board of Governors has 22 volunteer members – 12 representing sporting communities, four representing neighbouring communities, two representing school boards, and one appointed by the City of Calgary, a Chairman of the Board, a Past President, and a representative from the Past Presidents' Advisory Committee. It is described as an innovative governance and unique operating model. "The Board of Governors are not controlled by a municipal body and therefore not subject to the resultant restrictions mandated by municipal priorities".

Recommendation:
The administrative review confirms the value of the development of an arms-length society or City-operated model that maximizes a more entrepreneurial strategic business strategy and that ensures the new multi-purpose events centre operates in an economically sustainable manner. The review also has confirmed the value of retaining Municipal Public Works Development and Construction Management Models.

4. Strategy and Schedule

In order to have a new building operational in 2010, the process of design, financing, land assembly and a facility-operating model will need to be determined and commenced in 2007.

GEC has put together various options regarding implementation strategies and schedules and recommend the following:

Table 16: Implementation Recommendations

(Source: GEC Architecture)

IMPLEMENTATION STRATEGY	RECOMMENDATION
Development Model	Municipal Public Works Project
Construction Procurement	Construction Management Sequential Tender model
Operating Model	An arms-length society model or City-operated model

CONCLUDING COMMENTS

The project scope of Part II was to provide City Council with a report with recommendations regarding the feasibility of a new multi-purpose events centre based on the following: the development of a functional plan for a new multi-purpose events centre, the confirmation of operating costs, exploration of sources of grant funding and interest from the private sector to invest in and/or operate the facility based on the functional plan.

The GEC report was to recommend, based on their knowledge and expertise, the following key items for City Council's consideration:

1. Where a new multi-purpose events centre should be built?
2. When would a new multi-purpose events centre be built?
3. How large would the new multi-purpose events centre be?
4. What amenities, programs, and services would be included in a new multi-purpose events centre?
5. How much would the new multi-purpose events centre cost during a time when Alberta's construction economy is booming, and what were the options for funding?
6. Is there opportunity for the private sector to partner with the City to finance, build, or operate a new multi-purpose events centre?
7. How much would it cost to operate a new multi-purpose events centre and who should operate it?

The GEC report addresses each of these questions as well as provides excellent information for future arena feasibility planning.