5A-150 Pinebush Road
Cambridge ON N1R 8J8
p: 519.896.3163
905.381.2229
416.479.9684

www.ptsl.com

10 September 2021
Project: 200669

Sarah Reeve
Senior Development Coordinator
SkyDev
5 Douglas Street, Suite 301
Guelph ON N1H 2S8

Dear Ms. Reeve:

RE: 10-24 GROVE STREET, RESIDENTIAL REDEVELOPMENT, CITY OF BARRIE TRANSPORTATION DEMAND MANAGEMENT REPORT

Paradigm Transportation Solutions Limited was retained by SkyDev to conduct this Transportation Demand Management Report for the proposed redevelopment of 10-24 Grove Street West, south of Highway 400 and west of Bayfield Street in the City of Barrie.

Figure 1 illustrates the subject site location.

Redevelopment Concept

Existing Site

The site is currently occupied by a former YMCA recreational centre building. The site is accessed via one all-turns private driveway connection to Grove Street West and one direct connection to the current terminus of Toronto Street at the westerly limits of the site. The existing YMCA building and accesses will be removed to permit the redevelopment to proceed.

Proposed Redevelopment

The proposed redevelopment will consist of block three apartment towers, ranging in height from 21 storeys to 25 storeys, connected by a five storey podium and two link apartment buildings, eight and 12 storeys respectively. A total of 864 units will be provided in this section of the redevelopment. A separate five storey apartment building containing 64 units will be located near the southerly limits of the site. Overall, a total of 928 apartments will be constructed in a mix of one, two and three bedroom units. The redevelopment is expected to be completed in two phases, with full build-out in 2028.

Access to the site will be provided via one all-turns private driveway connection to Grove Street West, approximately 10 metres west of the current driveway location.

Figure 2 shows the preliminary site plan.

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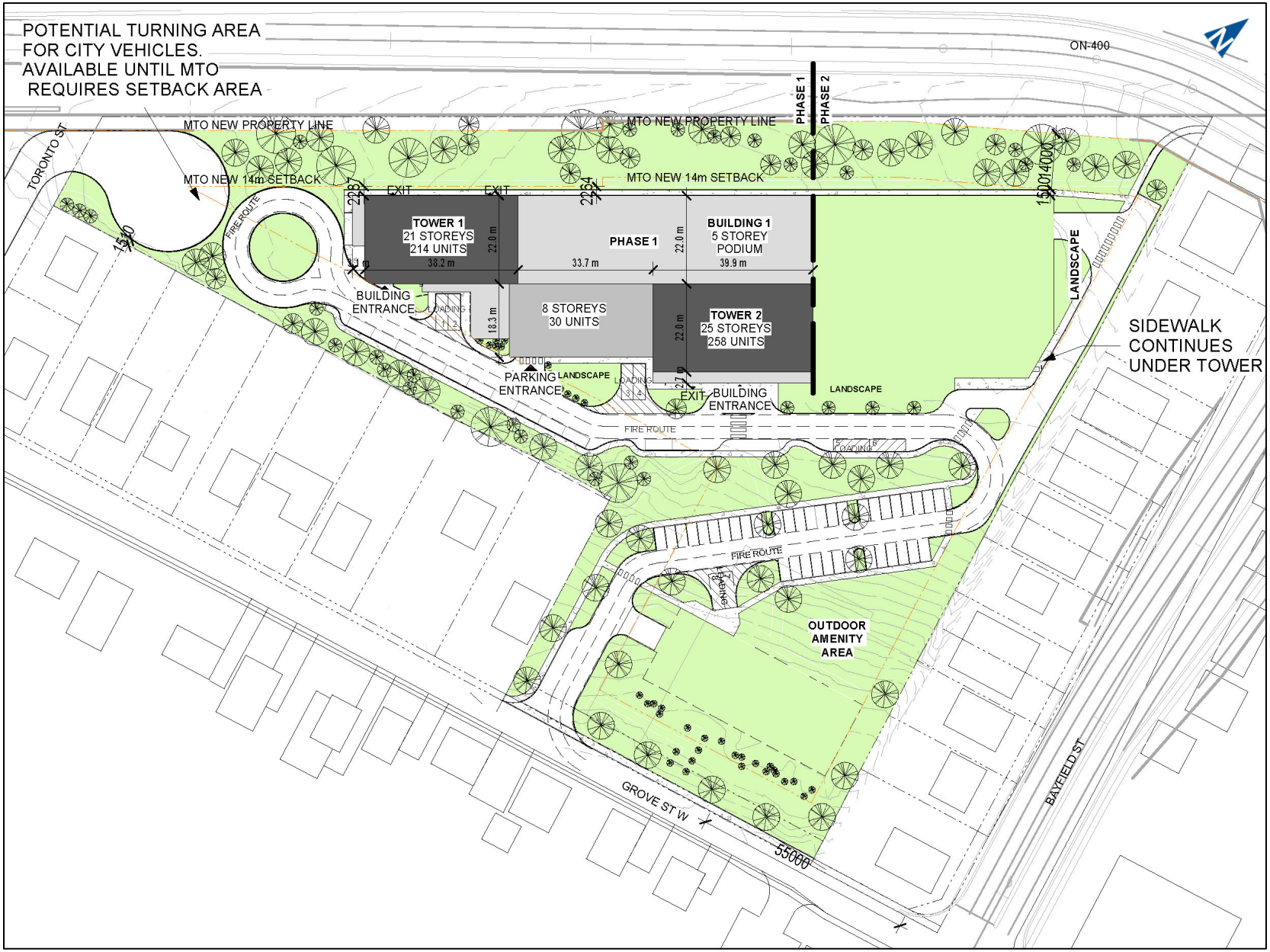
Study Area and Subject Site Location



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Proposed Site Plan

Existing Active Transportation Facilities

Pedestrian Facilities

Sidewalks are provided in the study area as follows:

- The south side of Grove Street West, west of Bayfield Street;
- The north side of Grove Street East, east of Bayfield Street; and
- Both sides of Bayfield Street.

Crosswalks, pedestrian signal heads and curb let-downs are provided on all four corners of Bayfield Street and Grove Street. The side street pedestrian signal phases are activated via push buttons.

Cycling Facilities

Sharrows, indicating a shared on-road vehicle/bike lane are provided on the entirety of Grove Street from Toronto Street in the west to Penetanguishene Road in the east. This is an isolate bike facility that does not connect to any other bike routes or facilities.

As per the City's Transportation Master Plan [1], Toronto Street, 190 metres west of the site, and Davidson Street, 875 metres east of the site, are designated as a future "signed bike route". St. Vincent, 1.5 kilometres metres east of the site, is designated as a future buffered bike lane. The timing of implementation is not known at this time.

Transit Service

Barrie Transit operates five routes within the study area. These routes provide service to key locations throughout the City including Georgian Mall, Georgian College and two GO transit train stations. Connections to the larger City transit service can be made both at street-level and the Downtown Terminal located about one kilometre south of the site.

Table 1 summarizes the exiting transit routes servicing the site.

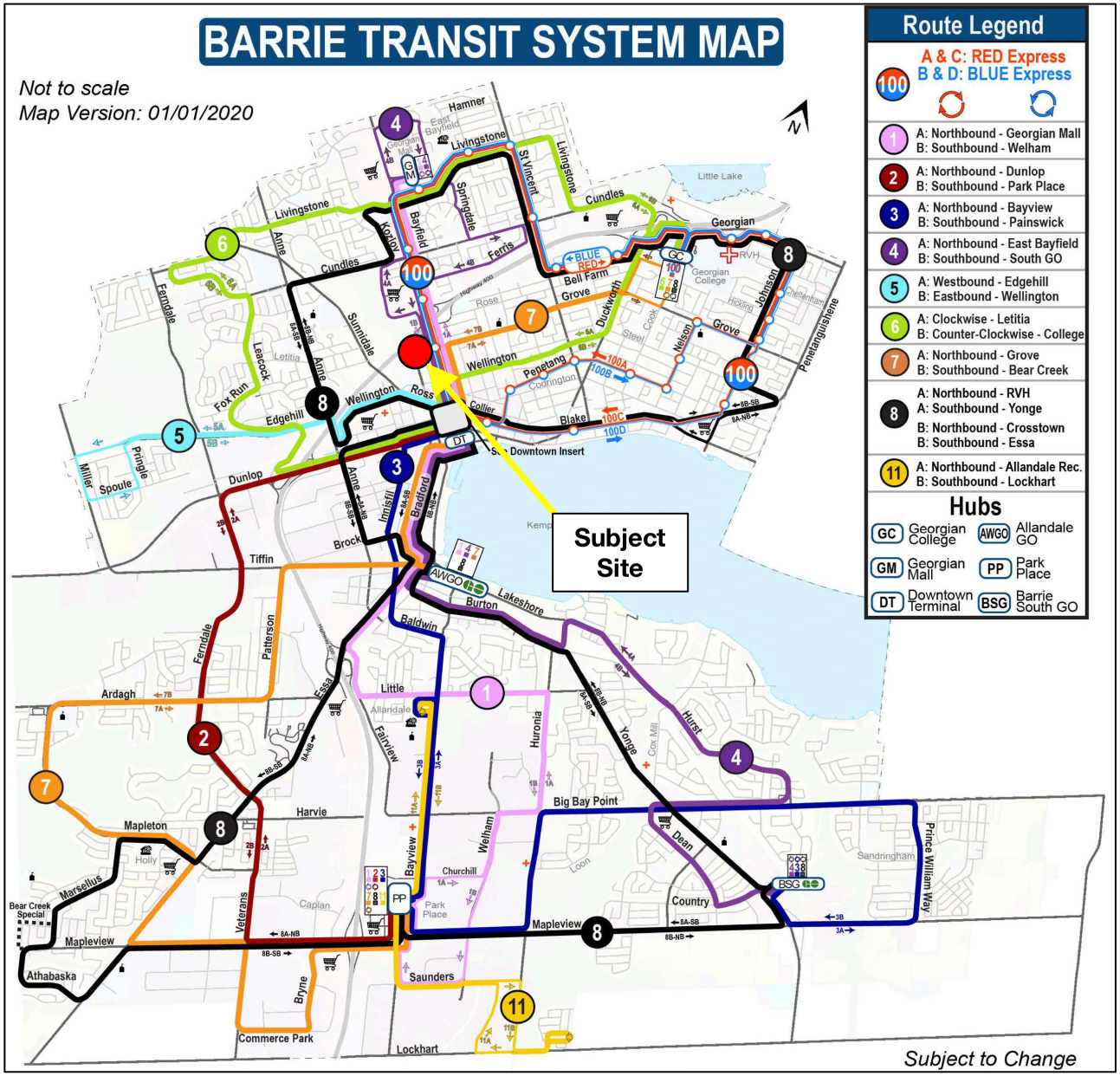
Figure 3 illustrates the existing transit network near the site.

[1] Figure 3-6 Existing Cycling Network, Transportation Master Plan, City of Barrie, June 2019

TABLE 1: EXISTING BARRIE TRANSIT ROUTE INFORMATION

Route	Description	Operating Hours
1A Georgian Mall (northbound) 1B Welham (southbound)	Route 1 is a north-south route that operates between Park Place shopping centre in the south and Georgian Mall in the north.	Weekday service runs from about 5:00 AM to midnight on 20-minute headways. Saturday service runs from about 7:00 AM to midnight on 30-minute headways. Sunday service runs from about 9:00 AM to 10:00 PM on alternating 30 and 60-minute headways.
4A East Bayfield (northbound) 4B South GO (southbound)	Route 4 is a north-south route that operates between the Barrie South GO station in the south and Georgian Mall in the north. It also provide service to the Allandale GO station and Downtown Barrie.	Weekday service runs from about 5:30 AM to 11:30 PM on 60-minute headways. Saturday service from about 7:30 AM to 11:30 PM on 60-minute headways. Sunday service runs from about 9:00 AM to 10:30 PM on 60-minute headways.
6A Letitia (northbound) 6B College (southbound)	Route 6 is a circular route that begins and ends at the Downtown (Barrie) Terminal. It provides service through several residential areas, Georgian Mall and Georgian College.	Weekday service runs from about 5:45 AM to midnight on 30 to 60-minute headways. Saturday service from about 7:15 AM to midnight on 30 to 60-minute headways. Sunday service runs from about 9:00 AM to 10:30 PM on 60-minute headways.

Route	Description	Operating Hours
7A Grove (northbound) 7B Bear Creek (southbound)	Route 7 is a north-south route that operates between Park Place shopping centre in the south and Georgian College in the north. It provides service to the Holly Recreation Centre, Allandale GO station and Downtown Terminal.	Weekday service runs from about 5:30 AM to midnight on 60-minute headways. Saturday service from about 6:30 AM to midnight on 60-minute headways. Sunday service runs from about 9:30 AM to 10:00 PM on 60-minute headways.
100 A/C Red Express (clockwise) 100 B/D Blue Express (counter-clockwise)	Route 100 is a clockwise/counter-clockwise route that operates to/from the Downtown Terminal. It provides service to Georgian Mall and Georgian College.	Weekday service runs from about 7:00 AM to 10:30 PM on predominantly 25-minute headways. Saturday service from about 7:45 AM to 9:30 PM on 45-minute headways. Sunday service runs from about 9:30 AM to 9:30 PM on 45-minute headways.
Within the study area, all routes operate on Bayfield Street. The closest stops are located on the southeast corner (northbound service) and southwest corner (southbound service) of Bayfield Street and Grove Street East about 185 metres, or a 2-3 minute walk, southeast of the site.		



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Barrie Transit Network

Transportation Demand Management (TDM)

Transportation Demand Management (TDM) programs[2] consider how people's choices of mode travel are affected by land use patterns, development design, parking availability, parking cost, and the relative cost, convenience, and availability of alternative modes of travel. Various TDM strategies are used to influence those factors so that alternatives to single occupant vehicle travel, such as transit or carpooling, are more competitive. TDM strategies that can be considered at a residential site development can be divided into two basic categories:

- **Pre-occupancy:** things that need to be done while a development is being designed and built; and
- **Post-development:** things that can be done once people have moved into the development.

The pre-occupancy actions are critical because they are most likely to determine how attractive, convenient and safe alternative travel will be once the site is occupied. Before a site is occupied, or during a remodel, it can be designed to be convenient and safe for pedestrians and cyclists. As well, vehicle parking can be provided to meet but not exceed demand.

After the development is built, incentives can be offered, but those incentives will not work as well if the site and its surroundings are already auto-oriented. The incentives generally include subsidies to use transit or rideshare and information about where and how to use alternative modes of transportation.

TDM is one of the tools that municipalities are using to create vibrant and sustainable communities. Using policies and programs to make active and sustainable transportation more convenient, a TDM approach to transportation can deliver long-term environmental sustainability, improve public health, create stronger communities, and build more prosperous and liveable cities.

Potential TDM Measures

To further promote sustainable modes of travel, TDM measures that will be implemented at the site are described below.

Walking

The pedestrian accessibility of a development is essential is helping to ensure that those that can walk, do. Proper pedestrian connections to the surrounding community ensure safety and enhance the experience of those that choose to walk.

[2] City of Mississauga Official Plan – Section 8 Create a Multi-Modal City 2015

Sidewalks currently exist on the south side of Grove Street West, north side of Grove Street East and both sides of Bayfield Street. Crosswalks and curb let-downs are provided on all four corners at Bayfield Street and Grove Street.

The applicant will provide sidewalks that connect the site to the adjacent municipal sidewalk system which will make walking a more attractive option. Signage, pavement markings, trees and bollards will be utilized where appropriate to identify and emphasize the major pedestrian routes through the site.

To further enhance the attractiveness of walking, proper lighting will be provided throughout the site and near all building entrances and exits. Weather protection will be provided at the building's main entrances. This may be in the form of a building overhang, or a stand-alone structure.

The future landscaping plan should consider enhancing the common areas to include pedestrian amenities such as benches or seating areas.

Cycling

In creating an environment that supports pedestrian and cycling activity, the public space must be accessible, safe and comfortable to encourage movement on the street and in the surrounding area(s).

The applicant will provide long-term bike secure bicycle storage spaces either in the underground parking garage or within the storage units. The spaces will be located near elevators and/or main entrances. Short-term bike parking, in the form of two to three-unit bike racks should be provided near each building's entrance.

The City does not currently include bike parking requirements within Zoning By-law 2019-141. The long-term and short-term bicycle parking spaces should be provided at rates agreed upon during consultation with City staff. Based on the previous study completed for the proposed development at 51-75 Bradford Street, a minimum of 0.15 long-term bike spaces per unit, or 140 spaces and 0.03 short-term bike spaces per unit, or 28 spaces could be considered.

Transit

The availability of convenient and desirable transit options can reduce the number of personal automobile trips. As previously discussed, public transportation is provided via five Barrie Transit routes. The routes provide good connectivity to the broader transit network and key destinations within the City, including institutional land uses, recreational facilities and shopping.

A bus shelter with a one to two person bench and a waste and recycling receptacle is provided at the northbound stop located on the southeast corner of Bayfield Street and Grove Street East. The southbound stop located on the opposite (southbound) side of Bayfield Street does not have any amenities. At present, the existing amenities at the surrounding transit stops limit the attractiveness of public transportation.

To further enhance transit usage, it is recommended that building management provide information about transit services, including maps and schedules, within the main lobby or common area of each building.

Parking

TDM measures aim to reduce auto ownership and private vehicle trips, thereby reducing the need for an oversupply of parking with the intent of encouraging the use of other forms of transportation. However, a parking supply should not be reduced to a point in which significant parking issues are created. Managing parking supply helps to reduce the undesirable impacts of parking demand on local and regional traffic levels and can result in positive impacts on community livability and design.

The following is recommended to further encourage residents to utilize sustainable travel modes:

- Provide only the minimum amount parking required under the site-specific zoning. At present, the site is required to provide one space per unit for Phase 1 (502 spaces) and then conduct a parking study to determine the Phase 2 ratio. The site is proposing to provide approximately 1.3 spaces per dwelling unit, or 1,207 parking spaces based on the proposed site plan;
- Unbundle parking spaces from the cost to rent a unit. This is more equitable and efficient since occupants are not forced to pay for parking they do not need and allows consumers to adjust their parking supply to reflect their needs;
- Limiting the number of spaces a unit can lease to ensure a stable and adequate supply is available for those requiring parking. Any surplus spaces could be leased on a month to month basis to those requiring additional parking beyond the limit, until such time as a resident under the limit requires parking. Alternatively, these spaces could be used to top-up the visitor supply during periods of peak activity such as holidays; and
- Assign specific/numbered spaces to users to ensure parking is available for them when required. This also provides for easy tracking of available parking for both residents and visitors.

Carpooling and Carshare

Ride-share/carpooling involves two or more people sharing a vehicle for a trip. The cost of the journey (fuel, tolls, parking, etc.) can be split between the driver and passengers, resulting in savings for all concerned. This also reduces the number of vehicle trips and parking demands.

Carpooling tools such as Car Pool World[3] set up online ride sharing databases. These databases enable people to enter their daily journey so that the database can automatically search out coworkers whose journeys match. It is recommended that notice boards are

[3] https://www.carpoolworld.com/

installed in the lobby of each building with information to help residents who may want to organize informal carpools.

Ride sharing opportunities can also be used in combination with carpool parking stalls. These parking stalls are typically positioned in desirable locations (i.e. next to the building entrance) and are specifically reserved for vehicles with two (2) or more people. Providing a convenient parking location can be a good incentive for residents and visitors to carpool. The applicant will identify which parking spaces could be reserved for carpool vehicles if demand exists.

At present, there are no car share providers within the City of Barrie.

Wayfinding and Travel Planning

Increasing awareness of sustainable transportation opportunities for residents of the redevelopment will be considered. New residents of the building will be provided with a welcome package that outlines the available transit and active transportation options such as the availability of bicycle parking, bike routes, etc. Signage will be installed within buildings' lobbies and common areas directing residents to nearby transit and active transportation facilities. The lobbies and common areas may contain kiosks or message boards where transit route and schedule information is provided.

Providing awareness of commuting events such as Bike to Work Day and promotional materials that inform residents that all Barrie Transit buses are equipped with bike racks can either be regularly distributed to residents or provided at the kiosk/message board.

Education/Promotion and Incentives

The following measures will be implemented to inform residents of existing transit and active transportation opportunities and encourage their usage:

- Travel planning resources will be provided within a welcome package for residents containing transit and active transportation maps and a list of community resources; and
- Wayfinding signage will be provided in the lobbies, common areas and near main entrances.

The added benefit that marketing materials prepared for the site can highlight the robust TDM plan including the availability of onsite travel planning resources and the site's proximity to transit and active transportation.

Conclusions and Recommendations

Conclusions

The above TDM measures should assist in mitigating the site's impact on the adjacent road network, promote a strong and vibrant economy, and create a livable community that has a balanced transportation network that accommodates all modes of transportation.

Recommendations

- Based on the TDM elements outlined above, the following is recommended:
  - Provide safe, well-lit and attractive walkways for pedestrian and benches or seating areas throughout the site and that connect to the external sidewalk system;
  - Long-term and short-term bicycle parking is provided at the rates agreed upon during consultation with City staff;
  - Management provide transit schedules and maps within each buildings' lobby;
  - The site provides only the minimum amount parking required under the site-specific zoning, or about 1,207 parking spaces based on the proposed site plan;
  - Parking spaces are unbundled from the cost to rent a unit;
  - The number of spaces a unit can lease is limited to ensure a stable and adequate supply is available for those requiring parking;
  - Parking spaces are assigned to users to ensure parking is available for them when required;
  - The applicant identify which parking spaces could be reserved for carpool vehicles; and
  - Signage is installed within the building lobbies directing residents to nearby transit and active transportation facilities.

Yours very truly,

PARADIGM TRANSPORTATION SOLUTIONS LIMITED

Jill Juhlke
C.E.T.
Senior Project Manager