

Brian Forsyth, Architect

**KINGSTON REGIONAL SPORTS AND
ENTERTAINMENT CENTRE
REVIEW OF PARKING, SITE ACCESS, AND
EXTERIOR CONDITIONS – RELATIVE TO
ACCESS FOR
DISABLED PERSONS**

JANUARY 26, 2007

INTERMEDIATE REPORT

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January 26, 2007

1. INTRODUCTION

The following is a preliminary review of Barrier-Free Access Conditions in relation to Parking, Site Access, and Exterior Conditions, within the prime study area of the Kingston Regional Sports and Entertainment Centre.

This report addresses issues from Item 1, Exterior Access Issues, from our proposal dated December 4, 2006, including:

Accessible Parking; Van Parking; Private Drop-off locations; Transit Drop-off locations; Accessible Routes; Site access; and Exterior Amenities.

Relevant sources for this report provided by the City of Kingston have included:

- Kingston Regional Sports and Entertainment Centre Transportation Study Final Report, dated July 2006 (completed by IBI Group);
- City of Kingston, Downtown & Harbour Zoning By-Law
- 90% KRSEC building plans prepared by Brisbane Brook and Beynon, Architects; and
- Initial site meeting with municipal staff and advisors on December 14, 2006 and on January 16, 2007 and January 23, 2007.

Note: The barrier-free accessibility standards generally considered are:

- Standards for Barrier-Free Design of Ontario Government Facilities, 2004 (SBFDOGF); and
- ADA Accessibility Guidelines for Buildings and Facilities; amended 2002 (ADAAG).

1.1 STUDY AREA

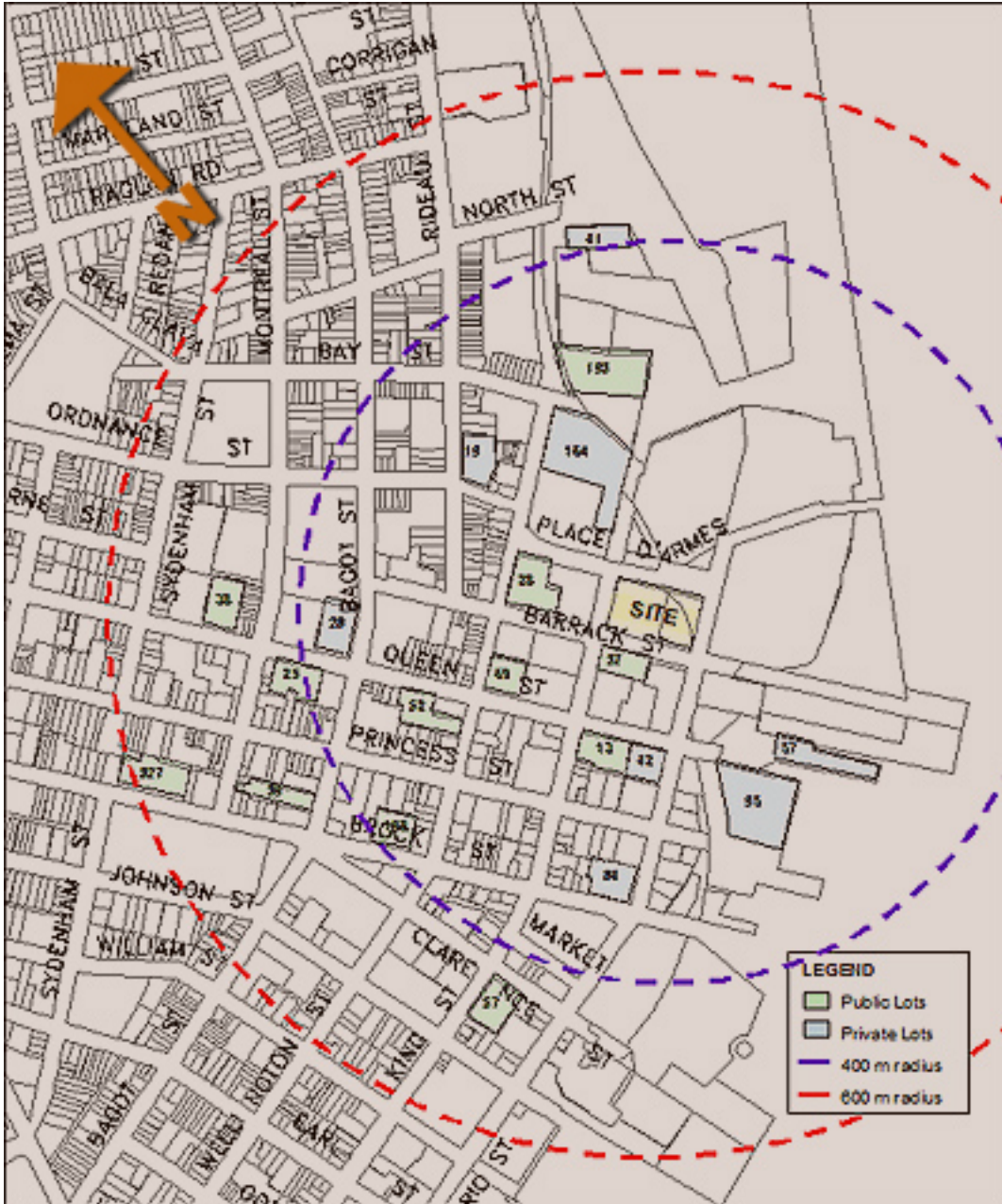


Figure 1 Study Area, Downtown Kingston

2. EXISTING CONDITIONS

The starting point of this study is the framework of the existing plans and conditions already in place for the Kingston Regional Sports and Entertainment Centre (KRSEC). These elements created the context and constraints for Barrier-Free parking, Accessible Routes, Drop-off Locations and Exterior Amenities at this facility.

2.1 Parking

The Center will not be providing on-site parking for the general public and therefore will not include provision for on-site Barrier-Free (BF) parking spaces. Public parking will be accommodated in existing public and private lots within 600 metres of the KRSEC. The Transportation Study notes that, “it is anticipated that parking for persons with disabilities will be provided in close proximity to the site at adjacent municipal lots”.

The IBI Transportation Study has identified 12 municipal lots (7 within 400m radius and 5 within 600m radius) and 9 private lots (7 within 400m radius and 2 within 600m radius) of the site with a total of 2,662 general parking spaces. Further study by City staff has indicated that 35 Barrier-Free spaces are located in off-street lots and on-street locations within the prime study area.

2.2 Drop-Off Locations

A public lay-by location has been provided for a “shuttle bus and motor coach pick-up/drop off on the north side of the site adjacent to Place d’Armes. This lay-by area will not accommodate pick-up/drop-off areas for general vehicular traffic and will be signed as “Buses Only”. This area and more specifically the Club entrance adjacent to the lay-by area will also facilitate disabled persons traveling to and from an event by shuttle buses. The club entry provides direct access to the ramp, which leads into the designated seating area for persons in wheelchairs.” (KRSEC Transportation Study pg. 35- Item 5.9)

Private passenger loading/unloading areas (Drop-off/Pick-up Areas) have not been incorporated into the site design. The study does recommend that these features “should be actively pursued through the final design of the adjacent road network, where possible”. (KRSEC Transportation Study pg. 35- Item 5.9)

Potential for additional lay-by drop off locations appears to be limited by street configurations, traffic volumes and lane width reductions on Barrack and Wellington Streets.

2.3 Accessible Routes

Since the location of Barrier-Free parking spaces has not been determined, the location of Accessible Routes connecting the parking to the site has not been finalized.

Pedestrian crosswalks are not used in the City of Kingston.

Brian Forsyth, Architect
6-10 Sword Street Toronto ON M5A 3N2

Specific details of sidewalk and paving materials and details both on-site and in the Accessible Route will require consideration.

Access ramps at the Ontario Street (Main) entrance and the Place d'Armes (Club) entrance have slopes of 6.5% and 8% respectively.

2.4 Exterior Amenities

Exterior amenities on site will be reviewed when designs are available. Exterior amenities include things like paving materials, landscaping, outdoor seating, tables, bicycle racks and pay telephones.

3. RELEVANT STANDARDS AND GUIDELINES

The following standards, generally from the Ontario Realty Corporation's "Standards for Barrier-Free Design of Ontario Government Facilities (SBFDOGF)", have been used to prepare recommendations for Barrier-Free Access at Kingston Regional Sports and Entertainment Centre. Exceptions are noted. Other than for provincial facilities, these standards exceed all existing code or bylaw requirements for facilities in Ontario.

Proposed standards for this project are as follows:

3.1 Barrier-Free Parking Requirements

For general Barrier-Free (BF) parking spaces we recommend using the SBFDOGF 1.1.1 formula. This requires six (6) BF spaces from the first two hundred (200) required parking spaces. One (1) space per 100 additional spaces is required.

The July 2006 parking Study recommends 1500 parking spaces for the 5000 event seats at KRSEC. The required BF parking is therefore six (6) spaces for the first two hundred (200) seats, plus thirteen (13) seats for the remaining thirteen hundred (1300) seats based on one (1) seat per one hundred (100).

"Accessible parking spaces serving a particular building shall be located on the shortest accessible route of travel from adjacent parking to an accessible entrance" (ADAAG 4.6.2).

Barrier-Free parking spaces shall be designed according to the specifications of SBFDOGF 1.1.2, SBFDOGF 1.1.6 and signage SBFDOGF 1.1.7.

3.2 Van Parking Requirements

Brian Forsyth, Architect
6-10 Sword Street Toronto ON M5A 3N2

The City of Kingston currently has no specific van parking spaces, in addition to regular Barrier-Free parking anywhere within the municipality. Because of this, demand for van spaces is not known. We therefore propose a developmental approach with the addition of two (2) larger Barrier-Free Van parking spaces, rather than the 4 spaces recommended by SBFDOGF. The municipality and the Centre's operators will monitor the usage of these spaces for at least one year and the number of spaces will be increased to four (4), if there is a need.

Van parking spaces must have a minimum width of 3500 mm, plus a 1500mm access aisle between every 2 adjacent spaces, to accommodate vans with built-in wheelchair lifts. The access aisle must be level. Length of the space shall conform to local bylaws.

If there is a grade difference, a curb ramp (that will not be blocked by a parked vehicle) must be provided adjacent to the access aisle. For Van spaces, surface material standards and signage requirements (with the addition of the label "Van Accessible") must match those of the Barrier-Free spaces. Van parking spaces must have a minimum clear height of 2850 mm.

3.3 Drop-off/Pick-up Areas

A passenger Drop-off/Pick-up area, for private vehicles, shall be provided at or near the main accessible entrance; designed to the specifications of SBFDOGF 1.1.9 and SBFDOGF 1.1.10. The appropriate signage including the International Symbol of Access is required.

3.4 Accessible Route from Parking and Drop-off/Pick-up Locations

Accessible routes shall be designed according to the Specifications of SBFDOGF 1.2 (Walkways and Ramps) and SBFDOGF 1.3 (Entrances and Exits).

Note: While exterior ramps at the Place d'Armes (Club) entrance and the Ontario Street (main entrance) do meet current building codes, they are steep for exterior use. Since their length does not appear to be an issue, a 5% slope (1:20) is preferable.

3.5 Exterior Amenities

Exterior amenities must be designed according to SBFDOGF 1.4 (Exterior Amenities). This includes specific requirements for pay or ticket booths (SBFDOGF 1.4.3).

Unless constant visual or CC security is provided at entrances, an accessible exterior pay telephone should be provided as a security feature for Disabled

Brian Forsyth, Architect
6-10 Sword Street Toronto ON M5A 3N2

Persons. Such telephones must be designed to the specifications of SBFDOGF
3.4 Public Pay Telephones.

4. SPECIFIC CONSIDERATIONS

4.1 Parking

4.1.1 Distance to Parking

It is reasonable to ask an able bodied person to walk 0.6 km (600 metres), crossing as many as 5 intersections, from a parking space to the Centre, but traveling this distance does present real hardships for many disabled persons. You will note in the codes and guidelines quoted above that most sources stipulate that parking should be as close as possible to the accessible entrance. Because of this, we cannot recommend Barrier-Free parking in the entire 600 metre radius that applies to regular parking. We recommend that the distance to BF parking should not exceed 200 metres from the entrance to the KRSEC.

4.1.2 Standards

It would be extremely difficult to maintain high standards for all of the Barrier-Free spaces if they are scattered over many public and private lots in the general parking area.

A preliminary review of parking lots within 600 metres of the Centre, both private and municipal, has indicated varying standards of surface conditions, signage and maintenance. Standards for the design, construction and maintenance of such BF spaces must be created and these bylaws must be enforced. It will probably be easier to monitor and maintain appropriate standards of Access in the 4 municipal lots in relatively close proximity (200 metres) to the Centre.

4.2 Accessible Routes

4.2.1 Standards

The construction and maintenance condition of the Accessible route or path from Accessible parking to the entrance is important to the safety and security of the disabled person. With the combination of multiple lots and public and private paths to various areas of the City, this would also be very difficult to enforce.

Photo 1 (Holiday Inn Lot) shows there are a considerable number of parking spaces in the Holiday Inn lot. However, curbs, barricades and shrubs currently block the direct Access route towards the KRSEC. Even if these barriers were cleared, it would be difficult to monitor and maintain high standards in the private parking lot, which is just over 200 metres from KRSEC

Brian Forsyth, Architect
6-10 Sword Street Toronto ON M5A 3N2



Photo 1: The Accessible Route is currently blocked at the North end of the Holiday Inn Lot

On a more basic level, the condition of sidewalks, on long routes, can present barriers to Disabled persons in wheelchairs, on walkers or on crutches. Rough, broken and uneven sidewalks such as those shown in **Photo 2 (Queen Street South, between Ontario & King Streets)** are very difficult for many to navigate. Because of this, we recommend avoiding long Access Routes.



Photo 2: Cracked and Broken Sidewalks Compromise an Accessible Route on Queen Street between King and Ontario Streets

4.2.2 Secure and Permanent Accessible Routes

Safe accessible routes must be provided when Accessible paths, from either parking or drop-off locations, must cross vehicular traffic lanes. The routes must provide secure and permanent paths for persons with disabilities involving mobility as well as those with visual or hearing disabilities. The signals at this intersection must stop traffic to allow disabled users to cross. Sonic warnings of signal changes and tactile warnings on curb ramps should also be provided for blind and visually impaired persons.

Temporary street closures during events at the Centre have been considered to create safe crossings and possible drop-off locations. These have been discussed and rejected because they do not offer secure and long-term Access Routes for the community.

5. RECOMMENDATIONS

5.1 INTRODUCTION

Brian Forsyth, Architect
6-10 Sword Street Toronto ON M5A 3N2

To meet recognized Barrier-Free accessibility standards at KRSEC, it will be necessary to provide well-designed Barrier-Free parking for approximately 19 vehicles and 2 vans in relatively close proximity to the Centre. Drop-off/ pick-up locations must also be provided in close proximity to the main entrance and on an accessible path. A short fully Accessible Path must connect these Barrier-Free parking locations and Drop-Off locations to the Centre.

In order to meet these objectives, we propose the following specific recommendations to tailor a solution to the particular needs of the Kingston Regional Sports and Entertainment Centre.

5.2 SPECIFIC RECOMMENDATIONS

5.2.1 RECOMMENDATION: BARRIER-FREE PARKING

- **Provide Barrier-Free parking in four (4) municipal parking lots within approximately 200 metres of the Centre. These lots are specifically: Barrack Street, Drury, Frontenac, and King & Queen lots.**
- **Seven (7) Barrier-Free spaces already exist in the three existing lots and on-street. Assuming that safe access can be provided to all 7 of these spaces, a balance of at least twelve (12) will be provided during events only, at the Frontenac Lot. Two permanent (2) van spaces will also be provided here. These spaces should be provided adjacent the King/ Barrack Street signalized intersection to allow easy access to the ticket box office and direct entrance.**
- **Upgraded standards for the design and maintenance of Barrier-Free spaces, where provided, will be developed. Ongoing control of these spaces will be provided by bylaw enforcement.**

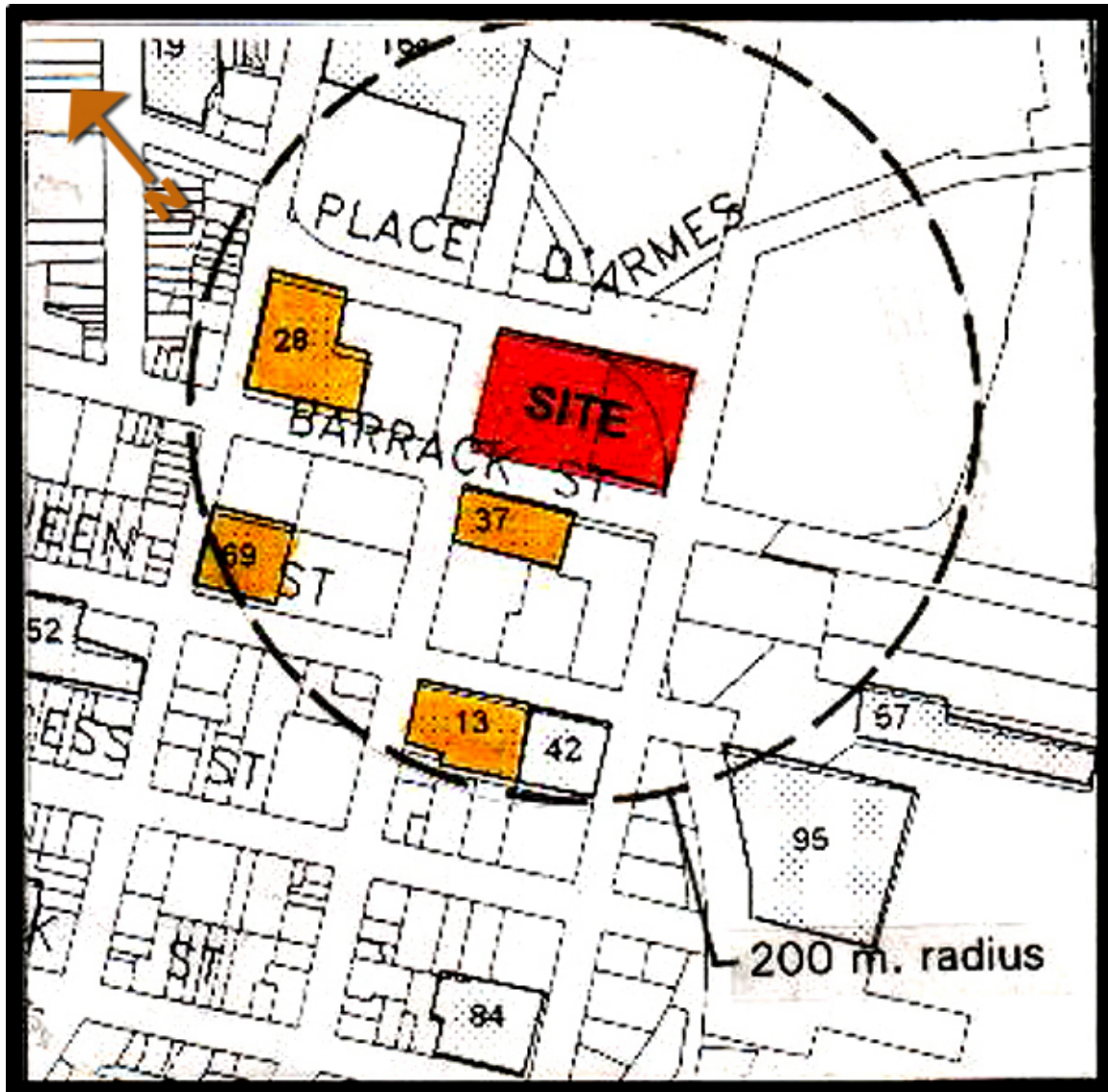


Figure 2 – Four Municipal Parking Lots within 200 metres of the Site

5.2.2 RECOMMENDATION: DROP-OFF/PICK-UP LOCATIONS

- Provide a dedicated and signed the bus lay-by in the bus area on the north side of the Centre adjacent to the Club Entrance for Accessible Public Transit shuttles.
- Provide dedicated and signed drop-off/pick-up location on the south side of Barrack Street adjacent to the King Street signalized crossing for private vehicles. This position is adjacent the King/

Brian Forsyth, Architect
6-10 Sword Street Toronto ON M5A 3N2

Barrack Street signalized intersection to allow direct access to the ticket windows and entrance.

- **Upgraded standards for the design, signage and maintenance will be applied to these Drop-Off/Pick-Up locations. Ongoing control of these this Drop-Off/Pick-Up location will be provided by bylaw enforcement**
- **Upgrade signalized Crossings, at the King/Barrack Street intersection to include sonic directional indicators and tactile warnings on curb ramps Disabled Persons using at the Drop-Off/Pick-up location.**

5.2.3 RECOMMENDATION: ACCESSIBLE ROUTES

- **Provide Accessible Routes from the four (4) designated municipal parking lots providing Barrier-Free parking within 200 metres of the Centre. Upgraded standards for construction and maintenance of the Accessible routes will be applied to this public walkway.**
- **Upgraded standards for the design, signage and maintenance will be applied to these Accessible Routes. Ongoing control of these this Accessible Route will be provided by bylaw enforcement**
- **If costs to upgrade all Accessible Routes exceed the municipal budget or if the Routes cannot be maintained, then all nineteen (19) Barrier-Free parking spaces and two (2) Van spaces or part thereof must be provided in the Frontenac lot with an Accessible Route crossing Barrack Street at signalized intersections.**