



salterpilon
architecture

URBAN DESIGN BRIEF
217 DUNLOP STREET EAST - DEC. 2020

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01 INTRODUCTION

OBJECTIVES

Salter Pilon Architecture has been retained by PBM Realty Holdings Inc. (the "Applicant") to prepare an Urban Design Brief for the redevelopment of the site located at 217 Dunlop Street East ("the Subject Lands" or "the Site"). The development consists of a 15 storey, 41 unit condominium building with ground floor commercial uses.

The purpose of the Urban Design Brief is to describe key urban design, environmental and servicing considerations applicable to the project. In doing so this brief aims to illustrate how the proposal will implement the design objectives set forth by the City of Barrie for successful development within the Urban fabric of the City.

The proposed development represents intensification near the eastern boundary of the City's Downtown. This intensification should aide and encourage further reinvestment and revitalization of the existing built-up area inside and surrounding the Downtown core.

POLICY & GUIDELINES FRAMEWORK

The Site is located in the area designated as "City Centre" per Schedule A Land Use, and is within the boundaries of the City's "Urban Growth Centre" per Schedule I Intensification Areas of the City of Barrie Official Plan.

The Urban design and tall buildings design policies within the City's Official Plan—in combination with the Zoning Bylaws and other guidelines—are intended to ensure that new development is compatible with the existing built fabric and contributes to an enhanced, attractive and safe pedestrian realm in the Downtown Area.

OUR APPROACH

In response to the City's vision, Salter Pilon on behalf of the Applicant have prepared this Urban Design Brief to illustrate how the proposed development has met the development requirements within the Official Plan.

Specifically, this Brief intends to provide context to the proposal through the lens of the City of Barrie's policies and guidelines, including Policy Sections 6.5 (Urban Design Guidelines, and 6.6 (Tall Buildings and Height Control) of the City of Barrie Official Plan.

The proposal will also be reviewed for consistency with other relevant guidelines pertaining to the City of Barrie Intensification Area and Urban Design Guidelines wherever possible. The brief will evaluate several primary urban design elements including: site design and orientation, site circulation, architectural design, lighting and landscape design, parking, utility, servicing, sustainability and microclimate.

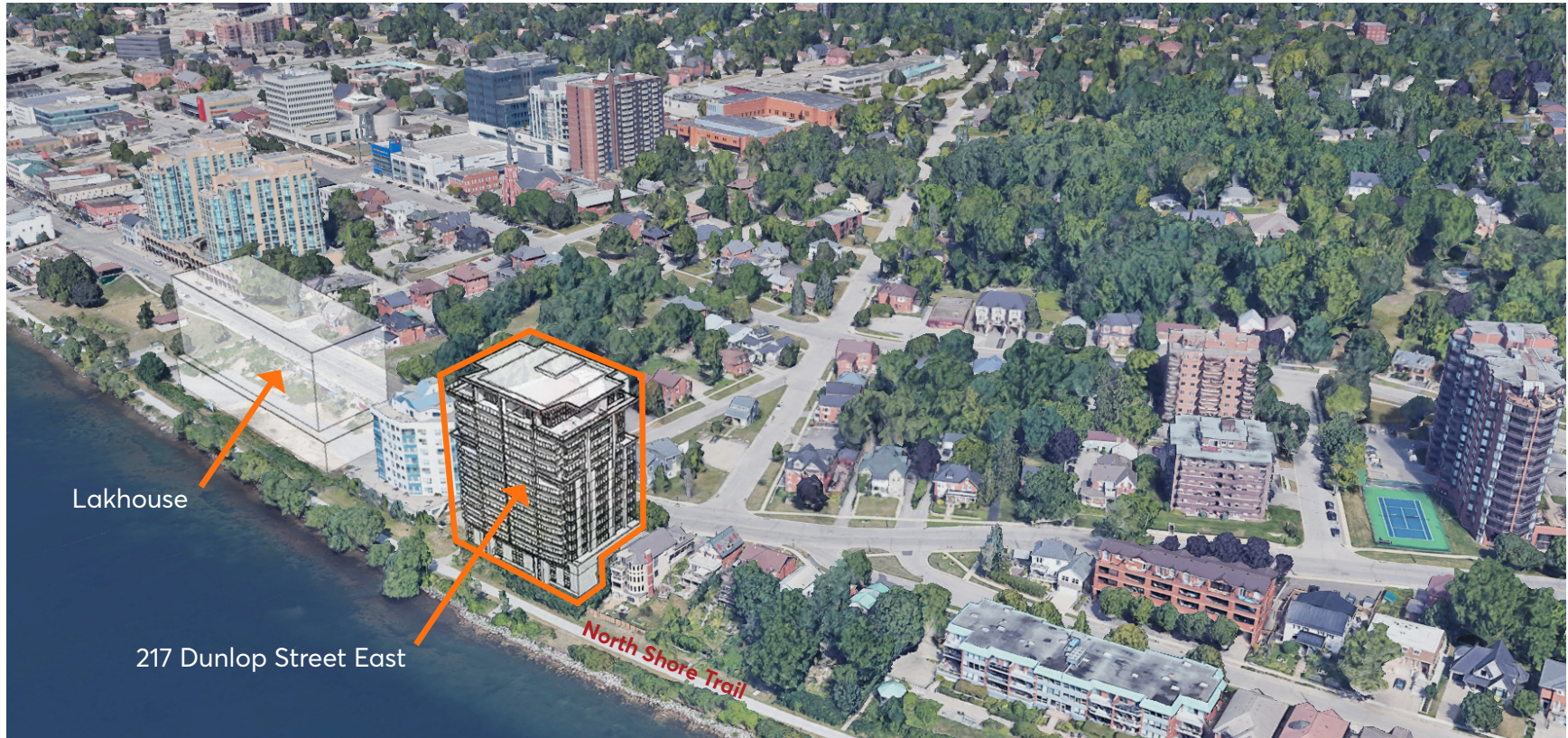


Figure 1
Context Plan Aerial View

DEVELOPER

The subject property is locally owned by 2012292 Ontario Limited (PBM Realty Holdings Inc.) which was founded in 1986.

PBM Realty acquired the Site in 2002 with a plan to build a boutique condominium.

Significant thought and evaluation has gone into this important project with the goal of creating an exceptional new architectural gem for the downtown core and waterfront.

TEAM

A team of highly qualified professionals has been assembled for the project. Primary team leads include:

- Salter Pilon Architecture Inc.
- Mitchinson Planning & Development Consultants Inc.
- Azimuth Environmental Consulting Inc.
- Skelton Brumwell & Associates Inc.
- Peto MacCallum Ltd.
- Landmark Environmental Group Ltd.
- Stephenson Engineering
- Quasar Consulting Group
- Geo-Solv Engineering

PROPOSAL

The development proposal consists of a high-rise residential condominium project to be located at 217 Dunlop Street East. The project requires City approval of a site specific zoning by-law amendment and site plan. The project comprises a 15-storey, 41-unit residential condominium building with a ground floor commercial component.

The proposed building will have a total GFA of 11,882 m² (127,896.8 sq ft). 11,480 m² of that area is proposed residential condominiums with 402 m² being provided as commercial space.

Primary pedestrian entrances for the residential lobby and the commercial space will be prominently located along the building frontage at Dunlop Street East.

A pedestrian connection is also proposed to provide improved access to the North Shore Trail from Dunlop Street East.

Parking for the building will be underground and within the street level podium on levels 0, 1 and 2. Parking areas will be accessed by ramping entrances at the west and east sides of the building. Fifty-three standard parking stalls will be provided with a combination of tandem and vehicle lifts providing parking for an additional 60 vehicles and a total of 113 parking stalls.

PROPOSAL cont'd

Also provided in the underground parking will be an enclosed bicycle storage room which can be accessed via the ramp at the east.

The property is a brownfield site (former Cotty's Cleaners) which has been approved for development by the Ministry of the Environment.

The building and site have been carefully designed to:

- Conform with Provincial and City of Barrie planning policies
- Compliment the neighbourhood and enhance Barrie's Urban Growth Center
- Mitigate potential impacts on surrounding uses.

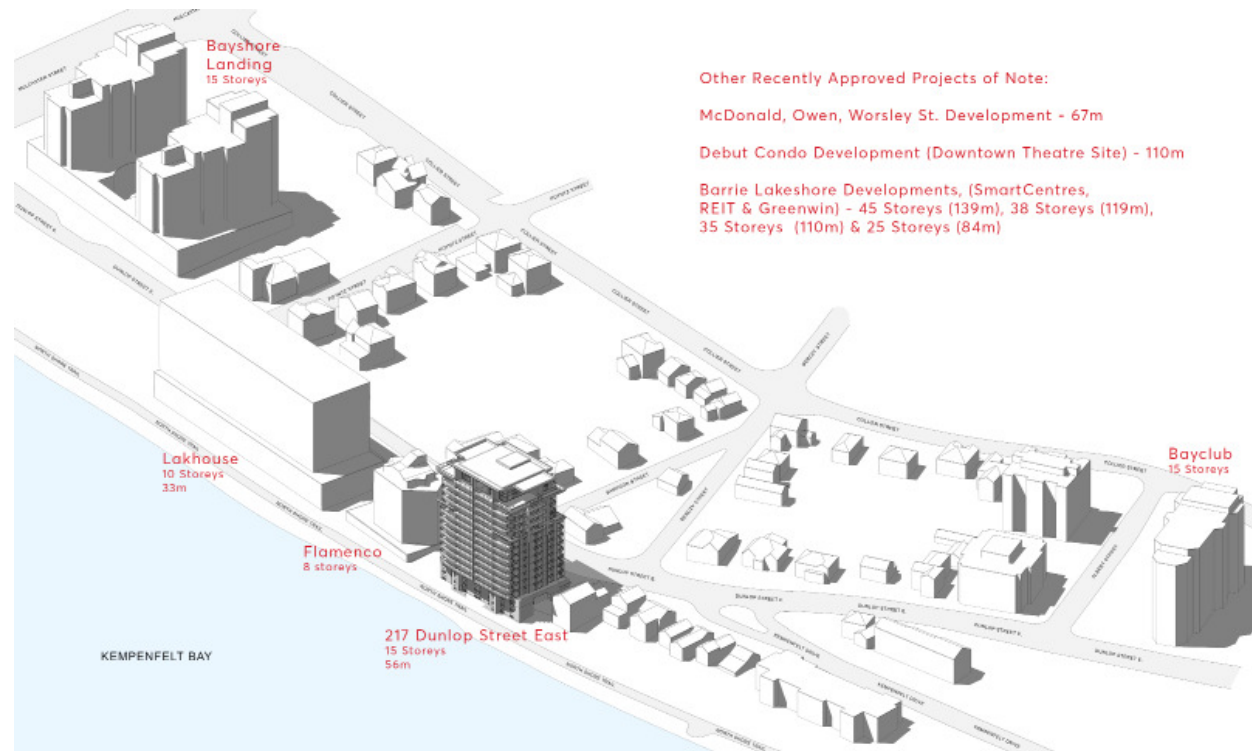


Figure 2
Block Plan Looking Northwest

POLICIES & GUIDELINES

Official Plan Policy 6.6.4 (b) i) Tall buildings will be sited to preserve and define any vistas terminating at Kempenfelt Bay, specifically the view corridors down Bayfield Street, Mulcaster Street, and Berczy Street. These vistas will only be considered when viewed from publicly accessible areas such as streets and parks. No policy in this Plan is intended to imply that views from private property will be protected.

Official Plan Policy 6.6.4 (b) ii) Buildings with frontages adjacent to view corridors will make use of setbacks, stepping provisions, and 45 degree angular planes to reduce the visual impact of building height on vistas.

Official Plan Policy 6.6.4 (f) i) All development proposals shall preserve major public views of the Algonquin ridge, geographical and building landmarks, and principal viewing areas such as the Nelson Street and Vancouver Street Lookouts.

Official Plan Policy 6.6.4 (f) ii) For tall buildings located within the Urban Growth Centre, adequate spacing should separate building towers in order to maximize views of the Algonquin ridge.

APPROACH & APPLICATION

The development meets the requirement for a building adjacent to Kempenfelt Bay to be designed to maintain physical accessibility to the waterfront for all City of Barrie residents along existing streets and trails.

Given its proximity to the lakeshore the proposed building will be highly visible and prominent on the city skyline. It is the privilege and intent of both the developer and design team to propose a building that will positively contribute to the look and feel of the City of Barrie while preserving its vistas.

The development has been sited to preserve and define any vistas terminating at Kempenfelt Bay. The building is sited such that sufficient separation distance will be provided between the proposed building and the existing tower at 215 Dunlop Street East directly to the West. Where tall buildings are proposed adjacent to existing tall buildings sufficient separation distance must be provided between towers in order to maintain privacy, access to light and views of the sky.

At the most narrow point between the proposed building and the property line of 215 Dunlop St. E., a minimum of 14.5m separation will be provided. Due to the podium tower configuration of the two buildings and the angular orientation of the existing tower, the distance between towers will be and feel

somewhat larger than 15m. This distance should provide a comfortable separation, similar to that which would be provided were the buildings located across the street from one another.

The strategic siting and massing approach will also serve to preserve and enhance views towards Kempenfelt Bay. The proposed improvements to the trail access at the bottom of Sampson Street will keep the Sampson Street view corridor clear and facilitate pedestrian movement towards the trail.

Rather than obstruct the view, the proposed building, together with the existing building at 215 Dunlop Street East, will frame the view down Sampson Street towards the South Shore Centre at the opposite side of the Bay. Views down Berczy Street will remain unchanged by this proposal.

Situated near the boundary of the Urban Growth Centre the building will provide an attractive anchor to the eastern edge of Barrie's Urban Growth Centre and an outstanding addition to Barrie's waterfront and City skyline. The provided at grade commercial opportunities will enhance the image of the Downtown as a multi-faceted place to live, work and play.

POLICIES & GUIDELINES

Excerpts from the City of Barrie Official plan Goals:

"ECONOMIC DEVELOPMENT FOR A PROSPEROUS FUTURE

To recognize the need for a strong downtown with links to the waterfront and continue to promote a diversified, balanced and socially responsible economy which supports existing businesses, encourages the development of new enterprise, and provides opportunities for new community economic development partnerships."

"WATERFRONT EXCELLENCE

To recognize the premier quality and exceptional scope of the City's Waterfront which promotes public ownership, community access, recreation, tourism, and downtown revitalization."

Urban Design Guidelines for Barrie's Intensification Areas (October, 2012):

Guideline 4.3.1 a) Buildings should be positioned to frame abutting streets, internal drive aisles, sidewalks, parking areas and amenity areas. On corner sites, buildings should be designed to frame both the primary and the secondary street.

Guideline 4.3.1 b) Where a building abuts a natural heritage feature or open space, the interface should create opportunities for easy public access and viewing from streets

and adjacent developments. It is therefore encouraged that where possible, new developments in this condition face and open towards the public open space.

Guideline 4.3.1 c) Main building entrances should be directly accessible from public sidewalks.

Guideline 4.3.1 d) The front streetwall of buildings should be built to the front property line, or applicable set-back line, to create a continuous streetwall.

Guideline 4.3.2 e) All new buildings must achieve a minimum height of 7.5 metres (2-storeys) to promote intensification and ensure the most efficient use of existing infrastructure.

Guideline 4.3.3 Minimum Ground Floor Height Floor heights for commercial uses are generally greater than a typically residential floor. Recognizing that ground floor retail will not be immediately viable throughout the Intensification Areas, a flexible ground floor height is recommended in order to accommodate future conversion to retail uses where appropriate.

Guideline 4.3.3 b) Ground levels should be free of any significant grade changes to promote barrier-free access and retail activity.

APPROACH & APPLICATION

The new development will foster a pedestrian friendly realm by featuring a street wall of continuous, but not monotonous, built form along Dunlop St. East. Architectural design features including a subtle tower and podium configuration, which will be utilized to reduce the visual and physical impact of height on pedestrian realm. The podium will be subtly protruded with a canopy at the front entrance to further present and emphasize a human scale at the street.

Particular consideration has been given to provide a pedestrian scale around the entrance and pedestrian connectivity to the North Shore Trail.

This project will enhance accessibility to the waterfront; proposed improvements to the design and condition of the informal pedestrian access located at the bottom of Sampson Street facilitate greater connection from the street and sidewalk to the trail. The existing informal access at this location is abruptly sloped and the trail is composed of loose dirt and gravel trail that makes access unsafe. The proposed access will be safer, more attractive and will hold up much better in the event of increased traffic.

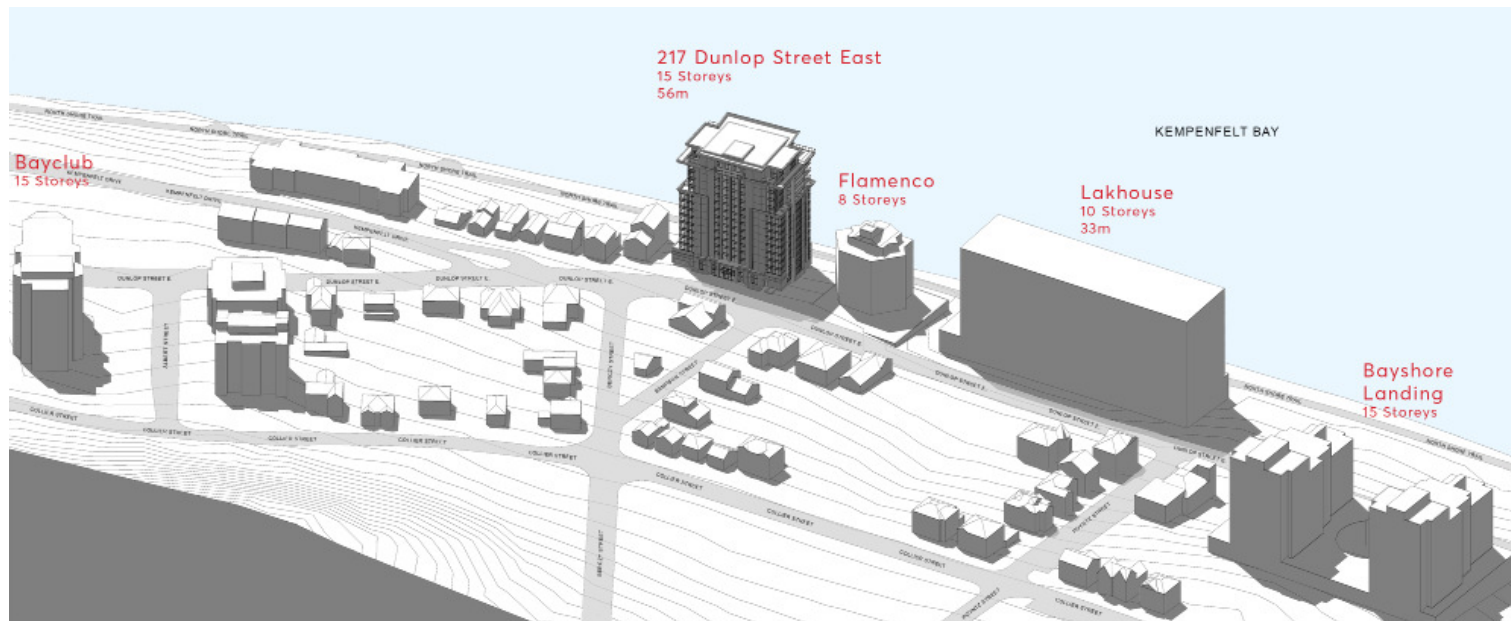


Figure 3
Block Plan Looking
Southeast



Figure 4
Existing views down Sampson & Berczy Streets



Figure 5
Existing view down Berczy Street

04 SITE CIRCULATION

POLICIES & GUIDELINES

City of Barrie Official Plan:

Official Plan Policy 6.5.2.2 v) Building entrances should be well-defined and accessible to pedestrians and the handicapped persons with disabilities.

Official Plan Policy 6.5.2.2 vi) Pedestrian links should be designed to promote the safety of the user and be fully accessible between the commercial and residential properties.

Official Plan Policy 6.5.2.3 (h) The City will promote pedestrian orientation through the development of open space systems that incorporate bicycle and barrier-free walking paths linking the downtown to the waterfront.

Urban Design Guidelines for Barrie's Intensification Areas:

Guideline 4.3.1 c) Main building entrances should be directly accessible from public sidewalks.

Guideline 4.3.3 b) Ground levels should be free of any significant grade changes to promote barrier-free access and retail activity.

APPROACH & APPLICATION

The proposed design meets the intent and criteria for Street Level Activity as follows:

- It fosters a pedestrian friendly public realm by featuring a street wall of continuous built form frontage adjacent to any principal streets (Dunlop Street East). The street wall includes active at-grade uses with building facades incorporating windows, doors, glazing, and other such architectural treatments.
- It incorporates building articulations, massing and materials that respect pedestrian scale and create interest.
- The main entrance is directly accessible from public sidewalks.
- The primary building facades are positioned and oriented along the property line in order to achieve a uniform street edge.

The proposed development promotes the use of varied transportation options such as walking, cycling and local transit routes with connections to GO Transit in the Downtown. In addition to the convenience of the location for pedestrian and transit access to the Downtown, the design will include bicycle storage and connections to the North Shore Trail.

Primary pedestrian entrances for the residential lobby and the commercial space will be prominently and accessibly located along the building frontage at Dunlop Street East.

A pedestrian connection is also proposed to provide improved access to the North Shore Trail from Dunlop Street East.

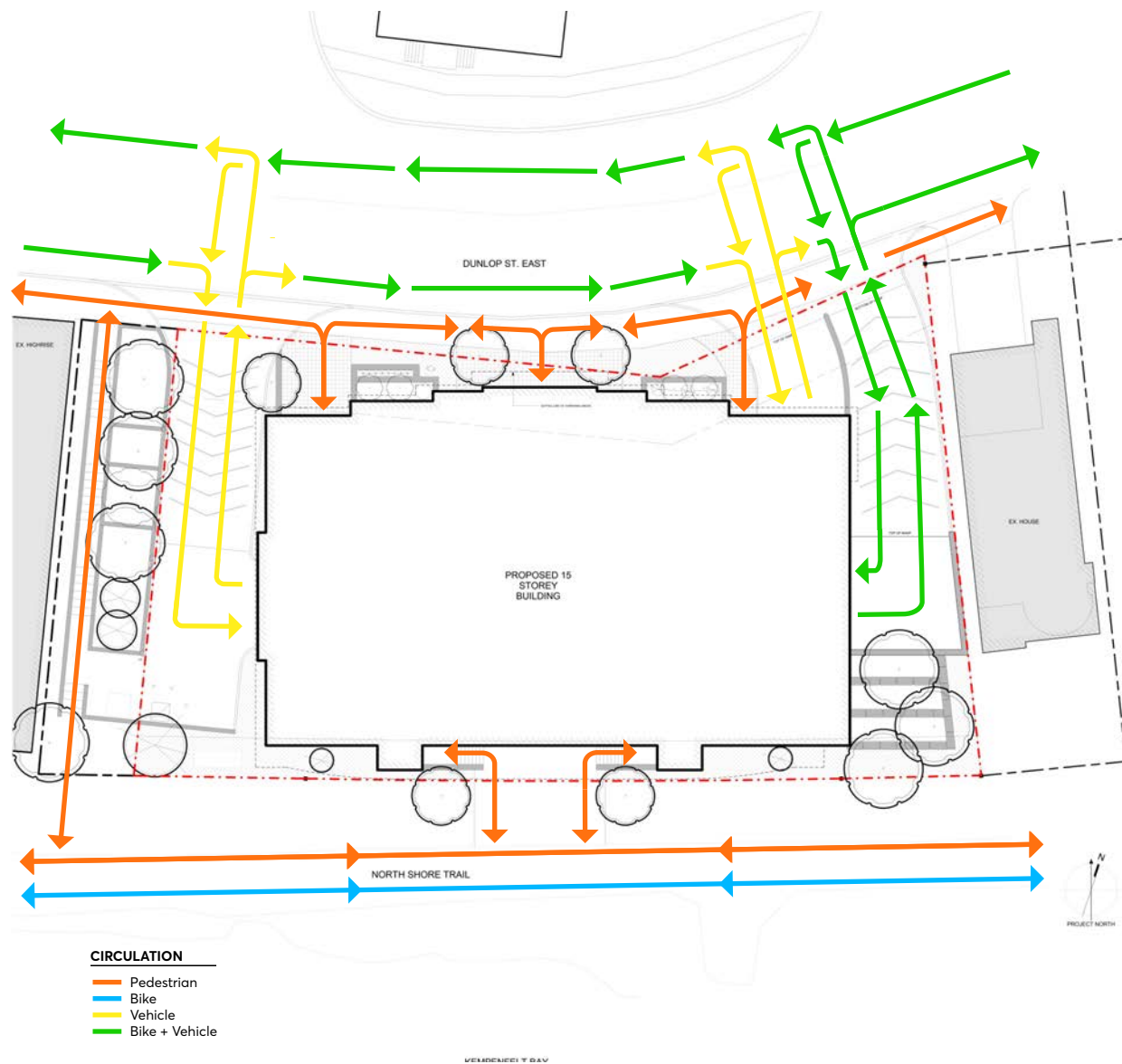


Figure 6
Site Circulation Diagram

05 ARCHITECTURAL DESIGN

POLICIES & GUIDELINES

Official Plan Policy 6.5.2.2 a) i) Buildings should be designed to complement and contribute to a desirable community character in terms of massing and conceptual design.

Official Plan Policy 6.5.2.2 a) iii) Large exposed blank walls should be avoided. All visible sides of a building should be finished and treated similarly to the front. Where exposed walls exist, screening through landscaping should be encouraged.

Official Plan Policy 6.6.3 a) Innovative architectural design will be encouraged to reduce the visual and physical impact of height on the adjacent pedestrian realm, including design features such as tower and podium configurations or other design measures.

Official Plan Policy 6.6.3 b) Tower design featuring floor plate sizes that result in slimmer buildings, along with other innovative design solutions which assist in reducing the visual and physical impact of tall buildings, will be preferred over slab style building design where important views need to be protected.

Official Plan Policy 6.6.3 e) Tall buildings directly contribute to the look and feel of the City's architectural styles. Accordingly, tall buildings will be held to a high standard

of design excellence by using quality urban design, architectural treatments, and building materials in order to promote a visually interesting skyline.

Guideline 4.3.10 b) All exterior building finishes should demonstrate a high quality of workmanship, durability and ease of maintenance.

Guideline 4.3.8 b) Despite the use of various architectural styles within the City, the design and material quality should be consistent and building materials and finishes should be complementary.

Guideline 4.3.10 j) New construction materials should be locally sourced to reduce the impacts of transportation. Canadian products are generally designed to withstand our climate.

APPROACH & APPLICATION

The development takes into consideration a number of urban design studies and recommendations regarding compatibility with surrounding uses, micro-climate effects, pedestrian safety, and issues of human scale and views.

The proposed design makes use of an articulated façade to comfortably relate to the human scale of pedestrian traffic along the sidewalk. This is achieved through use of a multi-tiered podium which will step up from the east and west towards the grand pedestrian entrance situated at the front centre of the building. The podium will be subtly protruded at the front entrance to further present and emphasize a human scale at the street.

To reduce the visual and physical impact of a tall building at this location, the tower design will feature a slimmer building mass than would characterize most other buildings containing units with floor areas as generous as being proposed. An innovative design solution will be implemented which will all but eliminate all extraneous horizontal circulation areas (corridors); multiple elevator cores will exit directly into the foyer of each residential unit and the multiple exit stairs required by the building code will be stacked together by utilization of a "scissor stair" configuration. Thus, the area of shared corridors which

APPROACH & APPLICATION cont'd

would commonly be required for buildings of this typology—to connect the vertical circulation to each unit, on each floor—has been removed, and along with it the additional building width these corridors would cause.

The design carefully navigates the relationship between views of the bay and skyline with life on the street. The façade along Dunlop Street East aims to combine the traditional architecture and aesthetics of historic downtown Barrie—which are informed by the City's past operation as a trade and manufacturing hub and characterized by brick and stone masonry and consideration for multiple modes of transportation at various scales—with a more contemporary condo design approach focusing on glazing and views from and toward the building.

The material sensibility of the proposed building references the marriage of past and present. A high standard of design excellence will also be evident by the high quality of architectural treatments and building materials utilized for construction of the building.

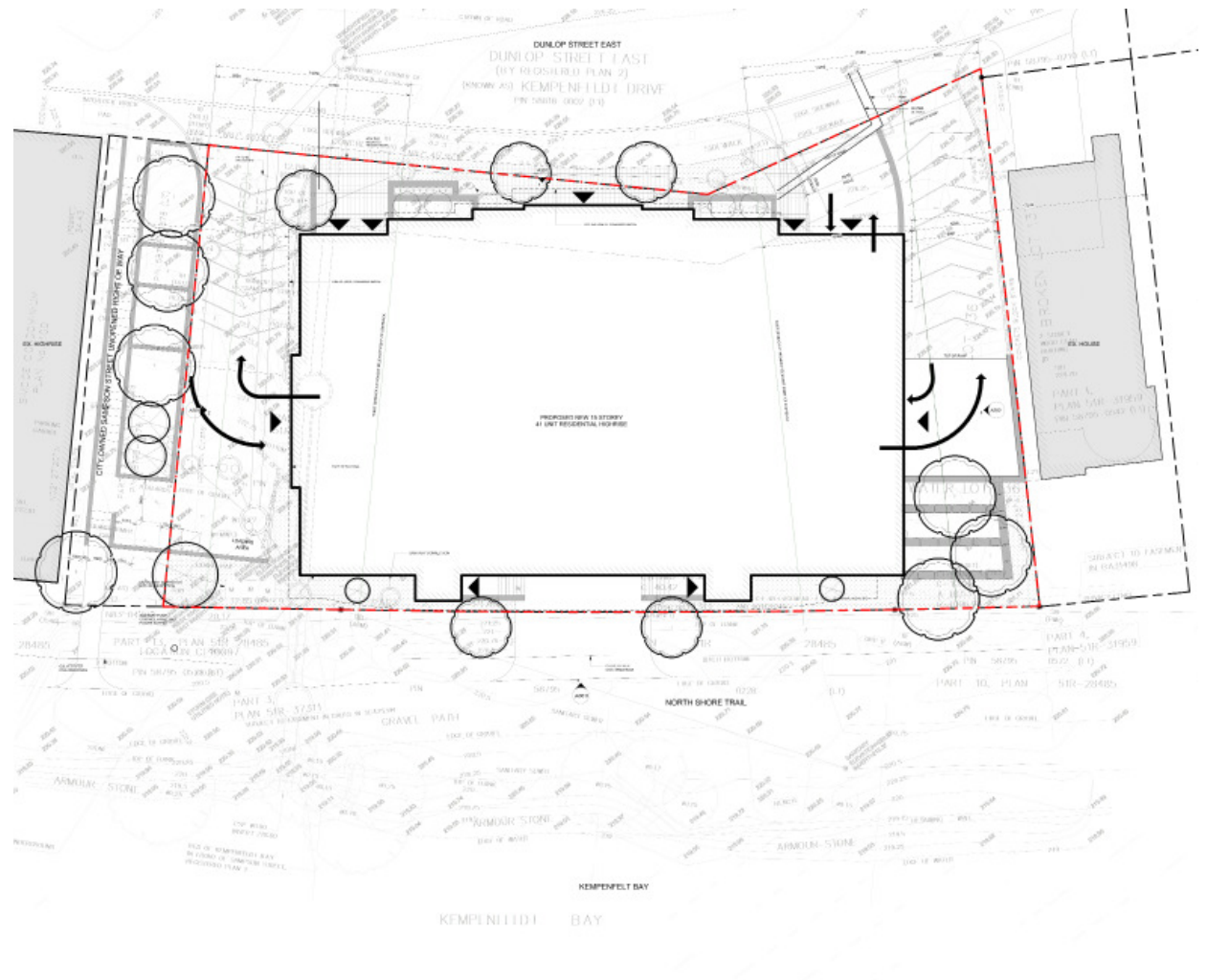


Figure 7
Site Plan

Figure 8
North Elevation

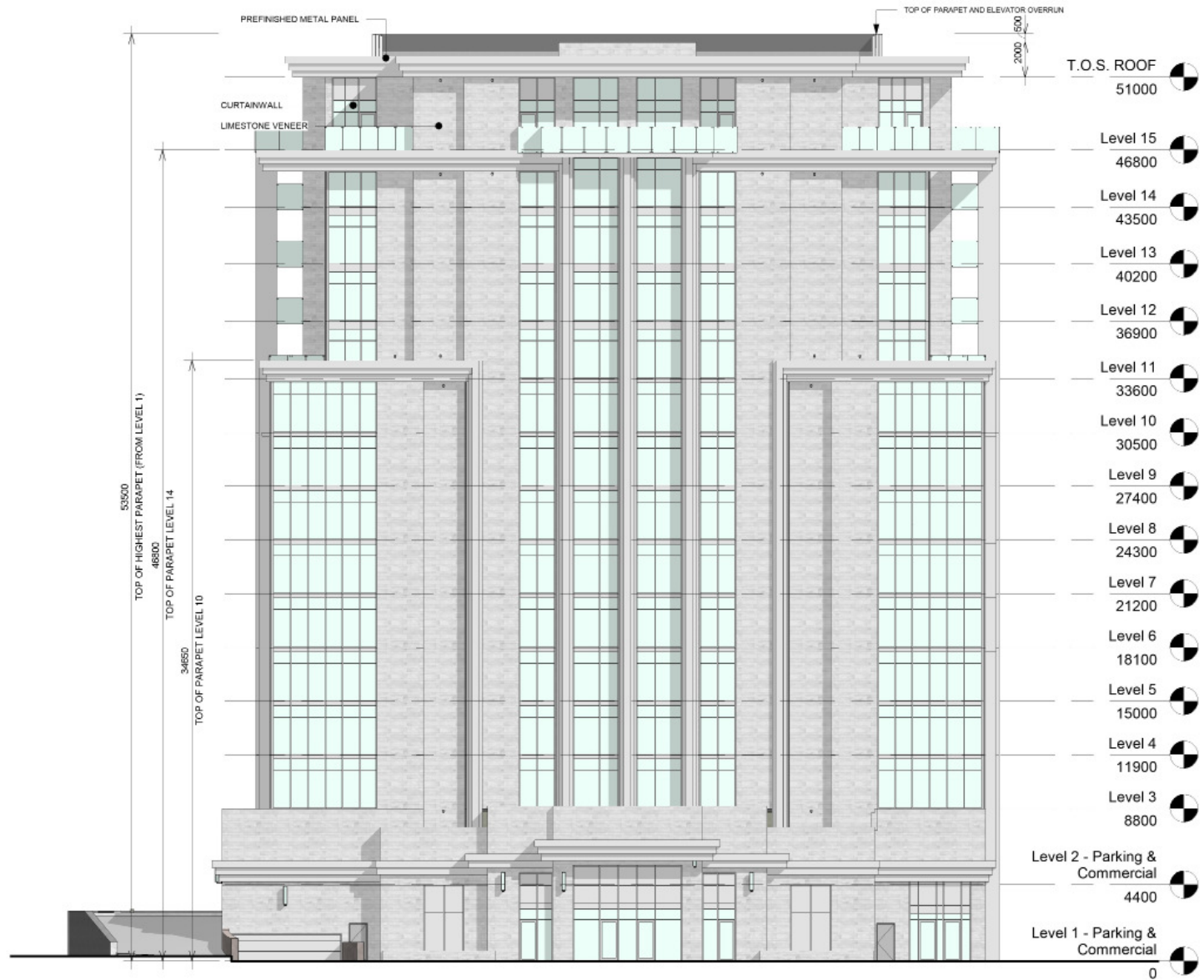


Figure 9
South Elevation

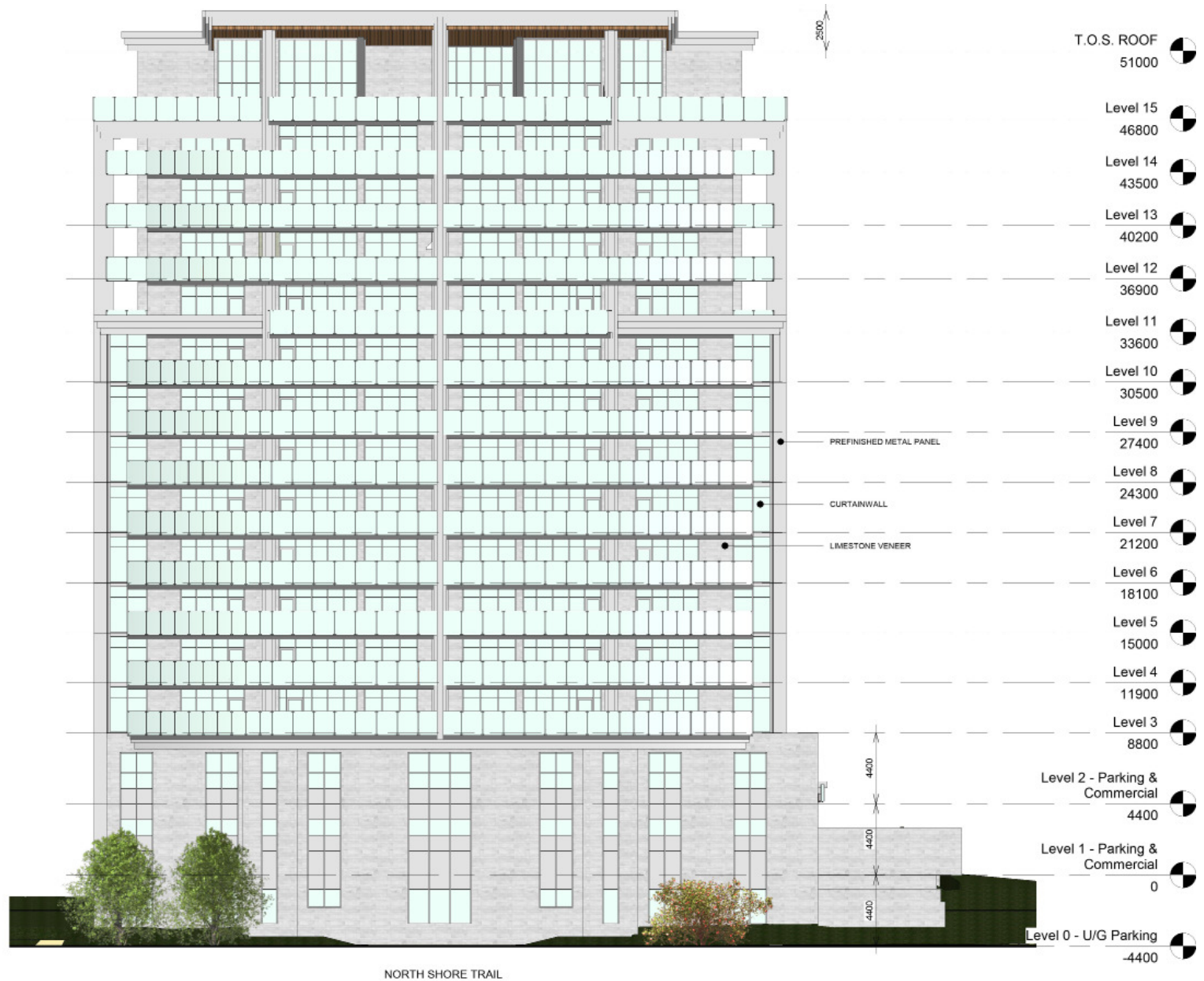


Figure 10
East Elevation

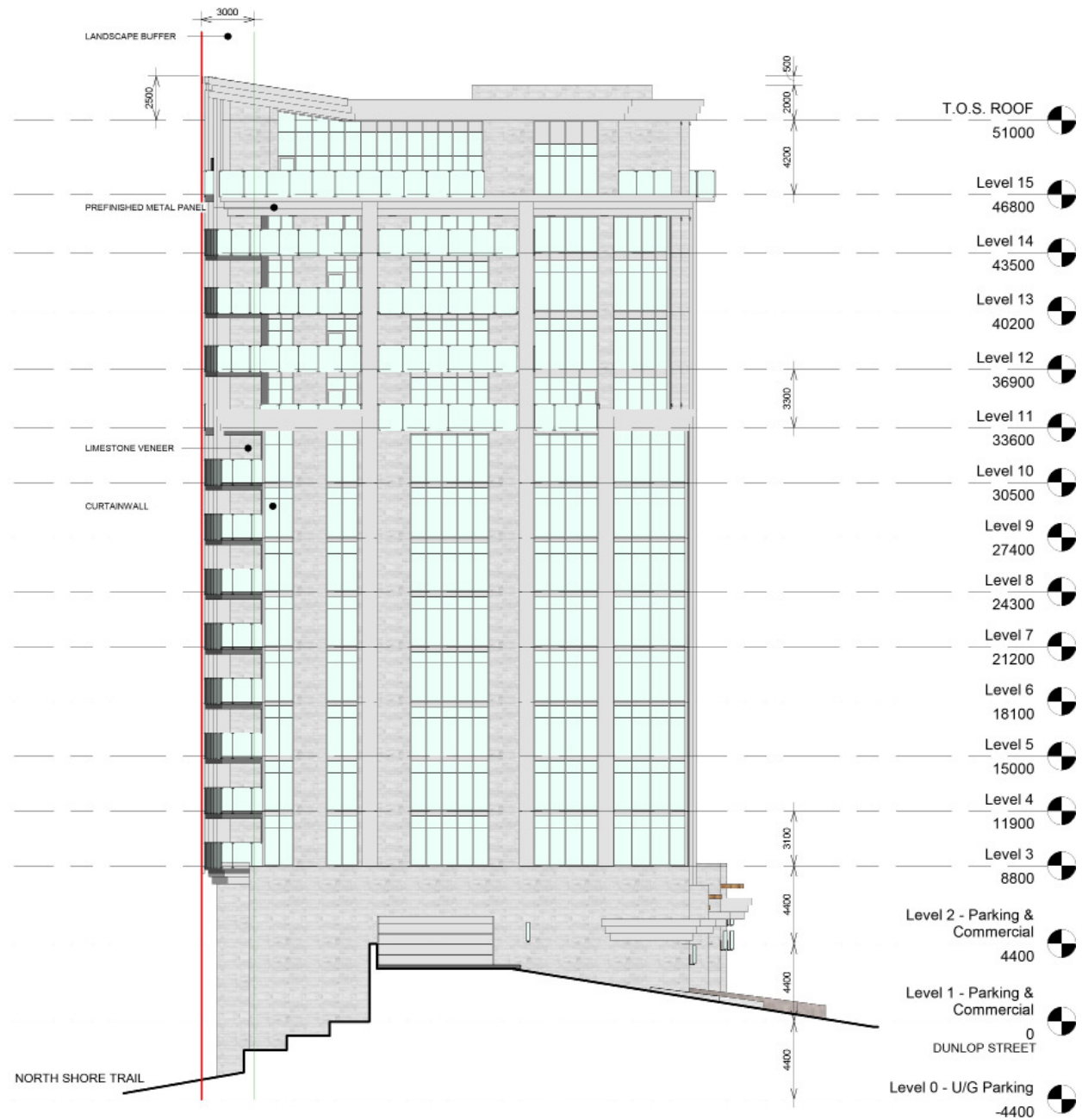
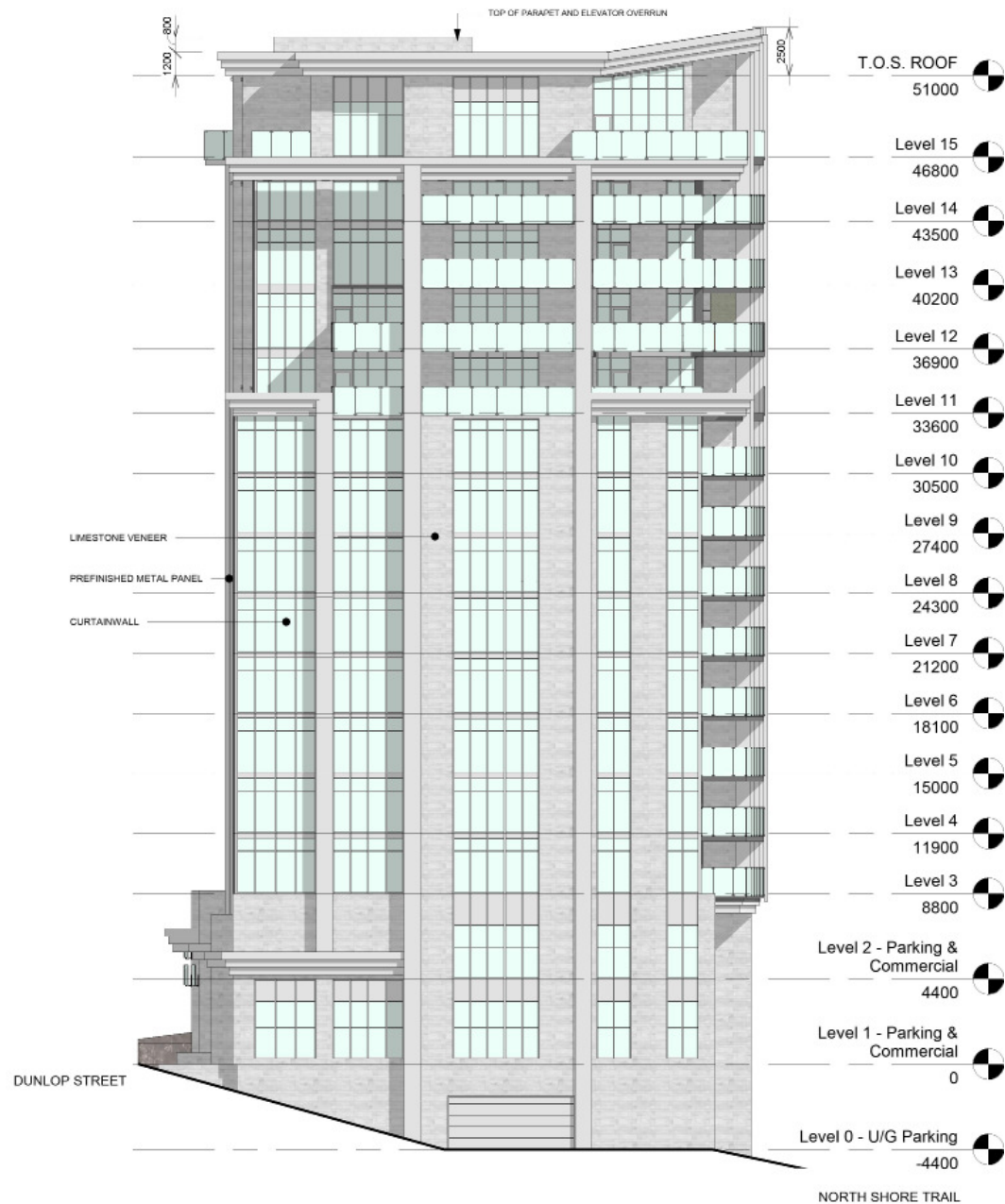


Figure 11
West Elevation



06 LIGHTING & LANDSCAPE DESIGN

POLICIES & GUIDELINES

City of Barrie Official Plan:

Official Plan Policy 6.5.2.2 a) iii) Large exposed blank walls should be avoided. All visible sides of a building should be finished and treated similarly to the front. Where exposed walls exist, screening through landscaping should be encouraged.

Official Plan Policy 6.5.2.2 (c) i) Minimum planting strips in accordance with the Urban Design Manual shall be provided along the street frontage and should contain planting materials and street furniture (lighting, seating and bus shelters) consistent with any themes established by the municipality.

Official Plan Policy 6.5.2.2 (c) iv) Landscaping should seek to utilize native vegetation, and water conservation practices wherever feasible.

Urban Design Guidelines for Barrie's Intensification Areas:

Guideline 3.1.3 b) Features within semi-private open spaces (e.g. paving, seating, public art, etc.) should be constructed of materials equal in quality and appearance with those of the main buildings.

Guideline 3.1.3 f) Paving materials should be high quality, easily replaceable and low

maintenance.

Guideline 3.2.1 a) As new development occurs, all streets within the Intensification Areas should include enhanced landscape design through tree planting and landscaping in the public and private right-of-way.

Guideline 3.2.4 a) Street furnishings should be developed within an overall concept and should provide a consistent and unified streetscape appearance that is appropriate for the area context.

Guideline 5.2.3 b) Pedestrian amenities within the boulevard, including street furniture, signage, light standards, and transit shelters, should reflect the existing heritage character within the downtown.

APPROACH & APPLICATION

Landscaping and Lighting has been proposed in accordance with the Urban Design Manual.

Planting areas are included planting along the street frontage and building perimeter, as well as in planter boxes along the proposed redevelopment of the Sampson Street access to the North Shore Trail and as screening elements at the south façade.

The proposed landscape design will utilize native and drought-tolerant species. This landscape design will ensure for energy efficient and water conservation features.

The photometrics study and drawing use lighting illumination levels and light dispersion patterns of selected light fixtures for the proposed design to calculate lighting levels within the property boundaries and slightly beyond.

Conclusion: It is the opinion of Quasar Engineering that the current lighting design and photometrics modelling meet the intent of the City of Barrie Design Guidelines including applicable lighting design for safety around the entire building perimeter, zero to minimal light pollution beyond the property boundaries so as not to adversely impact neighbouring properties, and dark sky compliant fixtures. As such the proposed development is feasible to proceed.

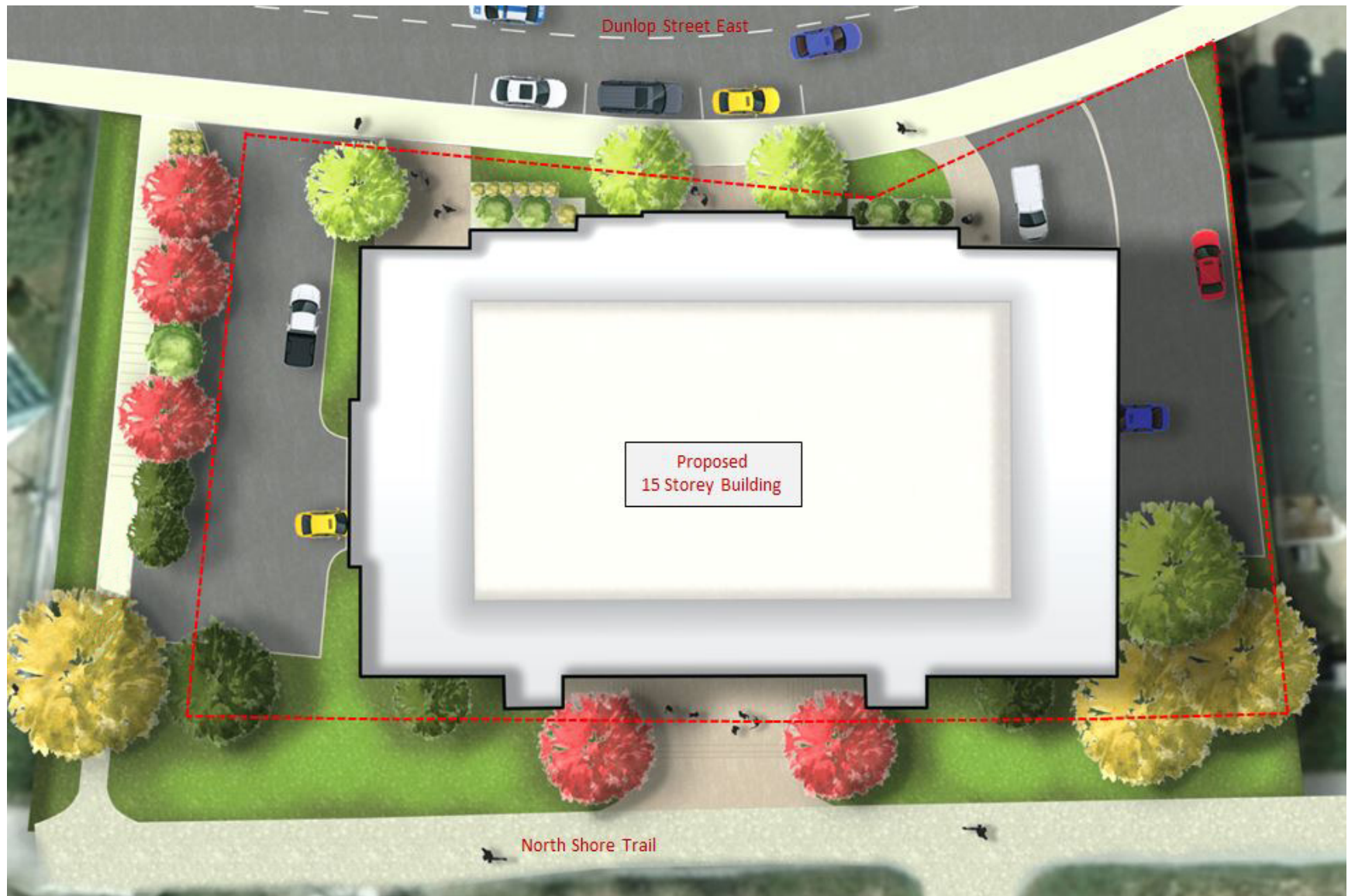


Figure 12
Coloured Landscape Plan

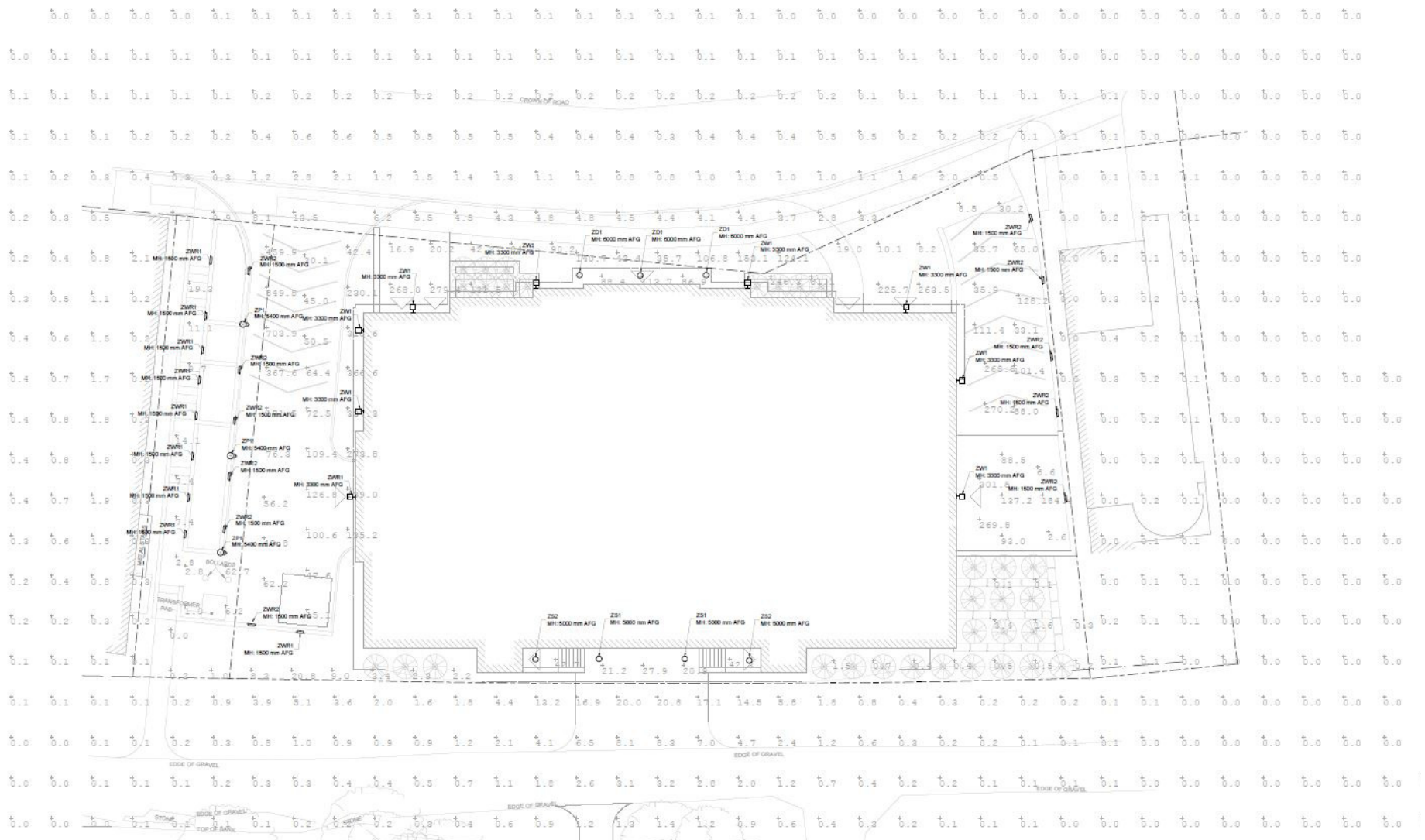


Figure 13
Photometric Site Lighting Plan

POLICIES & GUIDELINES

Official Plan Policy 6.5.2.2 b) i) Linking parking areas, driveways and access points should be encouraged to reduce the number of turns onto and off the major road. These mutual entrances will be encouraged and clearly identified.

Official Plan Policy 6.5.2.2 b) ii) Adequate disability parking spaces will be provided where required.

Official Plan Policy 6.5.2.2 b) iv) Major parking, loading and delivery areas, as well as garbage enclosures should be confined to the rear of the buildings.

APPROACH & APPLICATION

Parking for the building will be underground and within the street level podium. Where the street level podium will also house parking, the parking component will be relegated to the rear of the building rather than being presented as a prominent feature along the street.

Site servicing, loading areas, and building utilities are located internally and to the rear of building.

Due to the limited depth of the site there is insufficient space to provide 180 degree turning with an appropriately sized aisle and the required number of parking stalls within the allowable building footprint. As a result of these spatial limitations the design includes 2 separate drive entrances. A combined drive entrance is proposed at the front of the building to access the parking at level 1 and level 2. Underground parking can be accessed via a drive aisle on the west. The percentage of street frontage occupied by the entrances will be consistent with other frontages of similar length in the neighbourhood and will not seem out of character for the area.

The topography of the site is also conducive to this approach; access to the underground parking can be achieved through the west side of the building which ramps down closely following the natural slope of the site. To

mitigate the need for a ramp up to the level 2 parking on the east, each parking level will be sloped such that the drive entrance at the front of the building is recessed below grade and the ramp from grade up to the level 2 parking access is significantly reduced.

Grading of the site will generally follow the existing topography which consists of a significant slope from the street front down to the rear of the site which abutting Barrie's North Shore Trail. Vehicular access ramps to the parking structures will closely relate in location and slope to the existing topography and barrier free access for pedestrians is proposed from the street and sidewalk with minimal to moderate sloping provided.

Appropriate considerations will be made to ensure site services are located away from public and street view wherever possible: All utilities will be located underground and enter directly into the building at a mechanical hub room on the underground parking level.

The underground level will house two (2) proposed garbage and recycling rooms, keeping both the visibility and odour of any waste away from resident areas. Waste will be moved discretely from these rooms through the underground parking and out of the parking entrance/exit for pick-up by a private waste removals company and so will remain

APPROACH & APPLICATION cont'd

out of view of the public.

A traffic Study has been completed for the proposal:

- The 41 unit condominium is expected to generate about 26 vehicle trips in the morning peak hour and 30 trips in the afternoon peak hour.
- The additional traffic generated by the development does not warrant any road improvements on Dunlop Street.
- In order to provide optimal traffic movement on and off site, access is provided by two separate driveways from Dunlop Street located at the east and west sides of the property.
- It is expected traffic will be able to turn into and out of the site at a good level of service in the future condition. There will be some delay for traffic turning out of the site during peak hours, but the delay will not be unreasonable.

Conclusion:

It is the opinion of Skelton Brumwell & Associates that the proposed project will not adversely impact Dunlop Street and the service level of adjacent streets surrounding the site and as such, the proposed development is feasible to proceed.

A new electrical transformer is proposed, carefully situated to be accessible by vehicle but not prominently visible alongside the loading area at the entrance to the underground parking, the transformer will be both set back from the sidewalk and front of the building as well as below the elevation of the sidewalk at the street.

The site can be readily serviced with municipal water, sanitary and storm sewers and all utilities.

Site drainage and stormwater management design will ensure no impact to the North Shore Trail or Lake Simcoe.

The existing storm sewer from Sandford Street will be re-routed around the building and re-connected upstream of the North Shore Trail with no disturbance to the Trail or the Kempenfelt Bay shoreline.

Conclusion:

It is the opinion of Skelton Brumwell & Associates that there are sufficient existing services readily available to the site and as such the proposed development is feasible to proceed.

Figure 14
Parking Level 0

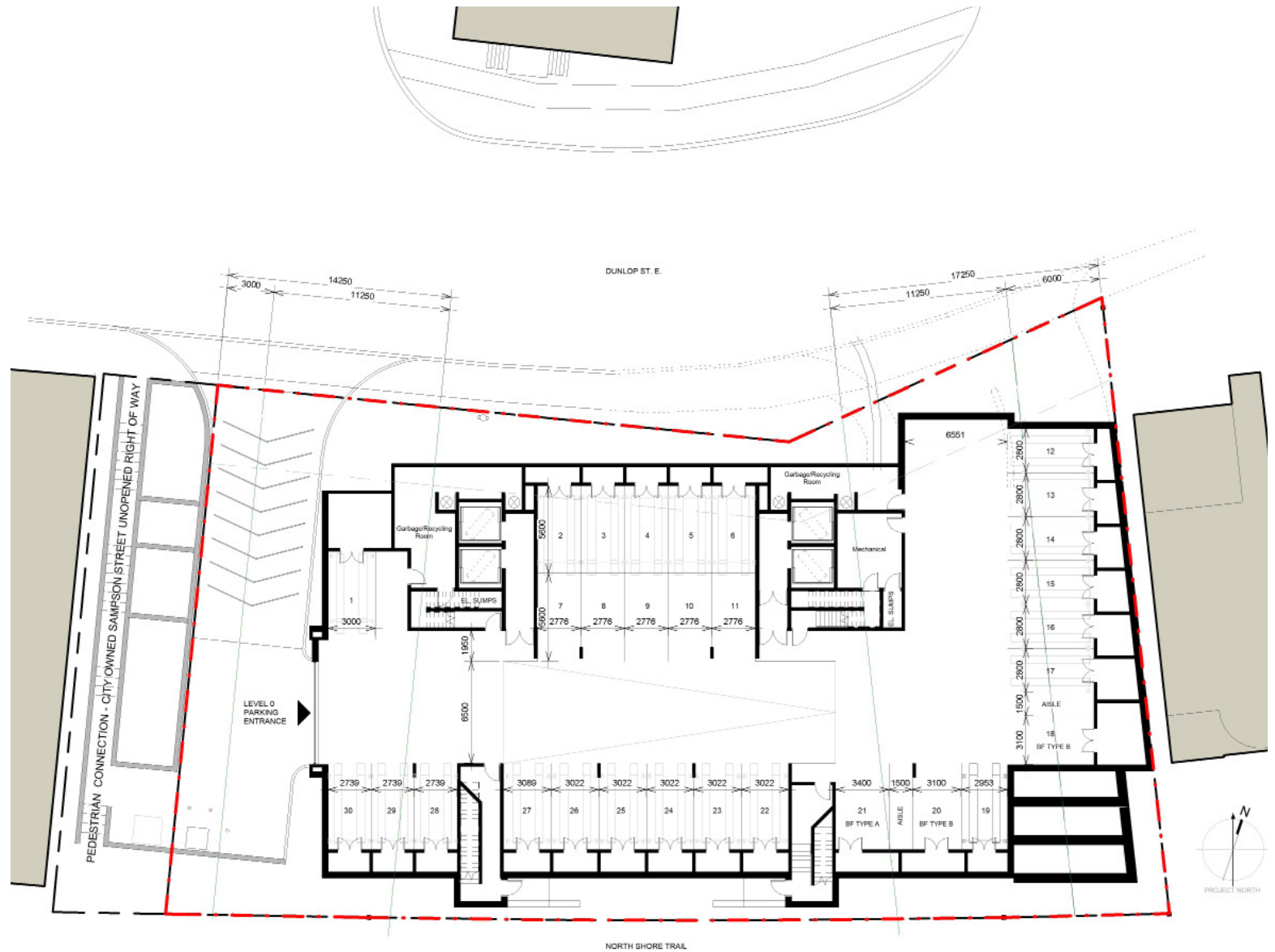


Figure 15
Parking Level 1

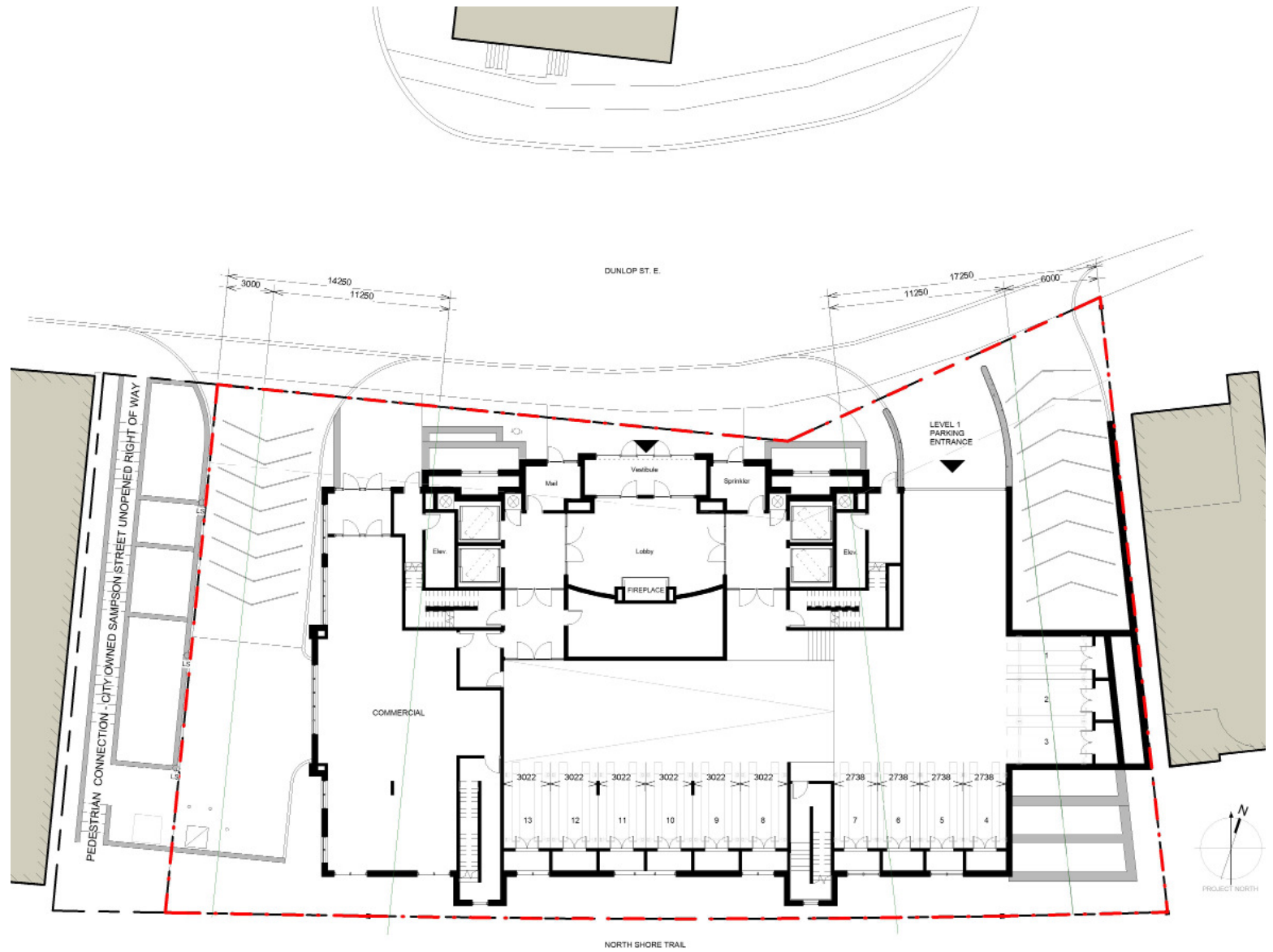
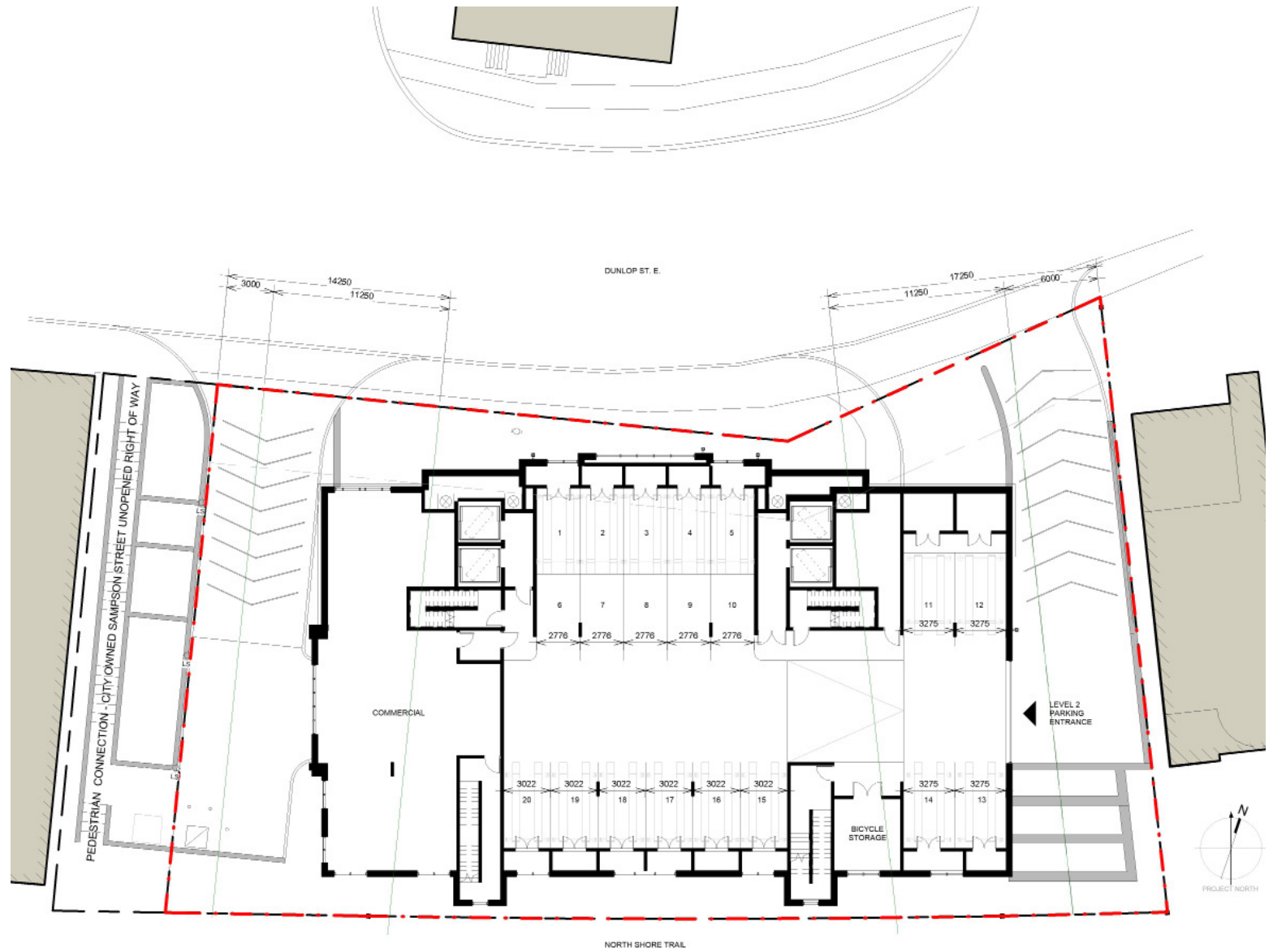


Figure 16
Parking Level 2



POLICIES & GUIDELINES

Official Plan Policy 6.5.2.2 (g) i) Energy efficiency shall be encouraged through community, site, and building design measures that use energy efficient building materials, energy conserving

landscaping, building orientation that uses shade and sunlight to advantage, panels for solar energy, appropriate lighting, "green" roofs, and other methods.

Official Plan Policy 6.5.2.2 (g) iv) Energy efficiency is promoted through the development of a compact urban form that encourages the use of transit, cycling, and walking, a mix of housing and employment uses to shorten commuting trips, and focusing major developments on transit routes.

APPROACH & APPLICATION

The development is being designed to a LEED standard with sustainable design principles applied to all building components.

Features include:

- a construction waste diversion program that will minimize landfill impact locally sourced materials and products minimizing transportation impacts products with high recycled content and zero off gassing emissions for maximum air quality
- high quality mechanical systems that exceed ASHRAE standards, high end air filtration systems for each individual unit and heat reclaim strategies
- maximized natural ventilation and natural lighting for overall energy savings
- electrical systems that include occupancy sensors and monitors to minimize consumption, use of LED fixtures and energy efficient appliances

The development promotes energy efficiency through a compact built form and is situated in a location that encourages the use of public transit, cycling and walking.

The property is a brownfield site (former Cotty's Cleaners) which has been approved for development by the Ministry of the Environment:

- The Province has issued a Record of Site Condition (RSC) for the brownfield redevelopment of this site from its past use as a dry cleaner to its future residential/commercial use.
- The proposed development meets Provincial requirements for brownfield redevelopment and a Certificate of Property Use (CPU) has been issued for the project.
- There are no significant natural heritage features or functions (including Species at Risk) associated with the property.
- There are no hydrogeologic barriers to the proposed redevelopment plan

Conclusion:

It is the opinion of Azimuth Environmental that given the requirements of the RSC and the CPU that currently exist for the site, the proposed development is feasible to proceed.

06 MICROCLIMATE & SHADOW STUDY

POLICIES & GUIDELINES

Official Plan Policy 6.6.4 (c) i) Tall buildings will be designed to minimize adverse microclimatic impacts in order to foster a comfortable pedestrian realm at the street level. Microclimatic impacts may include the effects of wind channelling, the urban heat island effect, adverse shadowing, and the interruption of sunlight.

Official Plan Policy 6.6.4 i) Tall buildings will be designed to best mitigate the impact of shadows on public parks and open spaces, private amenity areas, and surrounding streets, throughout the day.

APPROACH & APPLICATION

The project has been designed to minimize adverse microclimatic impacts in order to foster a comfortable pedestrian realm at the street level.

Gradient Wind Engineers and Scientists completed a pedestrian level wind (PLW) study to satisfy submission requirements for the proposed development. The study mandate was to investigate pedestrian wind comfort within and surrounding the subject site and to identify any areas where wind conditions may interfere with certain pedestrian activities:

Conclusion:

Based on computer simulations, meteorological data analysis, and experience with similar developments in Ontario, the wind study determined that:

- All areas at grade level within and surrounding the subject site will be suitable for their intended uses throughout the year. Specifically, wind conditions over surrounding sidewalks, building access points, and driveways are considered acceptable for the intended pedestrian uses throughout the year.
- Within the context of typical weather patterns, which exclude anomalous localized storm events such as tornadoes and downbursts, no pedestrian areas surrounding the subject site at grade level were found to experience conditions that could be considered uncomfortable or dangerous.

Green – Sitting

A wind speed no greater than 16 km/h is considered acceptable for sedentary activities including sitting

Yellow – Standing

A wind speed greater than 16 km/h but no greater than 22 km/h is considered acceptable for sedentary activities such as standing or leisurely strolling

Blue – Walking

A wind speed greater than 22 km/h but no greater than 30 km/h is considered acceptable for walking or more vigorous activities

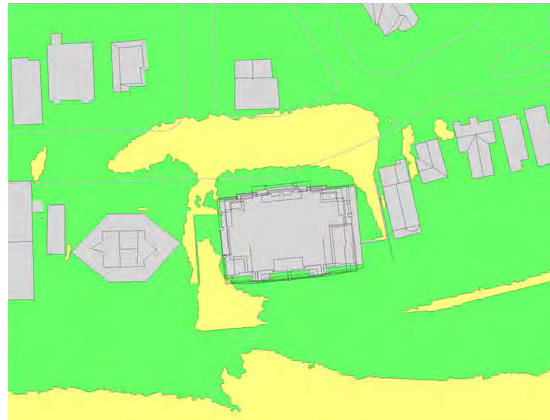


Figure 17
Spring - Pedestrian Wind Comfort Conditions at Grade



Figure 19
Autumn - Pedestrian Wind Comfort Conditions at Grade

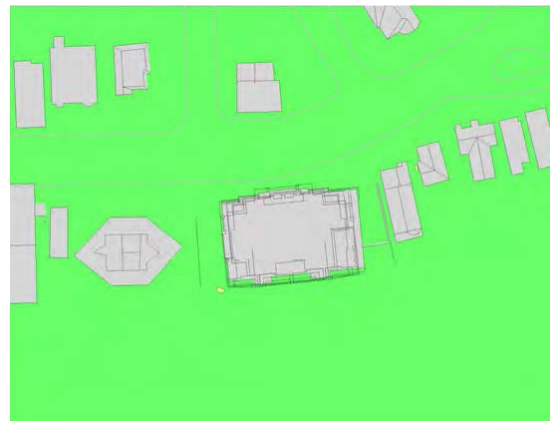


Figure 18
Summer - Pedestrian Wind Comfort Conditions at Grade

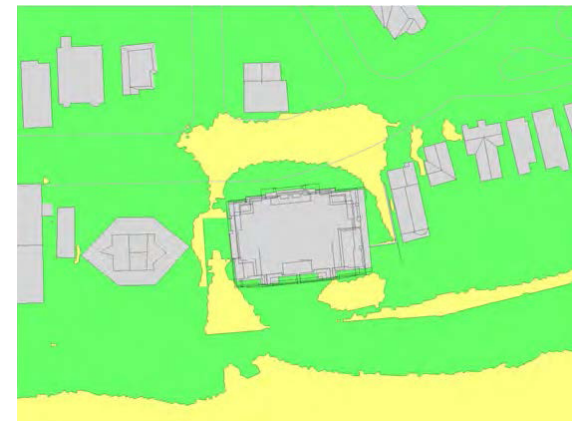


Figure 20
Winter - Pedestrian Wind Comfort Conditions at Grade

APPROACH & APPLICATION cont'd

Notes:

1. Radial distances indicate percentage of time of wind events.
2. Wind speeds are mean hourly in km/h, measured at 10m above the ground.

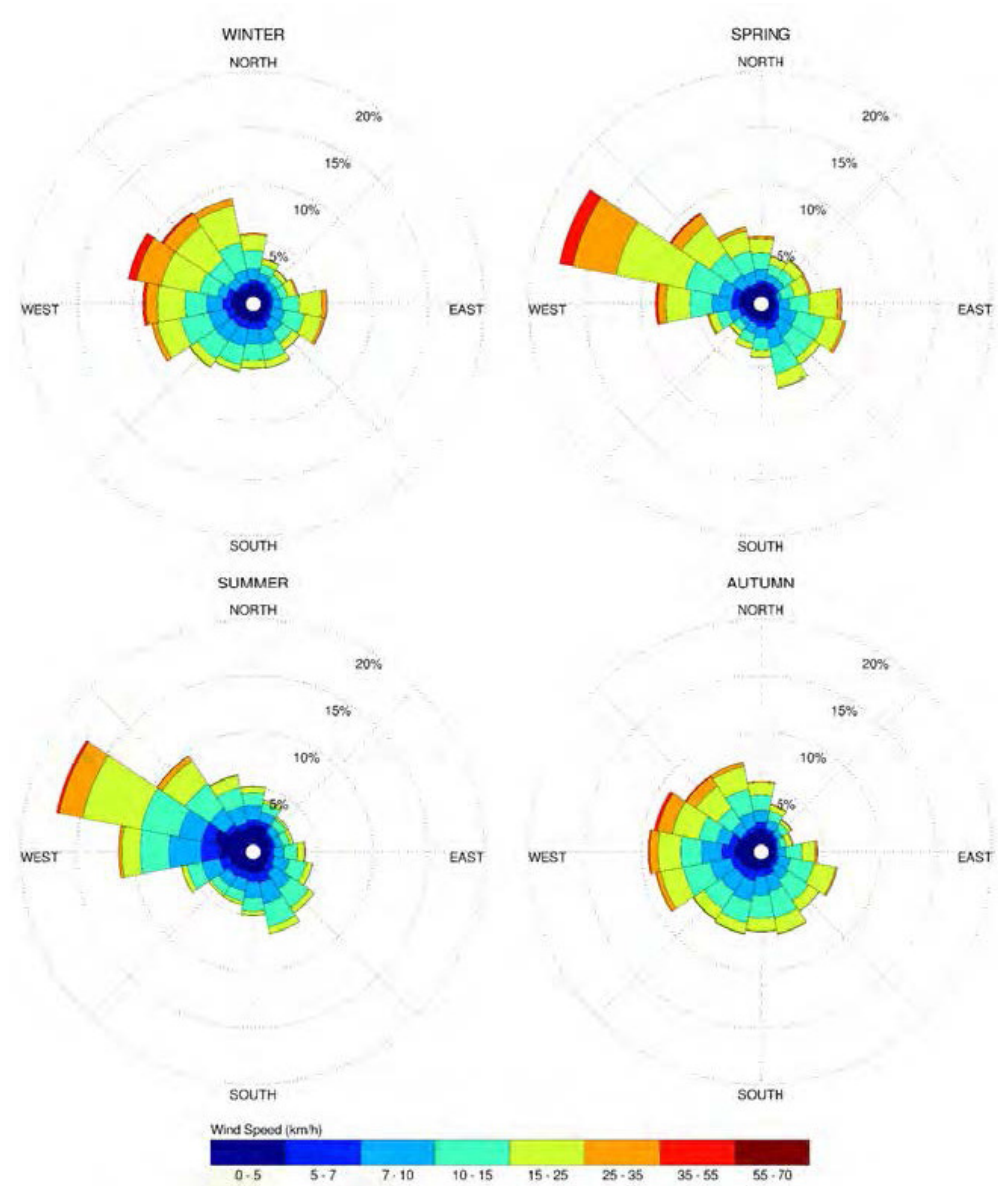


Figure 21
Seasonal Distribution of
Wind - Lake Simcoe Regional
Airport, Oro Station, Ontario

APPROACH & APPLICATION cont'd

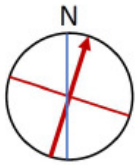
A shadow impact study (fig. 22) has been completed to ensure the design and project siting mitigates the impact of shadows on public parks and open spaces and private properties throughout the day.

The building is situated such that any shadows cast are mitigated by two positively influencing factors:

- The majority of shadows fall into the street rather than onto neighbouring properties as the building is situated across from two intersections—Berczy Street and Dunlop Street East and Sampson Street and Dunlop Street East.
- The building is located at the base of a substantial hill, thus properties to the north are elevated and the length of shadow cast from the building towards the north is effectively shortened.

Conclusion:

It is the opinion of Salter Pilon Architecture that the proposed project will have no impact to the North Shore Trail and minimal impact to adjacent public spaces. there will be shadowing to the north, east and west, however all adjacent private residences will have a minimum of 6 hours of solar access during the solstices, and as such the proposed development is feasible to proceed accordingly.



Summer
Solstice



Figure 22
Shadow/Shade
Impact Study

09 CONCLUSION

The site and building design conform with Barrie's Official Plan Policies related to urban design and requirements for tall buildings. It is our belief that the proposal has been developed according to the requirements, guidelines and the vision of the City of Barrie for the intensification of Urban Growth Centre.

The development will compliment and enhance the existing neighbourhood and has been designed to mitigate potential impacts on surrounding uses. Proposed uses of land and existing municipal infrastructure are environmentally sound, efficient and cost effective.

The building form and its proposed uses facilitate a smooth transition at the pedestrian realm where the eastern border of the Urban Growth Area intersects with the residential area beyond. Facing the street, articulations along the façade assist in maintaining a comfortable pedestrian scale and attractive urban streetscape. The proposal is consistent with other existing buildings in the area and proposals approved for nearby sites. The proposal embodies the desire for controlled intensification and growth which is characterized by the City's urban design policies and guidelines.

It is our opinion that the proposal is appropriate and in general conformance with the design intent of the City of Barrie guidelines. The proposal represents the implementation of good urban design practices and will contribute to an enhanced, attractive, sustainable and safe built fabric of the City of Barrie.

Should you have any questions or wish to discuss the brief in further detail, please do not hesitate to contact us.



Gerry Pilon

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