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MEMORANDUM

March 23, 2018

Files: 751-6/17-27
751-6/17-26

TO: Planning Committee

FROM: Jason Ferrigan, Director of Planning Services

RE: **Planning Committee Agenda March 28, 2018, Public Hearings #1 and #2. 1916596 Ontario Ltd. Applications for rezoning in order to permit a community recreation centre in the form of a public arena and to permit parking lots in addition to the uses permitted in the M2 Light Industrial Zone and M3 Heavy Industrial Zones, Kingsway, Sudbury**

Following the completion of the staff report, the applicant has prepared and submitted a Traffic Demand Management Plan (TDM) and a Risk Management Plan (RMP) to the City, for the subject lands. Copies of the Plans are attached to this memo.

Traffic Demand Management Plan

The Transportation Demand Management Plan provides details on workplace measures for the community arena, casino and hotel, measures for customers of the casino and hotel and measures that can be implemented for special events at the community arena. In addition to providing details on how the measures will be implemented, the plan provides estimated costs and identifies who will be responsible for operating and funding the measures. Further, the plan provides a monitoring program and establishes targets for the initial and future modal split. Infrastructure Capital Planning Services staff are satisfied with the TDM plan that has been submitted and the commitment the plan makes to refining the measures on an ongoing basis.

Risk Management Plan under Section 58 of the Clean Water Act

The RMP outlines design and operation best management practices that will occur at the site with respect to winter maintenance activities relating to the application, handling and storage or road salt and storage of snow. High pedestrian traffic areas have been identified where the application of salt/or alternative de-icing products will occur along with the identification of snow storage areas including an area on the applicant's lands located outside of the Ramsey Lake watershed. The plan also outlines the use of salt alternatives, including pickled sand, (a mix of sand and a low sodium chloride), proposed engineering methods to establish positive drainage and reduce ice formation, along with operational measures to minimize the use of road salt. The RMP also outlines a monitoring and review process to ensure that it evolves with the winter maintenance needs of the site and that emerging alternative ice control products and procedures are considered as they become available.

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The Risk Management Official for the Greater Sudbury Source Protection Area has reviewed and agreed to the RMP submitted by the applicant. A copy of the Notice/Agreement to the Risk Management Plan under Section 58(6) of the Clean Water Act is attached to this memorandum.

Resolution Public Hearing #1, File 751-6/17-27 To permit a Recreation and Community Centre in the form of a Public Arena

The Resolution section of the staff report regarding the rezoning application included a condition 1 e) as follows:

e) That the amending by-law includes an "H", Holding provision restricting the use of the subject lands to those uses which legally existed on the date the By-law applying the "H", Holding symbol. The "H", Holding symbol shall only be removed by council upon:

   i The submittal of a Transportation Demand Management Plan to the satisfaction of the General Manager of Growth and Infrastructure.

   ii The submittal of a Risk Management Plan under Section 58 of the Clean Water Act to the satisfaction of the Risk Management Official.

As a result of the applicant having prepared the above plans to the satisfaction of the General Manager of Growth and Development and the Risk Management Official, condition 1 e) is no longer required and can be removed from the resolution.

Resolution Public Hearing #2, File 751-6/17-26 To permit parking lots in addition to the uses permitted in the "M2", Light Industrial and "M3", Heavy Industrial zones

The Resolution section of the staff report regarding the rezoning application included a condition 1 b) as follows:

b) That the amending by-law includes an "H", Holding provision restricting the use of the subject lands to those uses which legally existed on the date the By-law applying the "H", Holding symbol. The "H", Holding symbol shall only be removed by council upon:

   i The submittal of a Transportation Demand Management Plan to the satisfaction of the General Manager of Growth and Infrastructure.

   ii The submittal of a Risk Management Plan under Section 58 of the Clean Water Act to the satisfaction of the Risk Management Official.

As a result of the applicant having prepared the above plans to the satisfaction of the General Manager of Growth and Development and the Risk Management Official, condition 1 e) is no longer required and can be removed from the resolution.

ET/ba
Attachs.

for Jason Ferrigan, MCIP, RPP
Director of Planning Services

cc. E. Archer
T. Cecutti
E. Labelle

MEMO

DILLON CONSULTING

TO: David Shelsted, MBA, P. Eng.
Project Director, City of Greater Sudbury

FROM: Mike Walters, P. Eng.

DATE: March 22, 2018

SUBJECT: **Kingsway Sports and Entertainment Complex**
Transportation Demand Management (TDM) Plan

OUR FILE: 17-6373

This memorandum has been prepared to document a Transportation Demand Management (TDM) Plan for the proposed Kingsway Sports and Entertainment Complex in the City of Greater Sudbury. The TDM Plan contains the following sections:

- Introduction
- Workplace TDM Measures
- Casino TDM Measures
- Hotel TDM Measures
- Special Event TDM Measures
- Expected Costs and Potential Funding Sources
- Opening Month/Year Activities
- Monitoring Program
- Conclusions and Recommendations

1.0 Introduction

1.1 What is Transportation Demand Management (TDM)?

According to Transport Canada, transportation demand management is *"a wide range of policies, programs, services and products that influence how, why, when and where people travel to make travel behaviours more sustainable"*.

1.2 Why is TDM Important for the Kingsway Entertainment District Site?

Given the volume of traffic that will be generated by the Kingsway site prior to and following an event, as well as other traffic constraints in the west end of the study area, consideration should be given to implementing measures to encourage a reduction in the number of vehicles being driven to the site. This would include measures to encourage spectators to travel via non-auto modes, and measures to encourage increased vehicle occupancy (more spectators per vehicle). In addition to reducing traffic pressure on the road network and decreasing the time required to clear the site after an event, reduced auto travel would reduce the required parking supply (and may negate the need for additional temporary overflow parking on adjacent business park lands).

2.0 Workplace TDM Measures

There are three distinct employers on site that would generate worker/employee trips on a typical day. They are: the Event Centre (Arena); the casino; and the hotel.

The Kingsway Event Centre (Arena) is envisioned to have around a dozen workers on site on a typical day. During an event day, the number of workers on site will increase significantly.

The Sudbury Casino is envisioned to have 400 workers, while the hotel component of the site is envisioned to have 50 workers on site at any given time.

The following TDM measures are envisioned for the site to target travel by site workers/employees:

- On-site secure bicycle parking
- Encouragement of public transit
- Carpooling/RideSharing

2.1 On-Site Secure Bicycle Parking

Both the casino and hotel will provide secure bicycle parking on the site. Given the scarcity of unallocated space internally within the casino building, the bicycle parking will be located outside. The form of the bicycle parking is yet to be determined, but for the purposes of this TDM plan it is envisioned that bicycle lockers will be provided. The location of bicycle parking for hotel employees is yet to be determined, since the floor plans for the hotel have not been fully developed at this time.

In addition to providing secure bicycle parking, trip end facilities are being contemplated to further encourage workers/employees to cycle to work. These trip end facilities include appropriate shower and change rooms for men and women. Separate male and female change rooms are already included within the floor plans for the casino. The floor plans are currently being reviewed to identify locations for male and female shower facilities. Once fully developed, the hotel floor plans will be reviewed to identify appropriate locations for shower facilities to encourage cycling to/from work.

As part of the hiring process for casino and hotel workers/employees, the employers will identify the potential for workers to cycle to/from the site. This will include the provision of maps identifying cycling infrastructure (bicycle lanes, trails, etc.) as well the identification of bicycle parking locations and trip end facilities (i.e., showers, change rooms) on site.

The surrounding road network is currently undeveloped; however, bicycle infrastructure has been identified in the transportation impact study to help support cycling as a mode of choice for people arriving and departing the site.

Employees for the Event Centre (Arena) are few in number (around a dozen) on a daily basis. The provision of secure bicycle parking can also be considered by the City of Greater Sudbury for these employees. Similarly to the casino and hotel, trip end facilities (shower and change rooms) would need to be available within the Event Centre to help promote this travel choice amongst workers.

On event days, the amount of staff will increase at the Event Centre. The additional staff may not necessarily be City staff (i.e., they could be security staff associated with an event). Given the temporary nature of this staff peaking at the Event Centre, the provision of additional bicycle parking may not necessarily be effective in altering the travel choices of these additional workers.

2.2 Encouraging Public Transit

As part of the hiring process for site workers/employees, the City of Greater Sudbury, Gateway and the hotel owner will identify the potential for workers to utilize public transit to get to/from work. This will include the provision of public transit route maps and schedules as well as identifying the location of transit stops on site (i.e., bus loop) and the monitors/screens which display transit route information.

Sudbury Transit is currently undertaking a service review that will likely identify modifications to the existing route network and/or schedules, and service to the subject site would be identified as part of this review. Daily site worker/employee travel will be a regular occurrence, and be more suited to a regular Sudbury Transit route operating along Street "A" and/or Street "C", likely traveling to/from one of the main terminals. To facilitate transit travel to/from the site, a bus loop is planned for the west side of the site. This bus loop can be utilized by Sudbury Transit to increase the attractiveness of its usage for site employees (since the bus loop is located near the main entrance at Festival Square).

Public transit routing and schedule information will be posted prominently within the various site buildings (event centre, casino and hotel) so that employees can easily identify the timing for the next schedule bus to arrive. This is envisioned to take the form of monitors/screens displaying real time travel information for buses scheduled to come to the site.

2.3 Employee Carpooling / RideSharing

As part of the hiring process for site employees, Gateway and the hotel operator will identify the potential for workers to carpool to work. Carpooling reduces the number of single-occupant worker vehicles that will arrive at the site. To encourage this travel behaviour, Gateway and the hotel operator will post (within employee-only areas) information on carpooling opportunities. Employees who become part of the carpool program can utilize specially designated carpool parking spaces within the employee parking areas for the casino and hotel. These spaces will be located closer to the doors than other employee spaces. Employees will be reminded of the carpool program, and its benefits, through regular staff meetings.

An alternative to the carpooling program would be for employers on site to register with a RideSharing App. The City of Greater Sudbury is currently considering the merits of working with a community partner to have a ridesharing app which would enable employees within Sudbury to identify ridesharing opportunities.

The app would require employers to sign up, at a cost, but would enable site employees to potentially better plan out their travel options for getting to/from work. Not only would it have trip matching abilities (i.e., it could identify employees from similar origins that are travelling to similar destinations at similar times), but it may also identify various travel options, including transit routes and cycling facilities

(maps, trails, etc.). As a benefit, there may be incentives to usage, such as a points program, or something similar, whereby users could convert points into gift cards or other rewards.

3.0 Casino TDM Measures for Customers/Patrons

From prior experience, TDM measures at the casino are typically limited to measures to encourage attendance by larger groups (e.g., tour buses); however, these measures would have been accounted for already as part of the trip forecasts (contained in the traffic impact study) for the Kingsway site.

The following additional measures are envisioned to help reduce customer vehicle trips to the casino:

- Shuttle service to the casino
- Encouraging public transit

3.1 Shuttle Service to Site

Shuttles currently serve the existing Sudbury Downs Raceway site in Chelmsford. This is largely due to the fact that the Sudbury Downs site isn't served by regular public transit. Shuttles also currently bring customers to the Sudbury Downs site from North Bay, Timmins and Elliott Lake. Given the potential for public transit to serve the Kingsway site, the existing shuttle service within Sudbury will likely cease (since customers can utilize the public transit system to access the Kingsway site). The existing shuttles to Timmins and Elliott Lake will be reviewed to determine whether it makes sense to continue operating them once the Kingsway site is operational.

If the Timmins and Elliott Lake shuttles continue, a dedicated pick-up and drop-off area at the front of the casino is included in the site layout to facilitate the picking up and dropping off of customers to the casino.

Shuttle schedules will be displayed on monitors/screens within the casino so that customers are reminded of the timing of the next shuttle.

Shuttle service can reduce the need for some customers to have to drive to the casino, thereby reducing the number vehicular trips to the site by customers.

3.2 Encouraging Public Transit

As noted in Section 2.2, monitors/screens within the casino will display real-time information regarding public transit service so that customers who take public transit to the site can be informed as to the arrival time of the next public transit bus. This information would be combined with any shuttle schedules so that casino customers can be fully informed on the timing associated with both public transit and shuttle travel options available to them.

4.0 Hotel TDM Measures for Guests

The hotel is envisioning the following measures to assist in reducing vehicular travel for its guests to the site:

- Free shuttle service from the airport
- Rebates or points for carpooling to the hotel

The hotel operator will operate a shuttle service to/from the airport. This measure has the potential of reducing individual taxi fares to/from the airport, as a shuttle can accommodate a number of passengers compared to individual cabs.

When booking reservations at the hotel, guests will be notified that if they arrive at the hotel with more than two guests in their vehicle, they will qualify for rebates or points. The details of this program are still under development.

Also, as a means of encouraging sustainable transportation, the hotel intends on installing free electric vehicle charging stations on site. These stations would be located near the front of the building, giving priority parking to owners of electric vehicles.

5.0 Special Event TDM Measures

The Traffic Impact Study (TIS) that was prepared for the Kingsway Sports and Entertainment Complex Event Centre identified the following potential TDM measures, primarily related to games and special events at the arena:

- Provision of shuttle service by Sudbury Transit, connecting to other routes at the downtown and/or New Sudbury terminals;
- Allowing event ticket-holders to travel to and from the event via Sudbury Transit for free or for a reduced fare;
- Provision of on-site infrastructure to prioritize shuttle buses over general traffic (e.g., use of pick-up / drop-off loop by buses only during arena events; signalized egress from bus loop);
- Encouraging higher vehicle occupancy by designating the small parking area within the drop-off loop (i.e., close to the main entrance) as preferential spaces for vehicles carrying more than a specified number of spectators (e.g., a "four-plus" lot); and
- Exploring other promotional measures to increase the size of groups attending games and other events (e.g., measures to encourage sales to larger groups).

In addition to these measures identified in the TIS, active transportation can also play a role in transportation demand management for the site.

The TDM measures outlined below focus on large events at the Event Centre, rather than the other uses on the site, because of the large amount of traffic and parking demand generated by such events and the relative infrequency of those events (i.e., to reduce the need to provide permanent infrastructure for an event that is a relatively infrequent occurrence).

5.1 Public Transit

The shuttle service and on-site transit measures would not necessarily increase the non-auto modal split above the 5% assumed in the analyses (although this may be possible depending on the attractiveness of the service and the availability of connecting services within the city); rather, they are measures that would be necessary to support the assumed 5% modal split, given the relative lack of transit service in the area and the number of riders that would need to be accommodated.

While Sudbury Transit's ongoing network study is likely to recommend route restructuring to serve the site, the base service frequency is unlikely to be greater than hourly headways at times when riders are traveling to and from events. Instead, service to and from events at the arena should be provided by express shuttles to the downtown terminal (and potentially also to the New Sudbury Centre terminus), providing connections to other routes. Consideration should be given to operating "extra" trips on key connecting local routes serving those terminals to minimize transfer times during lower-frequency periods.

At this point, it is anticipated that event spectators would pay the normal fare for riding Sudbury Transit when utilizing these express shuttle services. The City of Greater Sudbury may consider additional options to increase transit/shuttle usage during special events. These options could include allowing certain special event spectators (holding valid tickets) to ride Sudbury Transit to and from the site for free, or for a reduced fare.

A dedicated pick-up and drop-off loop is proposed adjacent to the Festival Square (which is near the main arena entrance). During special events, this loop will be solely used for the pickup and drop-off of spectators arriving by public transit, including special express shuttle buses. The proximity of this bus loop to the main entrance is intended to prioritize public transit and shuttle service over private vehicle traffic, both by reducing walking distances and by insulating buses from queues of vehicles waiting to exit the parking areas. The installation of traffic signals at the exit from the bus loop would further prioritize bus flows onto Street A over other vehicles exiting from site driveways farther to the east.

Further enhancements to transit facilities on the site are envisioned which would increase the attractiveness of public transit as an option for travelers to the site. These enhancements would include shelters, benches, wayfinding signage and real-time information regarding transit/shuttle arrivals and departures. Combined with monitors/screens located inside the Event Centre, this will provide transit/shuttle users with an increased awareness regarding the location and timing of transit/shuttle buses.

5.2 High Occupancy Vehicle Parking

A high occupancy vehicle (i.e., "plus-four") parking lot containing approximately 75 spaces is proposed in the general vicinity of the bus loop to the west of Festival Square. For special events, this lot may not necessarily change the vehicle occupancy level since vehicles with 4 or more occupants are already in sufficient number that those vehicles would exceed the capacity of the lot at a sold-out event. Rather, it would reinforce the existing vehicle occupancy levels and would be a promotional tool to keep ridesharing top-of-mind among spectators travelling to the site via automobile.

Signage would be installed at the entrance to this "plus-four" parking lot to indicate the auto-occupancy required to use these parking spaces. Organizers of special events would need to have staff positioned at the entrance to this lot to ensure auto-occupancy compliance, and to indicate when the lot is full.

5.3 Distribution of Travel Information with Ticket Purchases

Travel information can be provided with purchase of tickets to special events. This information can inform event attendees of the travel options that are available to them prior to attending the event. Some attendees may not necessarily be aware of all of the options that would be available to them otherwise. This information may attract passengers to public transit or express shuttles that may not normally be frequent riders.

For season ticket purchases, the Sudbury Wolves would be responsible for disseminating this travel information to ticket purchasers. In the case of other special events, where tickets are purchased through the City or event organizer, it will be the responsibility of the City or event organizer to make sure that travel information to/from the Kingsway site is included as part of the ticket purchase information.

The City of Greater Sudbury, the Sudbury Wolves, Gateway Casinos and the hotel operator can post travel information for the Kingsway site on their respective websites as an additional form of information dissemination regarding travel options to the Kingsway site.

Group sales for events could also result in a modest reduction in vehicle trips and parking requirements, depending on the size and number of groups at each event and assuming that groups arrive in one vehicle (or bus) rather than in separate vehicles.

5.4 Encourage Active Transportation Modes

There are currently no sidewalks along the Kingsway within the immediate vicinity of the site; the closest sidewalk begins in the vicinity of Third Avenue, approximately 2 kilometres to the west. There is a sidewalk on the east side of Levesque Street, and a sidewalk on the west side of Moonlight Avenue.

Given the site's separation from the urban area of the city, it is not anticipated that a substantial number of pedestrian trips will be generated from the west. Sidewalks should be provided along Streets A and C to allow for a connection to built-up areas south of the site and to accommodate pedestrian trips between different uses as the surrounding business park develops. Further, there are potential walking trails that may be implemented within the site to direct pedestrians to the Kingsway and Levesque Street / Street C intersection. Amenities along those walking trails, such as benches and wayfinding signage, could be considered to further increase the attractiveness of walking connections to/from the site.

On event days, temporary overflow parking may be utilized (depending on event attendance) on the surrounding blocks. Protected pedestrian crossings are envisioned on Street A to accommodate pedestrians traveling between off-site parking and the Event Centre entrance. Two crossing locations have been identified: one at the east side of the exit from the bus loop, leading directly to Festival Square and the Event Centre entrance; and one on the west side of the Street A access to the east parking lots, with a pedestrian corridor along the west side of this driveway that minimizes the number

of vehicular crossing points. The installation of traffic signals at the bus loop exit as a transit priority measure would reinforce the controlled crossing for pedestrians at this location.

While there are no cycling routes proposed in the TMP, there is an opportunity to connect to the bicycle lanes on Bancroft Drive, 750 metres to the south. The Street C cross-section is envisioned to include an allowance for cycling infrastructure. The City should also consider the feasibility of extending this cycling route farther to the south along Levesque Street. One possible means of achieving an extended cycling route could be to mark bicycle lanes along Levesque Street, given that the existing pavement width (approximately 10.5 metres) can accommodate two traffic lanes and two bicycle lanes for the majority of the distance between the Kingsway and Bancroft Drive.

On the south side of Street A, a residential subdivision is proposed. This subdivision will connect to Bancroft Drive, and enable future active transportation connectivity as the City grows.

6.0 Expected Costs and Potential Funding Sources

Table 1 outlines the expected costs for the various potential TDM measures envisioned for the site, along with anticipated locations, operating responsibility and potential funding sources.

7.0 Opening Month/Year Activities

Within the first month/year of opening (since the opening of each of the site facilities may not necessarily coincide with each other) the Kingsway Sports and Entertainment Complex buildings, information will be available and disseminated to public to educate them on the various travel options in getting to the Kingsway site. The intent is to get people accustomed early on in the various travel alternatives so that they don't simply assume that the only way to get to the site is to drive there. The various technologies can be presented so that first time visitors to the site can see first-hand:

- how public transit will serve the site;
- how shuttles would operate during events;
- the various wayfinding signage that will be in place to help navigate around the site from transportation pick-up and drop-off locations;
- the monitors/screens that will continually advise/update site users on transit/shuttle arrival/departure times; and
- the location of high-occupancy parking facilities.

The same approach is taken in some jurisdictions with new residential buildings whereby a developer may provide a monthly transit pass for the first month or two to allow new residents to get accustomed to the public transit service right from the start. Following that introductory period, some new residents simply continue to take transit because they've become familiar with how it operates in close proximity to their building and intended destinations.

A communications plan will be developed for opening day activities with a separate budget allocation.

Table 1 – Expected Costs

TDM Measure	Location	Expected Cost	Operating Responsibility	Funding Sources
Secure On-Site Bicycle Parking (assumed to be bicycle lockers)	Outside Casino	$2,500 per locker	Gateway Casinos	Gateway Casinos
Secure On-Site Bicycle Parking	Inside or Outside Event Centre and Hotel	Unknown	Site Operator and Hotel Operator	City of Greater Sudbury and Hotel Operator
Provision of On-Site Bus Loop	On-Site	$250,000	Event Centre	City of Greater Sudbury
Provision of Signals at Bus Loop	Street A and Bus Loop Exit	$100,000	City Road Operations	City of Greater Sudbury
Provision of Public Transit Service and Express Shuttles to Site	N/A	$3,000-$5,000/event*	Sudbury Transit	Farebox revenue + potential municipal subsidy
Provision of Bus Loop Amenities (Shelters, Benches, Wayfinding Signage, Real-time Information Display)	On-site Bus Loop	$7,000-$10,000 per shelter $300-$500 per bench $2,000 for wayfinding signage $2,000 for real-time information boards	Sudbury Transit	City of Greater Sudbury
Provision of Internal Monitors/Screens for displaying real-time information regarding bus/shuttle arrival/departure times	Inside Event Centre, Inside Casino, Inside Hotel	$2,000 per monitor/screen	Individual User (Event Centre, Casino, Hotel)	City of Greater Sudbury, Gateway Casinos, Hotel Operator
Carpooling Program Signage and Markings for Priority Parking Spaces	Within Employer Parking Lots	$500 per space	Gateway Casinos, Hotel Operator	Gateway Casinos, Hotel Operator
RideSharing App Participation	N/A	$6,000-$12,000/year	External	City of Greater Sudbury, Gateway Casinos, Hotel Operator
Casino Shuttle Service	N/A	Unknown	Gateway Casinos	Gateway Casinos
Airport Shuttle Service for Hotel	N/A	Unknown	Hotel Operator	Hotel Operator
Posting Travel Information on Websites	Facility Owner/Operator Websites	Unknown	City of Greater Sudbury, Sudbury Wolves, Gateway Casinos, Hotel Operator	City of Greater Sudbury, Sudbury Wolves, Gateway Casinos, Hotel Operator
Provision of Pedestrian Amenities (e.g., benches, wayfinding signage)	Benches and wayfinding signage along on-site trails	$2,000 per bench $1,000 per sign	City of Greater Sudbury	City of Greater Sudbury

TDM Measure	Location	Expected Cost	Operating Responsibility	Funding Sources
Extension of Cycling Facilities off-site	Off-site	To be determined upon completion of detailed design	City of Greater Sudbury	City of Greater Sudbury
Marketing/Educational Campaigns	On-Site	$10,000	City of Greater Sudbury, Gateway Casinos, Hotel Operator	City of Greater Sudbury, Gateway Casinos, Hotel Operator

*this does not include "extra trips" which may be required for an event

8.0 Monitoring Program

The success of any TDM program relies on monitoring. If the TDM measures are not as effective in achieving the proposed targets for travel modal splits, further measures need to be identified and taken to effect change in travel mode choices.

Data Collection

It is understood that the operation of the Event Centre may be contracted to a third party operator (who would ultimately be responsible for assembling data and responding to the City of Greater Sudbury).

For the workplace TDM measures (bicycle parking, public transit usage, and carpooling/ridesharing), the following data should be collected:

- The site operator will keep track of the usage of bicycle parking and report back to the City of Greater Sudbury on an annual basis;
- The site operator will keep track of the number of employees that are participating in carpooling and/or ridesharing programs and report back to the City of Greater Sudbury on an annual basis; and
- The site operator will collect from Sudbury Transit ridership data related to the site and provide it to the City of Greater Sudbury regarding travelers boarding and alighting transit routes which access the site on an annual basis (this data may also include customers/patrons to the site, not just workers).

The usage of a shuttle service to the casino and hotel can be recorded by Gateway and the hotel operator respectively, and can be provided to the site operator, who would provide it to the City of Greater Sudbury on an annual basis.

The site operator should provide evidence that monitors/screens exist within the facilities, and that these monitors/screens are displaying transit/shuttle information for the benefit of workers and customers.

For the Event Centre, the site operator will collect ridership data from Sudbury Transit that coincides with an event at the site (e.g., Sudbury Wolves game, concert, etc.). This data can be cross-referenced against attendance numbers to gauge modal splits that are achieved at particular events.

The site operator will regularly review the utilization of the high occupancy parking lot on site to determine its effectiveness in reducing lower occupancy vehicle trips to the site. This data can be combined with Sudbury Transit ridership data for events to provide a broader picture of travel behaviour for events at the site.

In addition, the site operator will ensure that annual surveys of travel behaviour be undertaken for the site to gauge the effectiveness of the TDM measures that are in place. The results of these surveys will be provided to the City of Greater Sudbury.

TDM Targets

The initial target for non-auto travel to the site is 5%. This is consistent with the modal split identified in the traffic impact study for the Kingsway site. The City of Greater Sudbury will review the results of the travel surveys and data supplied by Sudbury Transit, Gateway and the hotel operator to determine how effective the TDM measures have been in achieving the initial target modal split of 5%.

If the target modal split is not achieved, educational campaigns should be undertaken to further promote the benefits of non-auto travel to the site.

In addition to the educational campaigns, further marketing should be done by owners/operators of the facilities on site to understand how best to adjust TDM efforts. These marketing efforts would involve surveying facility users to better gauge their travel patterns and how TDM measures can be adjusted or modified to better meet their needs. As the TDM plan will be a living document, there is the potential to not only improve upon the TDM measures proposed herein, but also to highlight potential new measures which can be added to the site's TDM plan.

Once the 5% is achieved, a further target of 7% should be established for the site within a 5-year time frame. That would represent a 40% increase in non-auto travel to the site.

9.0 Conclusions and Recommendations

Given the volume of traffic that will be generated by the Kingsway site, a Transportation Demand Management Plan has been prepared to encourage a reduction in the number of vehicles being driven to the site. This plan includes measures to encourage spectators to travel via non-auto modes, and measures to encourage increased vehicle occupancy (more spectators per vehicle).

The following TDM measures are proposed to assist in reducing vehicular trips to the Kingsway site:

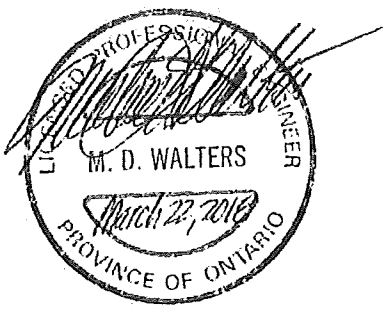
- Providing on-site secure bicycle parking to encourage workers to travel by bicycle to the site. This will include trip-end facilities (i.e., showers and change rooms) to further support cycling travel;
- Providing information and awareness to employees and customers that public transit will serve the site. This will include the posting (on monitors/screens) of travel times when buses are due to arrive at the site;
- Considering carpooling and ridesharing apps which would increase the occupancy of vehicles which are travelling to the site. This could involve employers starting their own carpool program, or registering as a company to a ridesharing app which would provide access to their employees to ridematching services;
- Providing shuttles which would allow access to the site from more remote locations (not served by public transit). This could include shuttle access to the airport for hotel guests;
- Providing express transit shuttles to the Event Centre for large events (e.g., Sudbury Wolves game, concert) to reduce the number of vehicles travelling to the site. This includes site design elements to include an exclusive bus loop to prioritize transit travel over private auto travel. Additional transit amenities (shelters, benches, wayfinding signage and travel information displays) would be included to further increase the attractiveness of transit travel to the site;

- Providing high occupancy vehicle parking on site. This measure would prioritize higher occupant vehicles over lesser ones due to the proximity of these spaces to the front doors;
- Distributing site travel information with ticket purchases. This information can inform event attendees of the travel options that are available to them prior to attending the event;
- Posting of site travel information on the respective websites of the City of Greater Sudbury, the Sudbury Wolves, Gateway Casinos and the hotel operator as an additional form of information dissemination regarding travel options to the Kingsway site; and
- Providing pedestrian and cycling infrastructure to support active transportation modes. This includes the provision of pedestrian amenities (e.g., benches) along sidewalks and trails on site. Bicycle parking will be provided on site to support cyclist travel. Connections to future cycling infrastructure will be incorporated into site design plans to encourage cycling travel to/from the site.

To get site users accustomed early on in the various travel alternatives available, educational and marketing campaigns should be undertaken during the opening month/year so that first time visitors to the site can see first-hand:

- how public transit will serve the site;
- how shuttles would operate during events;
- the various wayfinding signage that will be in place to help navigate around the site from transportation pick-up and drop-off locations;
- the monitors/screens that will continually advise/update site users on transit/shuttle arrival/departure times; and
- the location of high-occupancy parking facilities.

A monitoring plan will be established with the City of Greater Sudbury. This plan will formalize the targets for non-auto travel to the site, as well as the data which will be collected by the site operator to allow for an evaluation of the effectiveness of the TDM measures being incorporated. Since the TDM plan is a living document, which will evolve over time, not only will the proposed TDM measures identified herein be evaluated, but potential new measures may be identified for inclusion in the site TDM plan.



Mike Walters, P.Eng.
Project Manager

City of Greater Sudbury
Ville du Grand Sudbury

Greater | Grand Sudbury

NOTICE/AGREEMENT TO – RISK MANAGEMENT PLAN
***Clean Water Act, 2006* – Section 58(6)**

RISK MANAGEMENT PLAN **AGREED TO**

SP File Number: SP-RMP-46 Re: Parts of PINs 73561-0261, 73561-0282 & 73561-0264, Lots 9 & 10, Concession 4, Township of Neelon

March 23, 2018

PO BOX 5000 STN A
200 BRADY STREET
SUDBURY ON P3A 5P3

CP 5000 SUCC A
200, RUE BRADY
SUDBURY ON P3A 5P3

705.671.2489

www.greatersudbury.ca
www.grandsudbury.ca

1916596 Ontario Ltd.
c/o Dario Zulich
874 Lapointe Street
Sudbury ON P3A 5N8

NOTICE PURSUANT TO SUBSECTION 58(6) OF THE *CLEAN WATER ACT, 2006*

You plan to engage in:

- ***The application of road salt,***
- ***The handling and storage of road salt and***
- ***The storage of snow***

at:

Parts of PINs 73561-0261, 73561-0282 & 73561-0264, Lots 9 & 10, Concession 4, Township of Neelon

which poses a significant drinking water threat pursuant to the *Clean Water Act, 2006*.

This letter constitutes notice to you of agreement to the Risk Management Plan required under subsection 58(5) of the *Clean Water Act, 2006*. The Risk Management Plan (with/without modification) to which the Risk Management Official agrees is attached as Appendix "A" to this notice.

No person shall engage in the activities at the address above except in accordance with the attached Risk Management Plan.

André Filippin RMO Alt for David Brouse

Dave Brouse
Manager of Compliance and Operational Support (Risk Management Official)

Attachments: (Appendix "A") Risk Management Plan

DILLON
CONSULTING

CITY OF GREATER SUDBURY
GATEWAY CASINOS AND ENTERTAINMENT LIMITED
1916596 ONTARIO LTD

Risk Management Plan: Kingsway Site

March 2018 – 18-6947

Table of Contents

Figures

1.0 Background, Introduction and Objectives

1.1 Background

Dillon Consulting Limited (Dillon) has been retained by the City of Greater Sudbury (City), Gateway Casinos and Entertainment Limited and 1916596 Ontario Ltd (the "Owner"), to assist in obtaining necessary planning approvals to allow the development of the subject lands for a proposed Event Centre/Arena, a Casino and overflow parking. The three properties are described as:

- Proposed Casino – Part of PINs 73561-0282 & 73561-0264, Part 6 and Part of Part 11, Plan 53R-19391, Lots 9 & 10, Concession 4, Township of Neelon, (north side of Kingsway), Sudbury, Ontario
- Proposed Arena/Event Centre – Arena PIN 73561-0282,Part of Parts 10 & 11, Parts 12 & 13, Plan 53R-19391, Lot 9, Concession 4, Township of Neelon, (north side of Kingsway), Sudbury, Ontario
- Proposed Overflow Parking – parking Lot - Part of PINs 73561-0261, 73561-0264 & 73561-0282, Parts 2, 3, 5, 8, 14, 15, and part of Part 10, Plan 53R-19391, Lots 9 & 10, Concession 4, Township of Neelon, (north side of Kingsway), Sudbury, Ontario.

While separated by a property line, the "Kingsway Integrated Site Development" (Site) will be connected physically and form part of the Site. This development is envisioned to be an area for entertainment, providing exciting new opportunities for the expansion of Sudbury-based events for the residents of Greater Sudbury and visitors to the community.

The Site is located partially within the Ramsey Lake Issue Contributing Area (ICA) (**Figure 1**). As a result, a Section 59 Source Water Protection Application for Municipal Drinking Water Protection was submitted for each of the properties as part of the planning approvals process. The Risk Management Official identified that a Risk Management Plan (RMP) is required for the Site to provide mitigation measures to protect the sensitive water features, ground water features, and their hydrologic functions from road salt. In order to address drinking water threats related to the application, handling and storage of road salt and storage of snow one RMP has been developed for the Site that encompasses the three properties described above. The site drawings (**Figure 1** and **Figure 2**) were prepared by J.L. Richards & Associates Limited, the site plan infrastructure consultant with input from Dillon. These drawings were prepared using the available information known at this point in the design process.

1.2 Introduction and Objectives

Road salts or alternatives are regularly used as de-icing chemicals during winter maintenance to promote roadway, walkway and parking lot safety. The use of these substances frequently leads to the release of sodium and chloride to soil, groundwater, surface water, and the atmosphere through

losses at salt storage and snow disposal sites, and runoff from salt application areas. Releases of road salts to the natural environment can adversely affect soil, groundwater, plant and animal life (Environment Canada, 2001).

As of April 1, 2015, the Owner must comply with the *Approved Source Protection Plan for the Greater Sudbury Source Protection Area* (2014) to protect drinking water sources. A review of Source Water Protection mapping indicates that the Site is located partially within the Ramsey Lake ICA and Intake Protection Zone 3 (IPZ3) (**Figure 1**). In an IPZ3 area, the application of road salt, handling and storage of road salt, and storage of snow are considered threats to drinking water (Greater Sudbury Source Protection Committee, 2014), and correspond to threat numbers 12, 13 and 14 respectively, in *Ontario Regulation 287/07* under the *Clean Water Act* (2006). For the purpose of this RMP, road salt refers to sodium chloride.

Two policies relating to salt use and snow storage in the *Approved Source Protection Plan for the Greater Sudbury Source Protection Area* (2014) apply to the Site. Policy Sa3EF-RMP states that a RMP is required, under Section 58 of the *Clean Water Act*, when the application of road salt and storage of snow could be a significant threat, and exterior parking lots are equal or greater than one hectare in area. Policy Sa5F-s57 states that the future handling and storage of road salt is prohibited in vulnerable areas, under Section 57 of the *Clean Water Act*, where the activity would be a significant threat. In the Ramsey Lake ICA, this policy applies to storage of 0.5 tonnes of road salt and greater.

The objective of the RMP is to comply with the applicable polices outline in the *Approved Source Protection Plan for the Greater Sudbury Source Protection Area* (2014) related to road salt use and snow storage. The objective will be met by indicating best management practices related to design and operation that will reduce the risk to drinking water from application, handling and storage of road salt, and the storage of snow, while maintaining safe conditions for pedestrians and vehicles. This will be done by adopting best management practices relating to the design of new development and operation of winter maintenance activities as outlined in the following sources:

- Code of Practice: The Environmental Management of Road Salts, Environment and Climate Change Canada (2017)
- Syntheses of Best Practices: Road Salt Management, Transportation Association of Canada (2013).

As the RMP is based on the draft design plan for the Kingsway Site, if alterations are made to the design plan, the applicability of the RMP will be reviewed and updated appropriately.

2.0 Identification of High Traffic Areas and Bulk Snow Storage

It is anticipated that high vehicular traffic areas will include entrances to the Site, and the main driveways in between parking lots (**Figure 2**). It is anticipated that high pedestrian traffic areas will include main walkways from the parking lots, facility entrances and in the festival square (**Figure 2**). The application of road salt and/or alternative de-icing products, as discussed in **Section 3.0**, will occur in identified high traffic areas to ensure the safety of the facility.

Snow storage areas will be provided in the parking lots, in the proposed locations seen on **Figure 2**. Where possible, snow storage areas have been designated in areas without impervious surfaces to promote infiltration of melt water. Snow storage will also be maximized in the northern portion of the Site, where a drainage divide occur, and surface water flows away from Ramsey Lake (**Figure 2**). In the event that the above designated bulk snow storage areas become full, excess snow will be removed and disposed of offsite. Snow disposal will be contracted out, and will be disposed of at an approved snow dump facility.

3.0 Proposed Use of Alternative Products

It is understood that alternative de-icing products have different chemical properties that can reduce potential environmental impacts. The *Approved Source Protection Plan for the Greater Sudbury Source Protection Area* (2014) indicates that sodium is the chemical of concern related to road salt in the Ramsey Lake ICA. The use of alternative de-icing products including those with no or lower sodium concentrations, are discussed below and, will be considered for conditions where it is safe and effective to do so.

A primary de-icing product used onsite will be pickled sand, a low sodium concentration product. Pickled sand is a mixture of abrasive winter sand (OPSS 1004) and sodium chloride at a salt concentration of about 5%. Pickled sand will be used in high vehicular traffic areas. In high pedestrian traffic areas, including main building entrances, alternatives to sodium chloride such as calcium chloride can be used. It is expected that, since road salt (sodium chloride) is predictable and proven effective in achieving safe de-icing conditions in high vehicle and human traffic areas, its use will not be totally eliminated. Although, its use will be limited to conditions, such as freezing rain, where its application is necessary for safety at the facility.

Following each winter season, excess road salt, alternative products and sand will be swept from vehicle and pedestrian areas and removed from the watershed to minimize its entry into Ramsey Lake.

An effective way to reduce road salt and alternative de-icing product use is through forecasting and proactive winter maintenance. Engineering and operational measures described below will help to minimize road salt and alternative de-icing product use and subsequently decrease the release of sodium to Lake Ramsey. Logging winter maintenance activities during the first implementation year of the RMP will also set a baseline for road salt and alternative de-icing product use to be compared against for future years.

4.0 Recommended/Proposed Engineering Measures

Grading onsite, including roadways and sidewalks will be designed to establish positive drainage towards onsite storm water catchments. Grading in the vicinity of designated bulk snow storage should also be designed to establish positive drainage towards onsite storm water catchments. The implementation of effective drainage will reduce ice formation and subsequent road salt and alternative product application. Storm water catchments onsite, will direct precipitation and runoff to an onsite storm water management pond. **Figure 2** displays positive drainage towards the onsite storm water management pond. There is a drainage divide located on Site (**Figure 2**), with the northern future parking area, draining northwest away from Ramsey Lake. Snow storage will be maximized in this area, to minimize the release of runoff into Ramsey Lake. Snow storage will also be maximized on pervious surfaces, to allow for infiltration of melt water.

The storm water management pond will require an Environmental Compliance Approval (ECA), and an operation and maintenance plan will be prepared. For storm water quality control, the storm water management pond will be designed to remove 85% of 50 micron particle size prior to discharge. In addition, post development runoff rates will be 80% of the predevelopment run off rates.

Although grading is necessary to direct precipitation and melt water to storm water catchments, the slope of internal roadways, parking lots and sidewalks should be minimized to avoid the application of road salt and alternative products. If grit for traction is required, sand can be considered as an option. Sand can provide traction, and much of it can be removed from runoff by oil/grit separators and catch basin sumps located in storm water catchments. Catch basins will be inspected annually, and if necessary cleaned of debris to ensure their effective operation.

Consideration should be given to the location of roof downspouts. Directing downspouts away from high traffic areas, and when possible towards storm water catchments will also reduce the need for road salt and alternative product application.

In addition to frequent plowing, snow drift control measures may be considered onsite to minimize drifting. Snow drift control measures may include the use of temporary snow fences, or vegetation. The site drawings (**Figure 1** and **Figure 2**) were prepared by J.L. Richards & Associates Limited, the site plan infrastructure consultant with input from Dillon. These drawings were prepared using the available information known at this point in the design process and will be adjusted if significant changes are made in the site plan design.

5.0 Operational Measures to Minimize Road Salt Use

The primary method of snow and ice control will be the timely removal of snow on internal roads, parking lots and sidewalks, with a focus on areas of identified with high pedestrian and vehicle traffic (**Figure 2**). A winter maintenance contractor will be retained to remove snow, apply de-icing products and dispose of snow offsite. The contractor will store road salt, alternative de-icing products and snow removal equipment offsite, with the exception of water proof totes of road salt and alternative de-icing products near main building entrances during the winter months. Road salt stored in totes will amount to less than the 0.5 tonnes outlined in the *Approved Source Protection Plan for the Greater Sudbury Source Protection Area* (2014). Alternative de-icing products, not containing sodium, may be stored at the Site in excess of 0.5 tonnes. Snow removal equipment maintenance and washing will also occur offsite. The contractor will be responsible for moving snow to designated bulk snow storage areas, and when necessary removing the snow offsite. The Contractor should monitor current and forecasted conditions in order to remove snow quickly after snowfall events with precipitation greater than approximately 8 cm.

Use of road salt will be limited to conditions, such as freezing rain, where its application is necessary for safety at the facility. The Site employees may add road salt to high traffic areas if conditions are considered to be unsafe. Alternatives to road salt, including pickled sand and calcium chloride will be incorporated into the winter maintenance activities, as described in **Section 4.0**.

It is understood that, when necessary for safety, the amount of road salt and alternative products applied will be estimated and recorded by the contractor. Application rates will reflect the current and forecasted conditions. The Owner will communicate the best management practices detailed in *Synthesis of Best Practices, Road Salt Management* (TAC, 2013) to the Contractor. It is the Owner's responsibility to outline the expectations and responsibilities of the contractor with regards to winter maintenance activities to satisfy the RMP.

6.0 Adaptive Monitoring/Management

The first year of operation at the Site, winter maintenance activities should be logged, including the amount of road salt and alternative de-icing products used. This documentation will be used to create baseline winter maintenance conditions at the Site. Annually, the RMP should be reviewed to assess the effectiveness of the previous year's winter maintenance operations in comparison to the baseline conditions that are to be established. The objective of this review is to identify opportunities for improvement. The review process will also provide an opportunity to consider emerging alternative ice control products and procedures for use that year. Conducting an annual review will create a dynamic RMP, which will evolve with the maintenance needs of Site and allow for responsible management of winter maintenance.

7.0 Summary

This RMP outlines design and operation best management practices that will occur at the Site with respect to winter maintenance activities. The RMP also outlines the review process for the document, to ensure that the RMP evolves with the winter maintenance needs of Site, and that emerging alternative ice control products and procedures are considered as they become available. The RMP meets the applicable polices outline in the Approved Source Protection Plan for the Greater Sudbury Source Protection Area (2014) related to salt use and snow storage. As the RMP is based on the draft design plan for the Kingsway Site, if alterations are made to the design plan, the applicability of the RMP will be reviewed and updated appropriately.

DILLON CONSULTING LIMITED
LONDON, ONTARIO

Rob Kell, P.Eng., P.Geo.
Environmental Engineer

Taryn Azzopardi, MEnvSc
Environmental Scientist

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Figures

Rev. 1

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ENGINEERS • ARCHITECTS • PLANNERS
www.jlrichards.ca

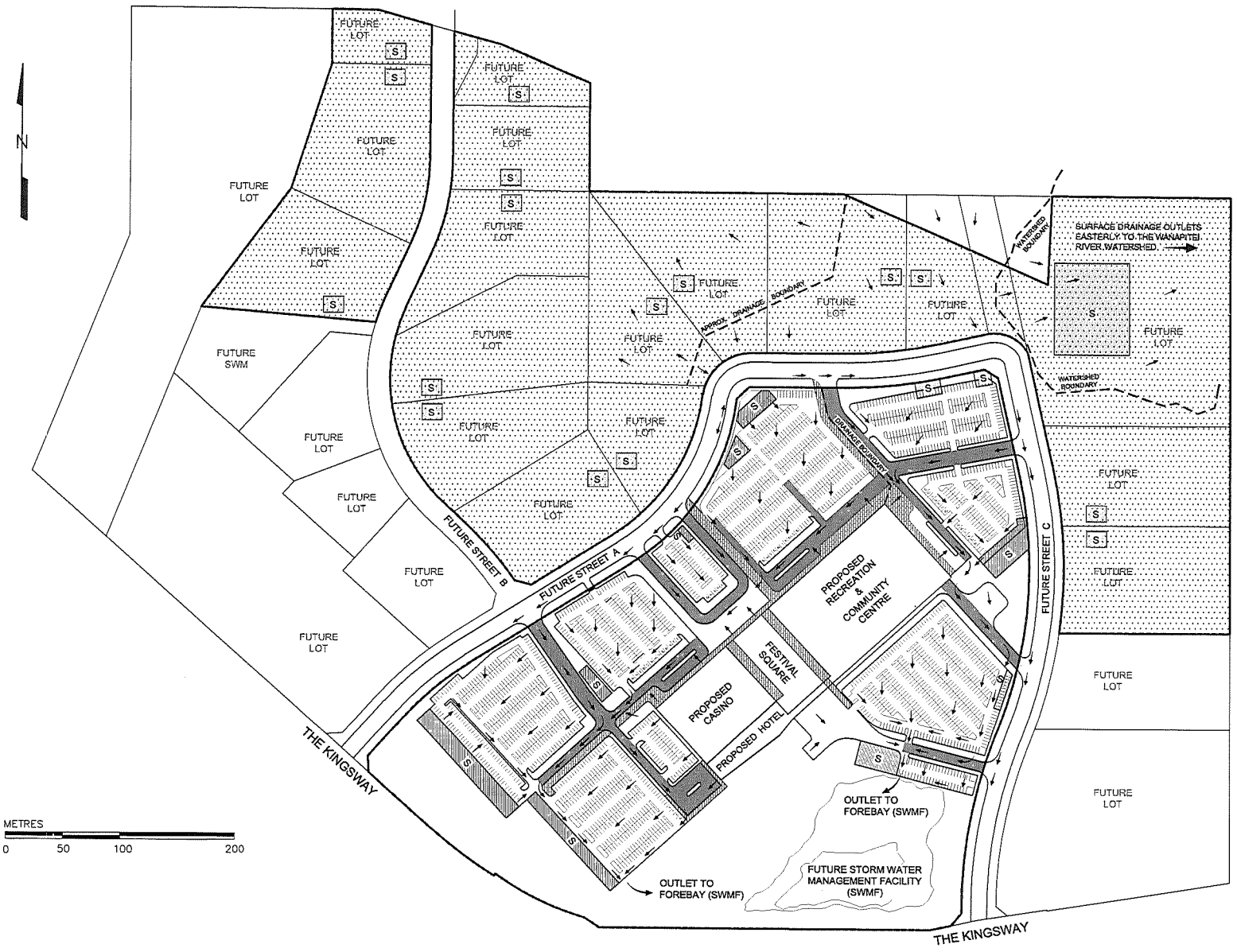
REVISIONS		
DATE	DETAILS	BY

DATE: 2018-03-23
DRAWN: DKW
DESIGNED: DKW
CHECKED:
ENGINEER:
APPROVED:

FIGURE 1

KINGSWAY ENTERTAINMENT DISTRICT
SITE LAYOUT AND VULNERABLE AREAS

SCALE: AS SHOWN
CONTRACT NO.:
CAD/FILE NUMBER:
PAGE NO.:



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REVISIONS		
DATE	DETAILS	BY

DATE: 2018-03-23
DRAWN: DKW
DESIGNED: DKW
CHECKED:
ENGINEER:
APPROVED:

FIGURE 2

KINGSWAY ENTERTAINMENT DISTRICT
HIGH TRAFFIC AND SNOW STORAGE AREAS

SCALE: AS SHOWN
CONTRACT NO.:
CAD/FILE NUMBER:
PAGE NO.: