



945 & 1015 Bank Street

Urban Design Review Panel Report – Revision 1
Site Plan Control
January 9, 2025



Prepared for City of Ottawa

Prepared by Fotenn Planning + Design
420 O'Connor Street
Ottawa, ON K2P 1W4

January 2025

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1.0

Response to UDRP Recommendations

Fotenn Planning + Design (“Fotenn”) has been retained by the City of Ottawa to prepare this Urban Design Review Panel (UDRP) Report in support of a Site Plan Control application to facilitate the development of new North Side Stands on the property municipally known as 945 and 1015 Bank Street, and otherwise known as Lansdowne (the “subject property”) in the City of Ottawa.

1.1 Urban Design Review Panel (UDRP)

The proposed development at 945 & 1015 Bank Street was subject to a review by the Urban Design Review Panel prior to the formal submission of a Site Plan Control application to facilitate the development of new north side stadium stands. The project team provided an Urban Design Brief to the UDRP Coordinator on November 27, 2024 and a UDRP meeting date of December 6, 2024 was confirmed.

The project team attended the UDRP meeting on December 6, 2024 and received written recommendations from the Panel via the UDRP Coordinator on December 18, 2024. A response to the recommendations is provided in the attached table, along with the previously submitted Urban Design Brief (Appendix 1) and the UDRP Recommendations (Appendix 2).

We trust that this Urban Design Review Panel Report satisfies the requirements for the Site Plan Control application for the subject property.

Sincerely,



Patricia Warren, MCIP RPP
Planner



Timothy Beed, MCIP RPP
Associate

945 & 1015 Bank Street - Lansdowne 2.0 North Side Stands

Response to UDRP Comments

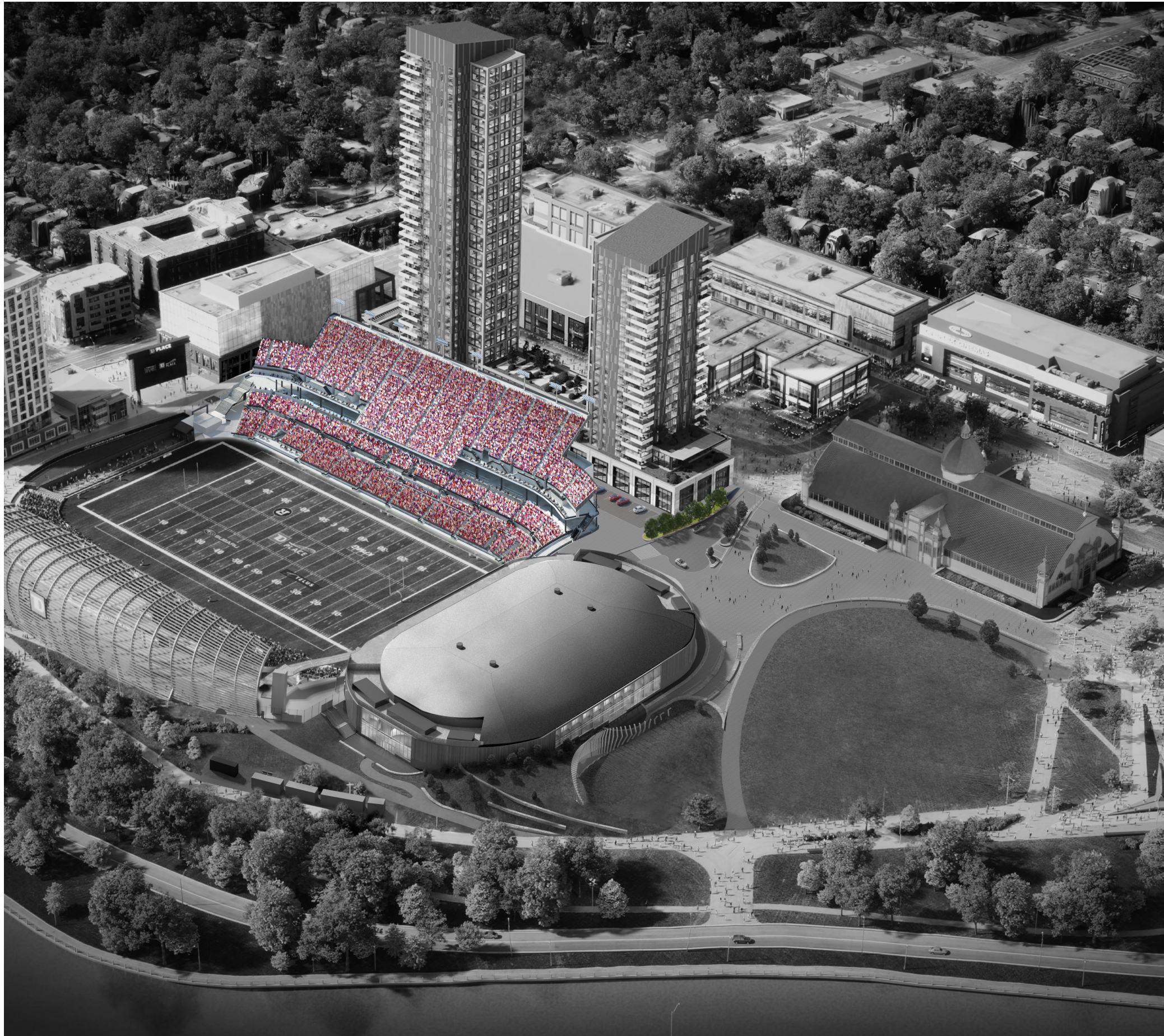
UDRP Date: December 6, 2024

No.	Comment	Response
1.0	Key Recommendations	
1.1	The Panel appreciates the importance of this project for the City. The Panel also appreciated the comprehensive presentation and the consideration for integration of the North Stand into the overall Lansdowne redevelopment.	
1.2	The Panel encourages the applicant to think about the “family of components” in the design. A potential screen and other façade elements should establish a dialogue between the North, the South Stand and the new Event Centre.	Noted. The current design and appearance will be revisited by BBB to incorporate elements and nods to the look of the existing South Stands and the proposed Event Centre.
1.3	The Panel highlights the importance of the relationship with the future residential development including the views from the residential units and encourages the applicant to plan ahead to ensure a cohesive integration.	Noted. The future development design is still undergoing, however BBB has considered the future access points to the new development to ensure a cohesive approach.
1.4	The Panel emphasizes the need to strengthen the public realm, improve sustainability measures, and refine architectural elements to create a vibrant, cohesive, and engaging experience for all users.	The landscape has been revisited to be more pedestrian focused, by adding walkways and amenities and screening the future on grade parking with vegetation. Along Frank Clair Lane, a streetscape provides shaded resting areas.
1.5	The Panel suggests that the North Stand is a pavilion in the round, and its design should limit the back of house elements fronting the public realm.	The back of house elements are fundamental for the functioning of the building, however these uses have been relegated to the underground level and the field facing spaces (for direct field access) under the tiers, with a separate access from the public.
1.6	The Panel appreciates the initial consideration of security for the stair access and encourages further refinement in these areas.	Noted, new anti-cross pollination measures have been considered for enclosed stairs.
1.7	The Panel emphasizes the critical importance of views of the stadium and how the architecture can contribute to the urban realm. Functional aspects, material choices, and the animation of public spaces should all relate cohesively to one another.	Noted.

No.	Comment	Response
2.0	Site Design and Public Realm	
2.1	The Panel recommends that public spaces and back-of-house areas should be designed to avoid creating inactive zones by exploring opportunities for animation through thoughtful integration of exterior and interior program functions.	The current design makes full use of all spaces, avoiding inactive zones around the building. Both West and East entrances provide public engagement and connection to the surrounding areas. The North facade faces a future development, therefore that area is out of BBB's scope.
2.2	The Panel recognizes opportunities to animate the North promenade, especially on game days, with retail integration, pop-ups, and public art installations to energize this space. o The 18m-wide back-of-house area could become more than a service zone by incorporating public-facing features.	Mode of utilization of spaces when building is open to the public is responsibility of the operations team. The concourses are left open to multiple solutions and implementation strategies.
2.3	The Panel suggests preparing flow diagrams to better illustrate pedestrian and vehicular circulation, ensuring seamless movement throughout the site.	Noted.
2.4	The Panel highlights the significance of the Lansdowne redevelopment project as a critical area for public use, consideration should be given to a cohesive approach to both pedestrian and vehicular experiences.	Noted. Materiality and public use are similar to the existing condition (Exhibition Way and F. Clair Lane).
2.5	The Panel suggests enhancing pedestrian lighting and incorporating design elements like illuminated planters and streetscape features which will contribute to safety and vibrancy during both day and night. The panel also recommending the up lighting of the structural elements to highlight them.	To create the ground-level laneway designed with Crime Prevention Through Environmental Design (CPTED) principles, the facade is being designed with several key features. Downlights are proposed at the columns to illuminate the walkways, enhancing visibility and safety. Additionally, CFL banners are being incorporated to add both visual interest and lighting. To further enhance the openness and transparency of the space, glazing is included in the facade of the OSEG office, which helps alleviate its appearance and contributes to a more welcoming and secure environment. Up lighting is discouraged to avoid night sky pollution. Planters will be lit with LED rope lights. The new development is aiming for LEED standing.

No.	Comment	Response
3.0	Sustainability	
3.1	The Panel recommends a more thorough wind study, including the microclimate conditions on various locations in the stands. The recommendations outlined in the wind study report and mitigative measures should be implemented in the second iteration of the plan.	Noted.
3.2	The Panel encourages the exploration of more effective sustainability options. It is essential to incorporate greenery and shaded areas. The Panel acknowledges that concrete and metal are not very eco-friendly materials however options should be explored to offset those material choices. Furthermore, bird-safe design options should be considered in the early design phase.	An etched film at glazing which comply with bird friendly design is being included as a feature. Future bird safety measures will be part of the operations team scope. Materials will be reviewed to comply with LEED standards.
4.0	Built Form and Architecture	
4.1	The Panel recommends the harmonious integration of the North Stand with mixed-use development and a strong connection to the cultural heritage of Lansdowne.	Noted, the current design echoes the curvature of the existing South Stands footprint and future Event Centre rounded facade. The projecting columns echo similar elements present in the Aberdeen Pavilion. Ongoing considerations for materials and colours are being discussed.
4.2	The Panel recommends exploring textured materials, public art, vibrant colors, and a design inspired by Lansdowne's history and vitality, as the North façade has significant potential to express elegance and energy. Specifically thinking differently of the lower part of the building and making it distinct from the upper part.	Noted, we are currently exploring textured materials and uses for the North Facade that could incorporate banners and similar items.
4.3	The Panel suggests incorporating a thinner edge for the parapet to achieve the aesthetic of a floating tray, as the current cladding design appears similar to the seating.	The solid parapet is needed as an additional safety measure.
4.4	The Panel recommends enhancing the architectural dialogue between the North and South Stands and the Event Centre, ensuring a unified design language that reflects the dynamic energy of game-day experiences. <ul style="list-style-type: none"> o The design should consider interim conditions for the North Stands, with strategies for temporary uses and activation, even for short-term periods. o Explore the potential for a retail / activated use at the north-west corner of the stands to animate the adjacent public space. 	Mode of utilization of spaces when building is open to the public is responsibility of the operations team. The facades are conceived as a flexible open surface for multiple applications and design features to be implemented on game day.

Appendix 1
Urban Design Brief



Lansdowne 2.0

NEW NORTH SIDE STANDS
URBAN DESIGN BRIEF

DECEMBER 6, 2024

BRISBIN
BROOK
BEYNON

ARCHITECTS

FOTENN

CSW

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- H) Heritage Impact Statement

Project Team

Architect — Brisbin Brook Beynon Architects
Planner — Fotenn
Landscape Architect — CSW
Heritage Consultant — ERA
Site Services — WSP




1. INTRODUCTION

We are pleased to submit this Urban Design Report for the Lansdowne 2.0 — North Side Stands project, in accordance with Ottawa's Urban Design Brief Terms of Reference. This submission has been prepared to demonstrate the context behind the development and the site, current design direction of the North Side Stands, and alignment with the City's design policies and Official Plan.

This Urban Design Brief substantiate our current design approach and preliminary considerations, providing background information and visuals of the proposed development. This report aims to assist in the review process, ensuring that the design seamlessly integrates with its urban context and enhances the existing environment.

We believe that the materials provided illustrate our commitment to creating a vibrant, multi-use, and community-focused stadium that will serve as a significant asset to the Lansdowne and Ottawa.

Thank you for your consideration of our submission. We look forward to your feedback and are available to discuss any aspects of the report in further detail.



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BRISBIN BROOK BEYNON ARCHITECTS



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2. PROJECT DESCRIPTION

PROJECT OBJECTIVE

The New North Side Stands (NNS) at Lansdowne Park's TD Place will replace the current, functionally obsolete stadium's north-side stands. The NNS will reduce the seating capacity from 13,993 to 11,200 while introducing new club seating, enhanced accessibility viewing areas, and standing-room space for eventgoers. Access to the NNS will be improved through Gates 2, 3, and 4, which will lead into a reimagined main concourse. This concourse will feature various food and beverage options, retail kiosks, bars, facility operation areas, and men, women, and gender-inclusive restrooms. The NNS will also provide sensory rooms and prayer rooms, creating an environment that is not only inclusive for eventgoers but also fosters a welcoming space for all visitors. Furthermore, the new design will open up accessible job opportunities, particularly in retail, hospitality, and event operations, ensuring that employment opportunities are available to individuals of all abilities. The new upper concourse will offer similar amenities for patrons and staff. A new bridge will link the NNS to the neighbouring new North Side Stands and the South Side Stands to provide convenient access between the two facilities and additional sightlines to the field. A new parking level will be constructed at the existing service level and seamlessly connect to the adjacent parking structure via an access ramp, ensuring convenient vehicular flow. Designed with future expansion in mind, the parking facility will be adaptable for integration into the future residential developments adjacent to the New North Side Stands (NNS).

PROJECT DESIGN INTENT

The new North Stands replace an obsolete and over imposing structure that currently fragments the landscape by filling up the space between Exhibition Way and the field, interrupting the pedestrian realm between the two. The new stands aim at bridging the areas and improving the streetscape for local residents by introducing landscaping opportunities, plus walkable and cyclable paths. They also provide a new vibrant experience for event goers at all stages, starting from the fully accessible welcome areas and continuing well into the concourses with improved services and design sensibility. The event experience is further enhanced by presenting a new variety in seating options for all users, premium and general admission alike. Interior spaces also provide ample and necessary office space, with a flexible design that allows for future internal expansion, and new team areas for the local soccer team, with consideration for accessibility and gender inclusiveness. The spaces and services take into consideration flexibility for types of events that are not limited to sports alone. The design overall follows LEED principles and reduces the footprint and impact of the current structure, while creating a physical and visual connection to the South stands and Event Centre.

The new look presents a smaller and streamlined mass, with multiple point of access and open concourses that create a welcoming feeling, while offering raised views of the surrounding points of interest such as the Aberdeen Pavilion. The facade is linear, clean and easy to read, allowing users to quickly find their way around the stands. The simplicity of the design aims at creating a structure that is easily integrated into the surroundings, further demonstrated by the way it subtly mirrors the Event Centre rounded facade at the East end entrance and the curved footprint of the South Stands.

PRELIMINARY PROJECT STATISTICS

Lansdowne 2.0 New North Side Stands		
GROSS FLOOR AREA	AREA (SF)	AREA (SM)
NORTH SIDE STANDS	193,960	18,020
OSEG OFFICES	21,960 (+ 4,920 Mezzanine)	2,040 (+ 460 Mezzanine)
UNDERGROUND PARKING	46,040	4,275
TOTAL	266,880	24,795
SEATING	CAPACITY	TOTAL SEATS
GENERAL	-	10,363
ACCESSIBLE SEATING & COMPANION	-	238 & 22
SUITES (6 TOTAL)	18/SUITE	108
LOGES (12 TOTAL)	4/SUITE	48
TOTAL CAPACITY	-	11,221
PUBLIC WASHROOM	# OF FIXTURES	
WOMEN	56	
MEN	73	
GENDER NEUTRAL	29	
FAMILY	6	
UNIVERSAL	1	
TOTAL	165	
FOOD & BEVERAGE		
BELLY-UP CONCESSIONS	3	
JUST WALK OUT & COOKING	4	
PORTABLES	8	
CLUB	1	
CLUB KITCHEN	1	
STORAGE COMMISSARY	880 SF (82 SM)	

ADDITIONAL ACCESSIBILITY FEATURES

- All Entries
- All Publicly Accessible F&B Areas
- Washrooms in all Areas
- Guest Services
- Stroller Parking
- Elevators
- Adaptable Seating provided (5% of total capacity)



PRELIMINARY EXTERIOR CONCEPT RENDERING — VIEW OF NORTH WEST



PRELIMINARY EXTERIOR CONCEPT RENDERING — VIEW OF NORTH EAST



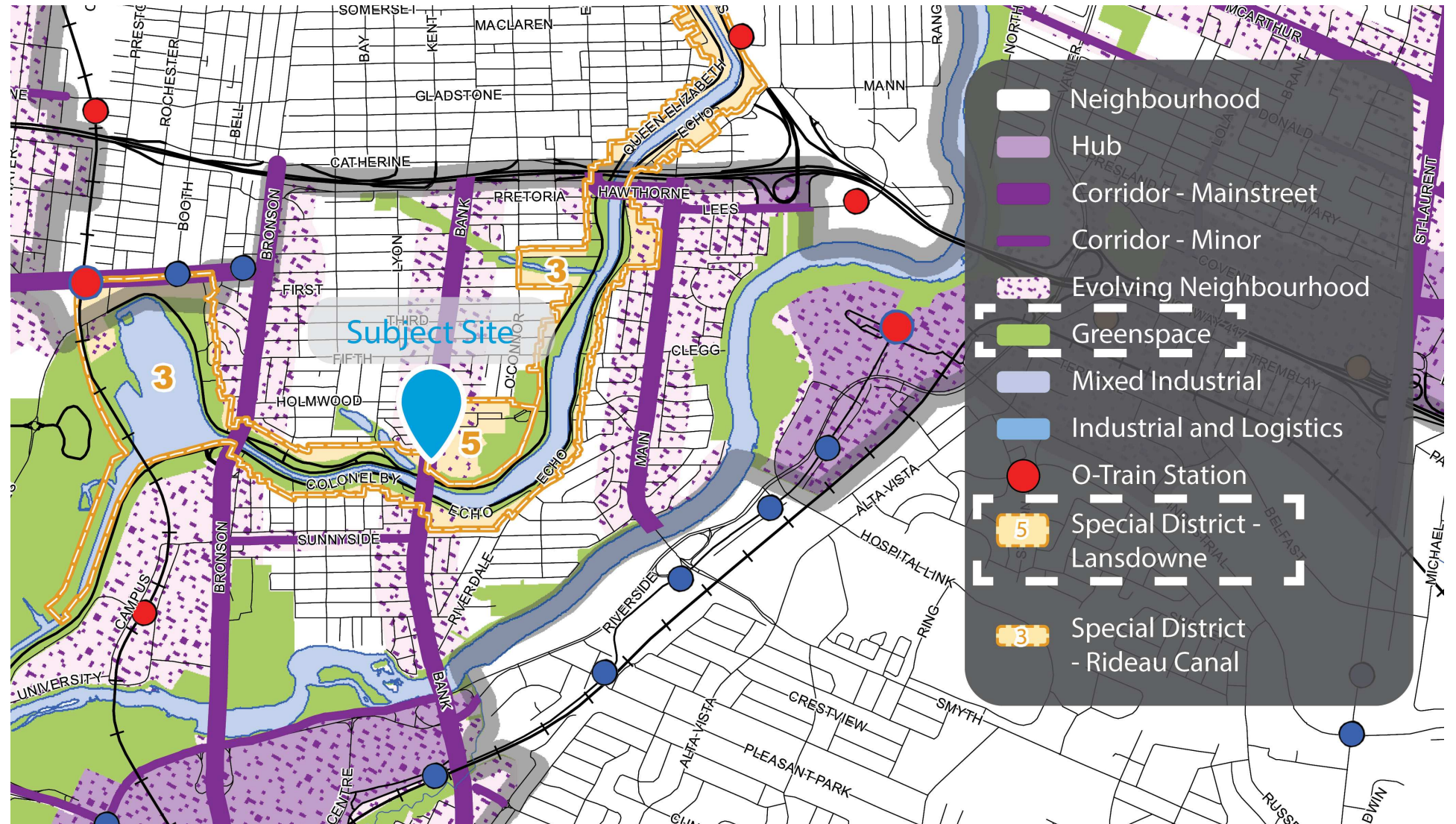
PRELIMINARY EXTERIOR CONCEPT RENDERING — VIEW OF SOUTH EAST

3. DESIGN DIRECTIVE

PLANNING FRAMEWORK POLICY CONTEXT

The subject property is located within the Inner Urban Transect of the City of Ottawa and is designated as the Lansdowne Special District in the City's Official Plan. Special Districts are parts of the City that are important internationally, nationally and to the metropolitan area. They define the image of the City through their cultural heritage value, architecture, public realm, their roles as tourism attractions and/or as major economic generators. Lansdowne is considered to be a City-defining special district, as it is a demonstration of the successful integration of a large professional sports facility within an established neighbourhood. The Special District policies provide general direction for maximum permitted building heights and more specific policies for the Lansdowne Park area, which considers heritage, transportation, the type of development, and where development is located. The proposed development conforms to the policies of the Official Plan as it relates to the Lansdowne Special District and the Inner Urban Transect. The proposed development will contribute to supporting the role of Lansdowne as a destination for amateur and professional sports, festival, concerts, etc. by creating modern, safe and efficiently maintained facilities. The proposed development will also support existing and potential new cultural assets.

The proposed development responds well to the City's policy direction as it relates to urban design. The subject site is located within a Tier 2 Design Priority Area, which is an area of national and regional importance to defining Ottawa's image. The proposed development recognizes the importance of cultural heritage assets on and around the site, and has been designed to enhance existing views of the Aberdeen Pavilion as outlined in the Heritage Easement with the Ontario Heritage Trust. Public realm and pedestrian-scale are important elements of the proposed development, particularly in areas where there is a direct interface between the north side stands and the urban plaza in front of the event centre entrance.



Schedule B2 – Inner Urban Transect of the Official Plan

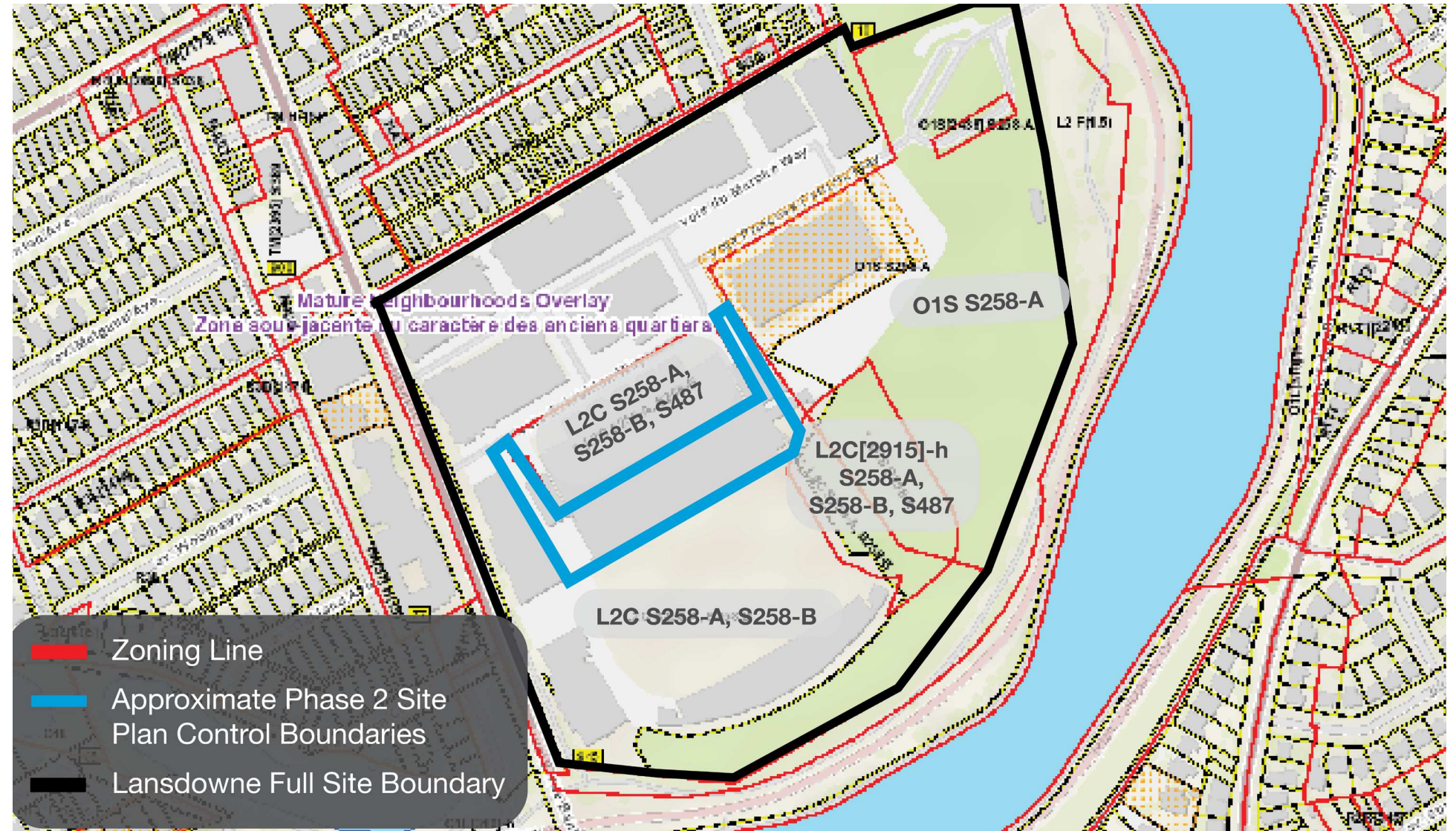
PLANNING FRAMEWORK CITY OF OTTAWA ZONING BY-LAW

The portion of the property subject to Site Plan Control is zoned Major Leisure Facility, Subzone C, with site specific schedule 258-A and 258-B (L2C S258-A, S258-B).

The purpose of the L2C zone is to:

- Accommodate major, urban City-wide sports, recreational and cultural facilities addressed under the Major Urban Facilities policies of the Official Plan;
- Permit a broad range and intensity of leisure, recreational, cultural and related uses; and
- Allow a moderate density and scale of development.

As outlined in the previous UDRP submission for the Zoning By-law Amendment and the Event Centre Site Plan Control application, the proposed development is consistent with the intent of the Zoning By-law, contributing to Lansdowne Park as a destination at a local, regional, and national scale. The proposed development complies with the Zoning By-law.



RESPONSE TO URBAN DESIGN DIRECTIONS PROVIDED AT PRE-CONSULTATION MEETINGS WITH CITY STAFF

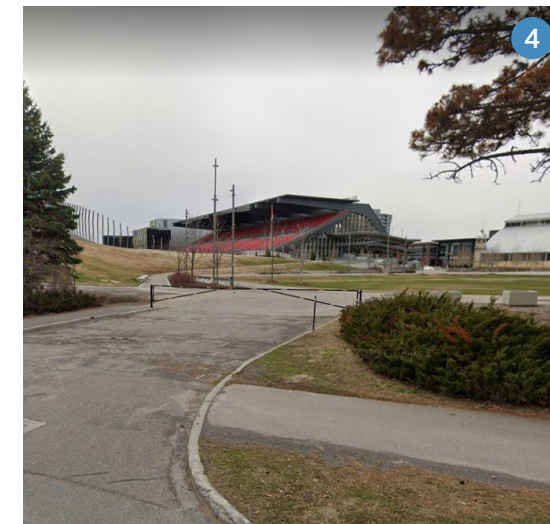
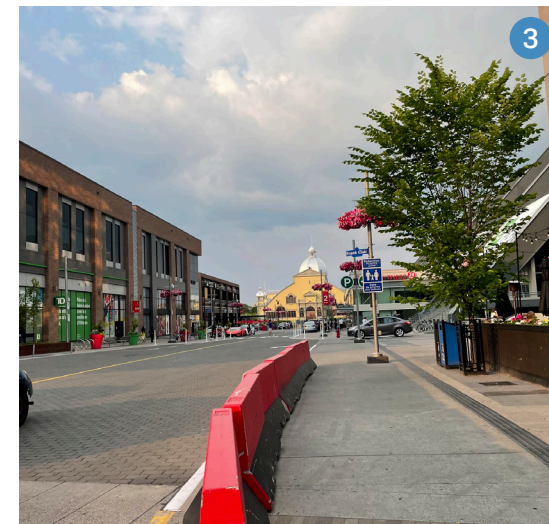
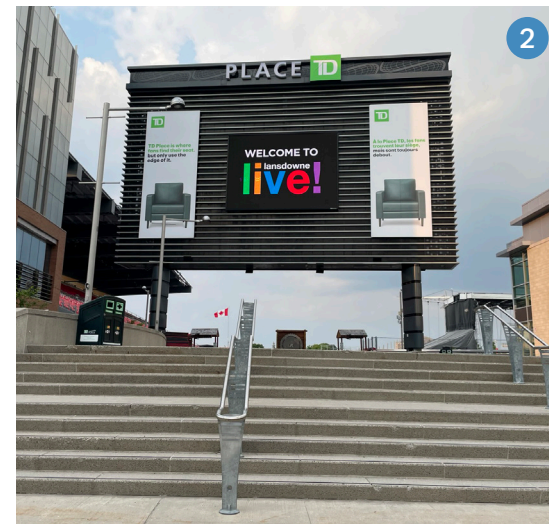
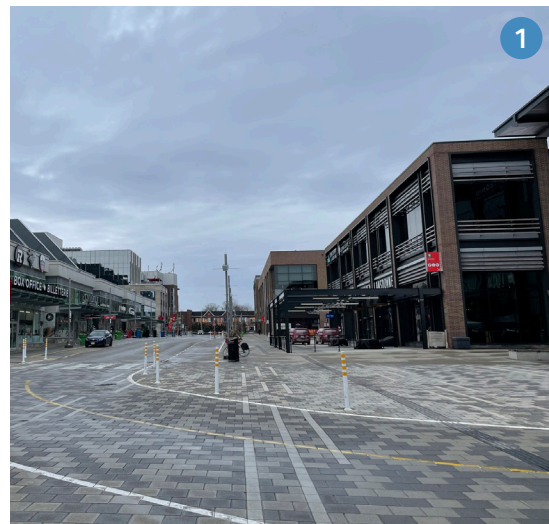
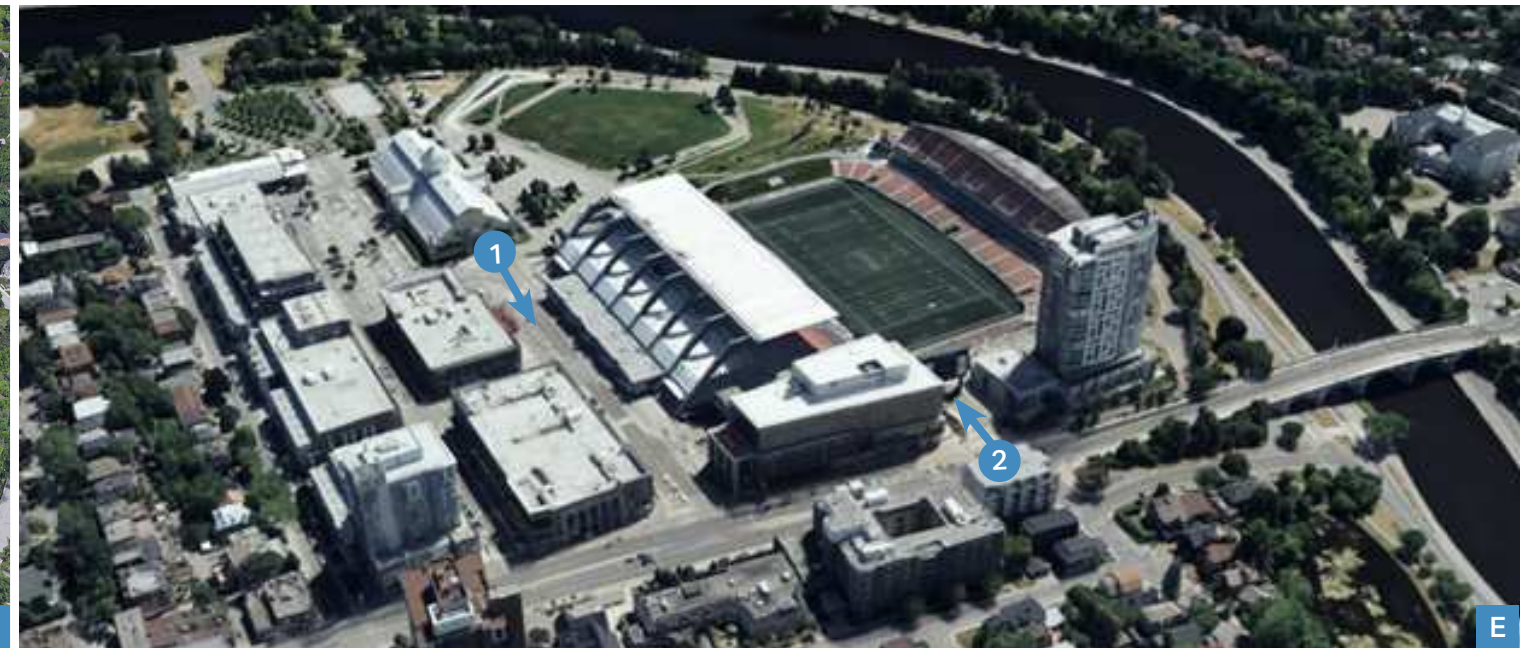
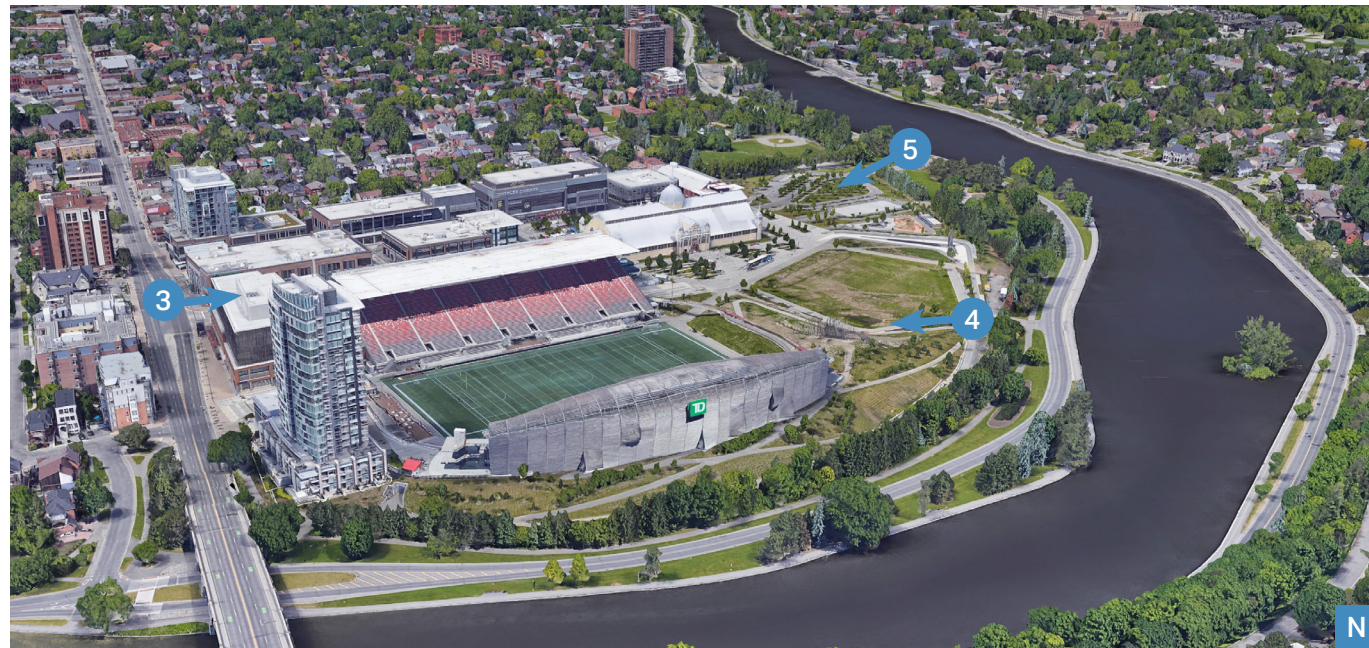
PRE-CONSULTATION MEETING COMMENTS		
NO.	COMMENT	RESPONSE
PLANNING		
1	Staff strongly encourage further consideration be made into ensuring a harmonious interface between the proposed north side stands and future mixed-use podium and tower. Efforts should be made to mitigate any negative impacts between the two land uses, including but not limited to:	
2	The ground-level laneway (previously a public promenade) should be designed with CPTED principles in mind, creating a pedestrian-friendly and animated area. Currently, it is staff's understanding that this area will functionally operate as the back-of-house for the commercial uses in the future podium. However, the area should be designed to positively integrate and connect with the remainder of Lansdowne Park, and incorporate glazing and quality surface treatment to resemble an active, safe, and visible component of the public realm.	To create the ground-level laneway designed with Crime Prevention Through Environmental Design (CPTED) principles, we carefully designed the facade with several key features. Downlights were installed at the columns to illuminate the walkways, enhancing visibility and safety. Additionally, CFL banners were incorporated to add both visual interest and lighting. To further enhance the openness and transparency of the space, we included glazing in the facade of the OSEG office, which helps alleviate its appearance and contributes to a more welcoming and secure environment.
3	Ensure that the height of the proposed north side stands, as well as the proposed northern elevation does not negatively impact the south-facing units within the future residential towers, ensuring adequate separation and views.	Proposed height is well within the approved maximum height for the lot. North stands are separated from the proposed towers by a distance of 15m. New North Stands is +/-1.5m higher than the existing North Stands.
4	Please consider revisiting the design of the north side stands in order to better represent Lansdowne Park's identity as a dense, urban entertainment district requiring architectural merit and integrity. The skeletal nature of the current proposal could be studied further in an effort to better contribute to the historical and cultural significance of the surrounding area and interface to future phases of the development.	We have provided a new landscaping design that enhances the overall aesthetic and better integrates with the surrounding environment. By partially covering the existing ramp to the underground parking on the West end, we create more opportunities for landscaping at grade, while adding an accessible entry and drop off area that is currently lacking from Frank Claire Lane. The design has evolved from the original concept to ensure a stronger connection to the site's historical and cultural context. While the design was considered as a modern evolution of the sturdiness of the existing stands, we have thoughtfully evolved it to better align with the surrounding environment, integrating modern elements with the existing conditions of the site. Additionally, we have incorporated curved architectural elements that not only complement the adjacent Event Centre but also align with the design of the stadium across, creating a more cohesive and unified identity for the area.
5	Please investigate opportunities to better treat the east, west, and northern facades to incorporate architectural elements which can screen the functional elements and activate the facade.	We are no longer providing mechanical equipment screens. Instead, we have extended the parapets to naturally conceal the equipment, ensuring a cleaner, more integrated look. This approach allows us to maintain a streamlined, cohesive aesthetic while addressing the need to screen functional elements.
6	Please describe the interim treatment of the north facade during the period of time starting after completion of the north side stands until the construction of the phase 3 residential towers.	BBB: N/A

PRE-CONSULTATION MEETING COMMENTS

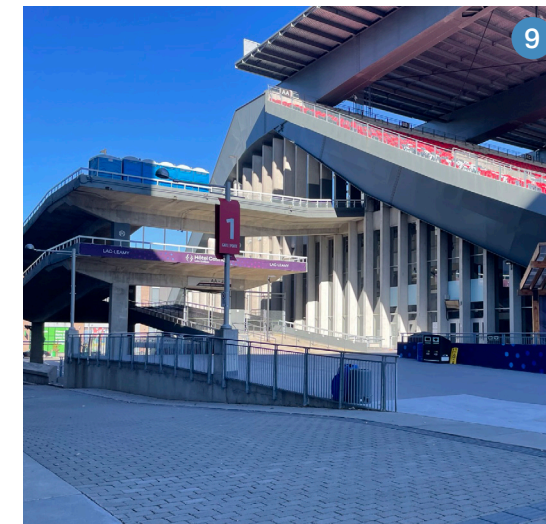
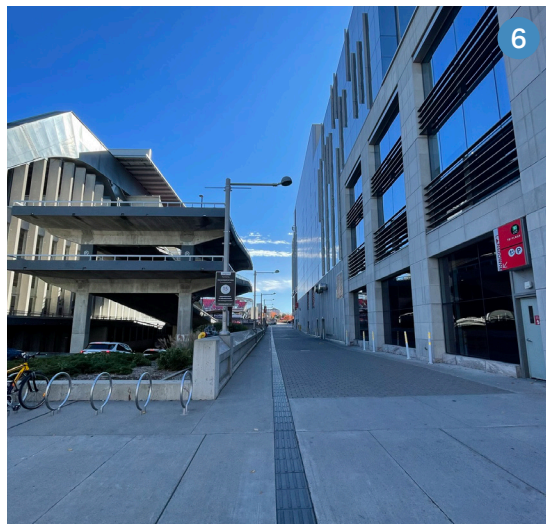
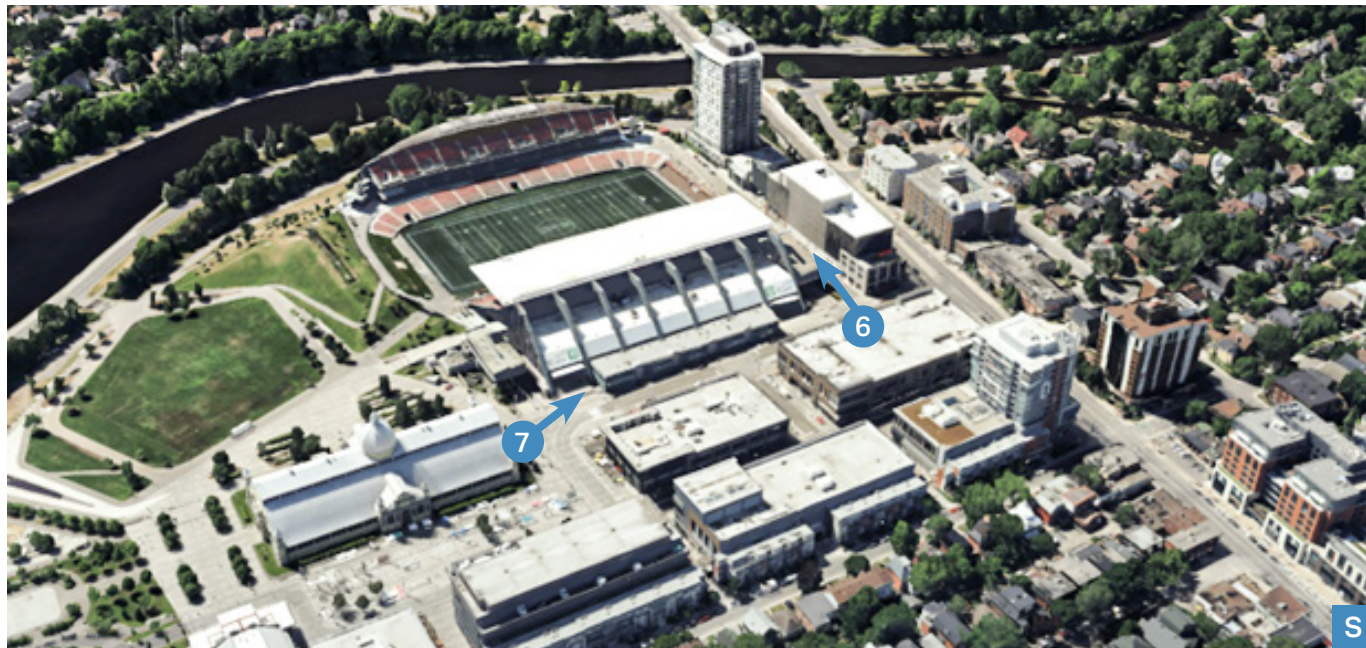
NO.	COMMENT	RESPONSE
URBAN DESIGN		
	<p>East facade and relationship with the future plaza, the Aberdeen Pavilion and the new event centre is a concern. Back of house functions are proposed at grade on the east side. Much of the east side of the structure also appears to be “facade-less” where a very large storage space is secured by chain-link fences. The future plaza is an important public space and should be animated and/or well landscaped. Please consider the following:</p> <ul style="list-style-type: none"> a. Allocate uses that can animate the plaza. b. Provide appropriate landscaping. c. Enclose the space under the stand and create a facade. 	<p>We have added an elevator lobby and Gate 4 entry at the east end, designed to better connect with the adjacent event center and the future plaza. We are no longer providing chainlink fences or storage spaces as initially proposed. Instead, the east facade is now enclosed with metal panels, enhancing the aesthetic appeal and creating a more cohesive and visually engaging interface with the plaza. Additionally, we are considering uses that will animate the plaza and provide appropriate landscaping to ensure the space is vibrant and inviting for the public.</p>
	<p>Height and location of the north stand and relationship with future development along Exhibition Way is a concern. The total height of the proposed north stand is 29.952m, which is approximately 9m taller than the concept shown in the master plan. The north stand is also significantly closer to the potential future mixed-use high-rise development. The overall relationship with the future development may be significantly impacted when compared to the concept shown in the master plan, resulting in concerns on the impacts of the north stand on the viability and livability of future development, particularly the residential aspect of the development.</p>	<p>The zoning on the site permits a height of 38 metres. This was not changed through the previous OPA/ZBLA applications approved in November 2023.</p>
2.6	<p>In addition, the previously proposed pedestrian promenade is no longer contemplated. The applicant also indicated that Gate 3, which is an iconic feature of the master plan, is not a necessity for the operation of the north stand. These proposed and potential changes raise questions and concerns on the overall vision, connectivity, and public realm interface of the proposal.</p>	<p>The stands are well connected on the east with the pedestrian plaza and on the west with Frank Clair Lane, where the drop-off area and pedestrian Gate 2 entry are located. A placeholder for the future Gate 3 stair has been provided, allowing for its inclusion in later phases of development.</p>
2.7	<p>Relationship with developments on Bank Street is a concern. Comparing with the current condition, the proposed north stand will protrude into the background of the existing plaza on Bank Street between the two buildings. How will the “facade-less” design of the north stand look like from Bank Street? Similarly, at a height that is equivalent to a 9-storey building, the proposed stand will be highly visible from Exhibition Way. How will the “facade-less” design impact views from the Exhibition Way?</p>	<p>The proposed north stand is 1.5 meters higher than the existing structure, which will slightly alter its visibility from both Bank Street and Exhibition Way. However, the design is no longer “facade-less.” The east, west and north face of the New North Stands are now enclosed with metal panels and features vertical elements like railings, ensuring a more cohesive and visually appealing appearance. These updates address previous concerns and enhance the overall aesthetic. For a clearer understanding of how the design will look from these vantage points, please refer to the west renderings, which provide a more detailed perspective of the stand’s integration with the surrounding environment.</p>
2.8	<p>Wind conditions on and around the north stand should be further studied given the changes to both the north stand design and the zoning provisions for the future private development along Exhibition Way. Spectators should be safe and feel comfortable to sit and move around.</p>	<p>Completed wind study by Gradient Wind attached</p>
2.9	<p>The main concourse of the north stand is set at over 9m above grade, which is approximately 2.5m higher than previously envisioned in the master concept plan. Climbing up to the main concourse is equivalent to walking up to the 4th floor of a residential building. Is it too tall?</p>	<p>To address the height of the main concourse, we are providing a maximum of 15 steps per flight to ensure a manageable and comfortable ascent for visitors. Additionally, if elevators are required, we have incorporated two passenger elevators for patrons—one located at the west drop-off and another at the east drop-off. This design ensures accessibility and convenience for all users, making the height of the main concourse more manageable and accommodating.</p>
2.10(a)	<p>With three major projects in a row, the event centre, the north stand, and the mixed-use highrise development up to 40-storeys, Lansdowne Park Special District is likely to experience a prolonged period of construction activities. What is the plan to mitigate the impacts so that the District can continue to be a viable and vital destination during and after the construction? It appears that the north stand and the mixed-use high-rise development are intertwined by virtue of their location and close proximity, is there a plan to bundle the two projects so that the design can be integrated, and the construction can be coordinated?</p>	

4. SITE, CONTEXT & ANALYSIS

PHOTOS OF EXISTING SITE CONDITIONS



PHOTOS OF EXISTING SITE CONDITIONS

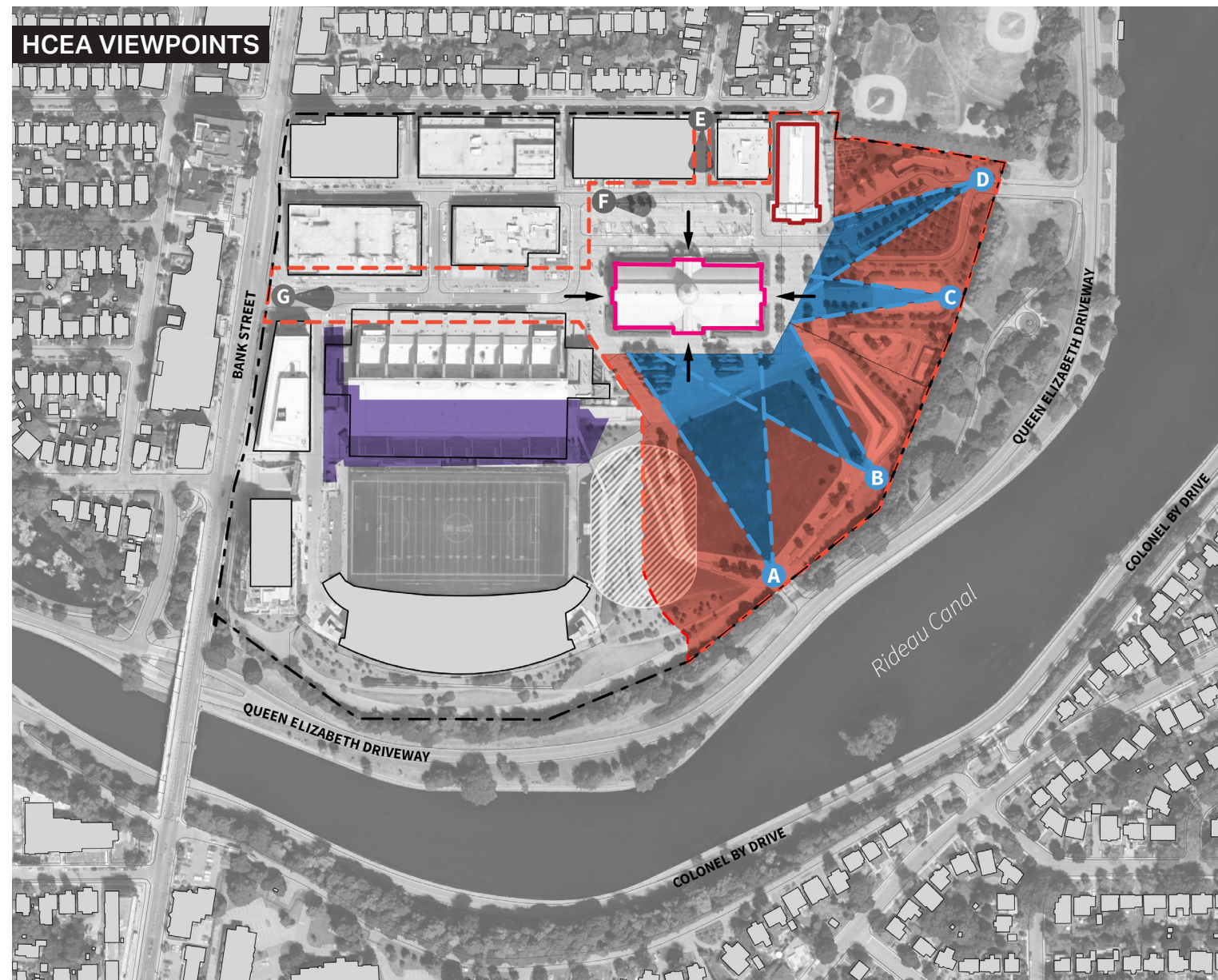


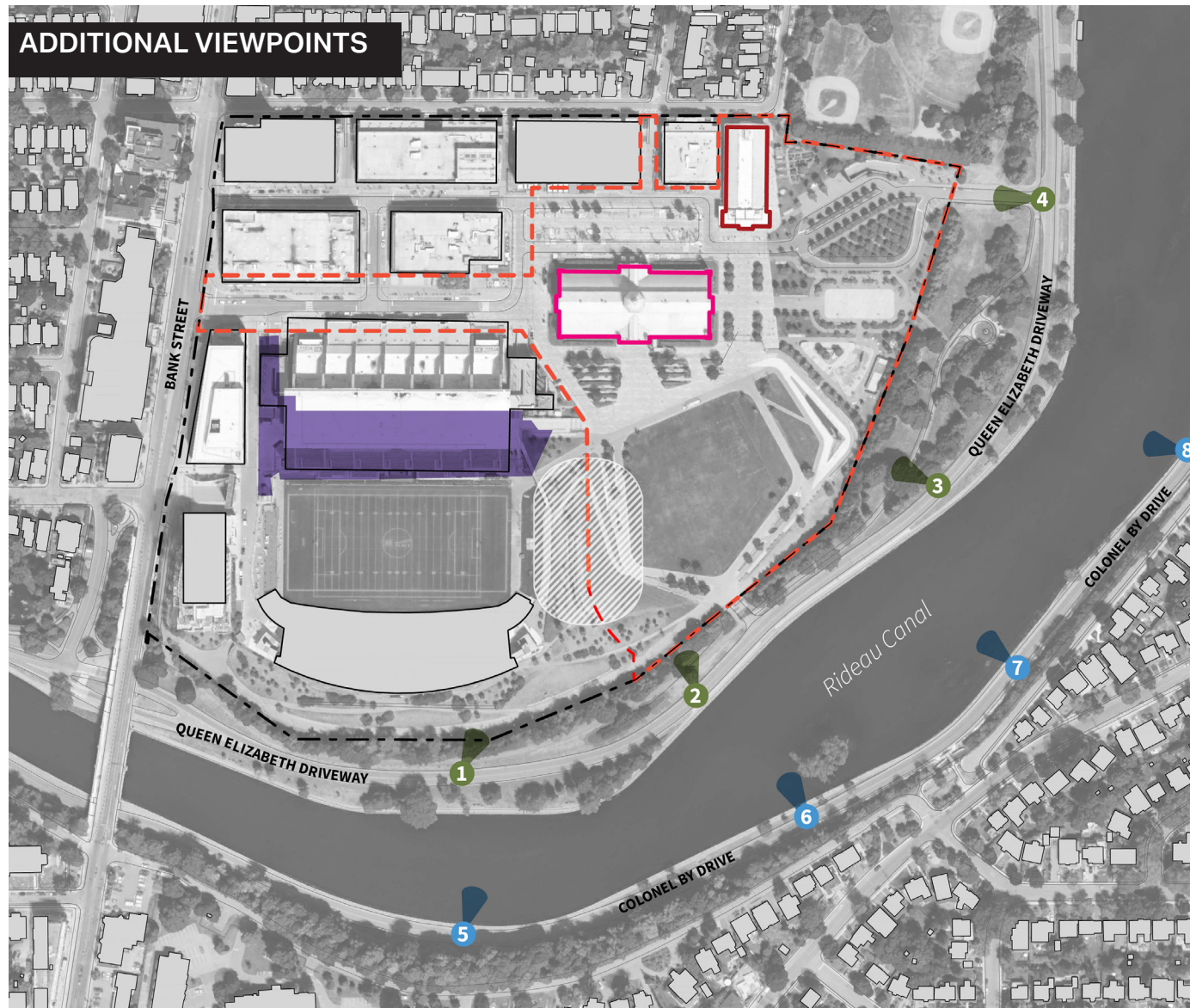
PROTECTED VIEW CORRIDORS

The Heritage Conservation Easement Agreement (HCEA) identifies specific views (A-G), the Setting Lands, and the Framing Lands within Lansdowne Park as being of cultural heritage value.

Overall, the impacts to the protected viewpoints are minor as the existing stands will be replaced with the new North Side Stands (NSS), altering the existing footprint slightly. Further, the future proposed retail podium will obscure the stands from the north.

Some minor impact is anticipated in Viewpoints C and D looking southwest with the NSS in the background beyond the Aberdeen Pavilion. These potential view impacts will be analyzed in detail in the forthcoming Heritage Impact Assessment.





- KEY PLAN LEGEND**
- LANSDOWNE PARK BOUNDARY
 - - - OHT EASEMENT PROPERTY BOUNDARY
 - PROPOSED NSS BOUNDARY
 - ▨ PROPOSED EVENT CENTRE
 - ABERDEEN PAVILION (1898, NHS, PART IV)
 - HORTICULTURE BUILDING (1914, PART IV)
 - RIDEAU CANAL VIEWS INTO LANSDOWNE PARK FROM QED
 - RIDEAU CANAL VIEWS INTO LANSDOWNE PARK FROM COLONEL BY DRIVE



BUILT & NATURAL HERITAGE ASSETS

The impacts of the proposed NSS are minimal. The new structure retains the same function as the previous stands, features a reduced footprint, and conserves the cultural heritage value of existing on site and adjacent cultural heritage resources, including the Aberdeen Pavilion, Horticulture Building and the cultural heritage landscapes along the Rideau Canal.

The proposed NSS do not present a direct impact on the adjacent cultural heritage resources of the Rideau Canal, Queen Elizabeth Drive (QED) and the Colonel By Drive cultural landscapes. The Rideau Canal and the QED are recognized by the HCEA as having a contextual relationship with Lansdowne Park and the proposed NSS do not present an adverse impact on this relationship.

MICROCLIMATE ANALYSIS

The proposed design of the New North Stands indicates that the elevation of the new structure remains only slightly higher than the existing North stands, ensuring minimal disruption to the prevailing wind and sun patterns in the area. The reduced footprint of the building and exposed concourses allows for open space and natural airflow, enhancing the comfort and environmental quality of the area. Furthermore, by removing the existing ramps and opening up the Frank Clair Lane area for drop-off, the design fosters a more welcoming and accessible entry plaza. This change enhances pedestrian flow while also reducing potential shadowing effects around the plaza and surrounding spaces. The overall design approach prioritizes a comfortable, climate-responsive environment for visitors.

TOP OF THE EXISTING SOUTH STANDS
 TOP OF THE PROPOSED NORTH STANDS
 TOP OF THE EXISTING NORTH STANDS

MAIN CONCOURSE LEVEL

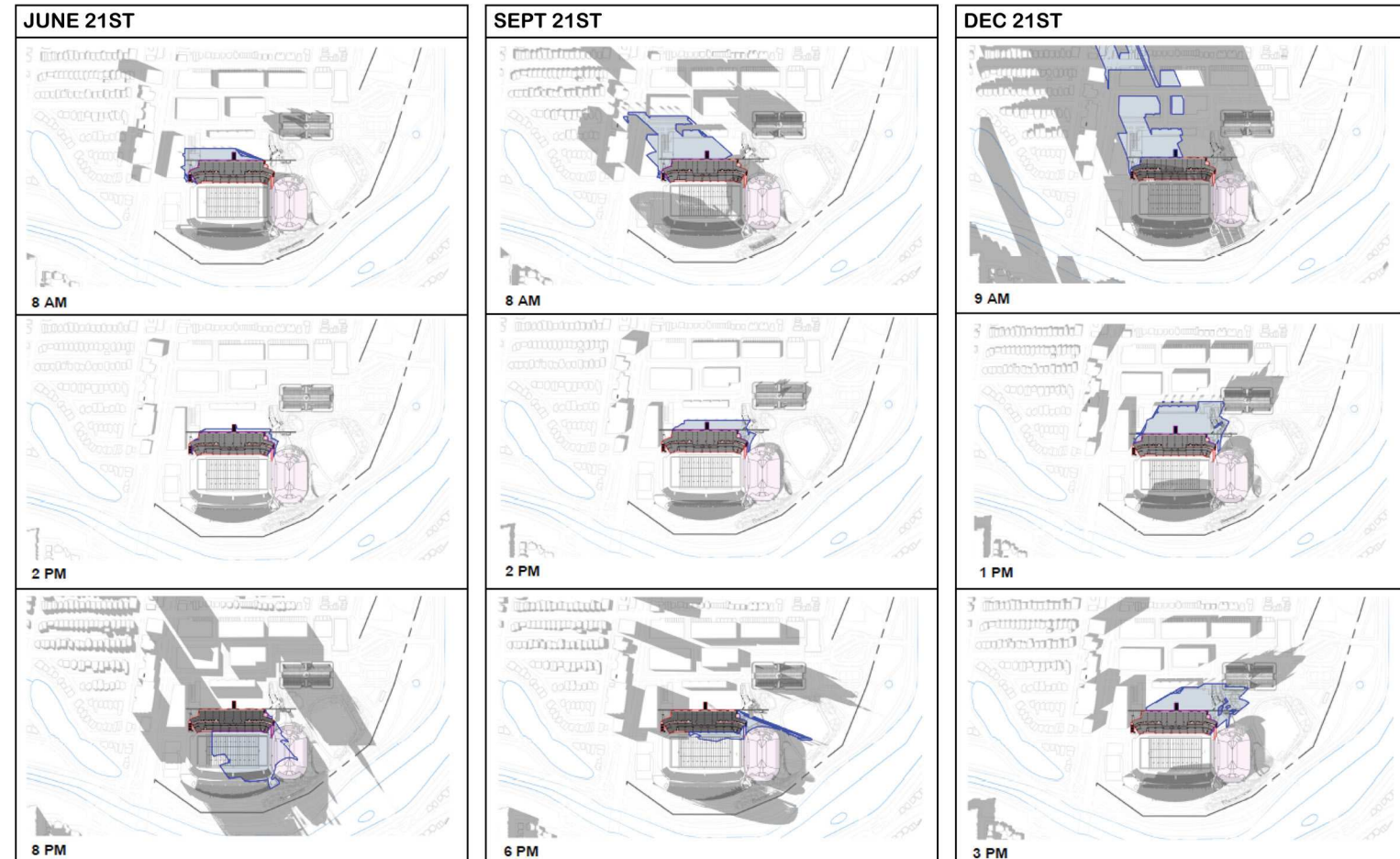
FIELD LEVEL

PARKING LEVEL

- LINE OF THE PROPOSED NORTH STANDS
- - - - - OUTLINE OF THE EXISTING NORTH STANDS
- LINE OF THE EXISTING SOUTH STANDS

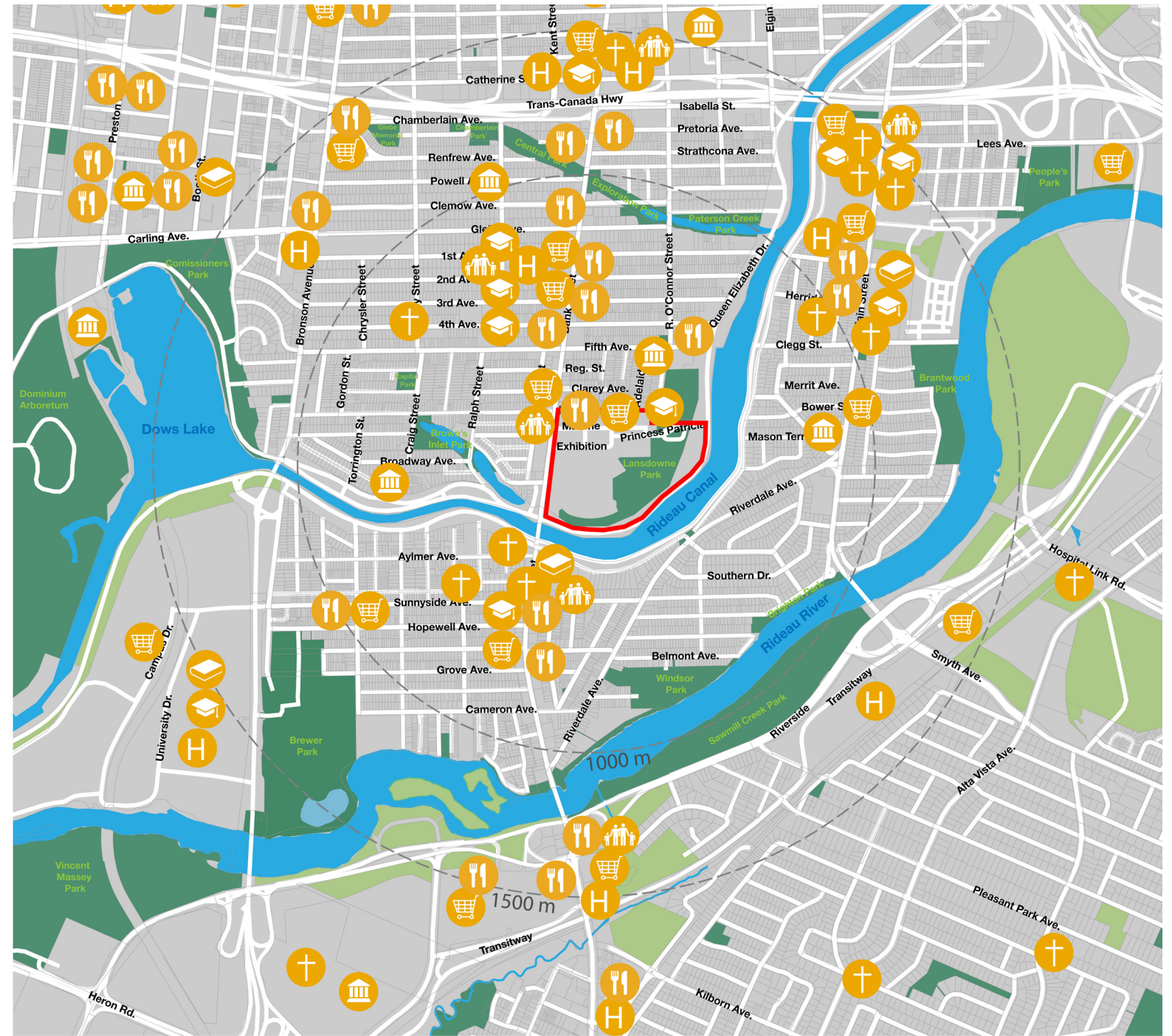
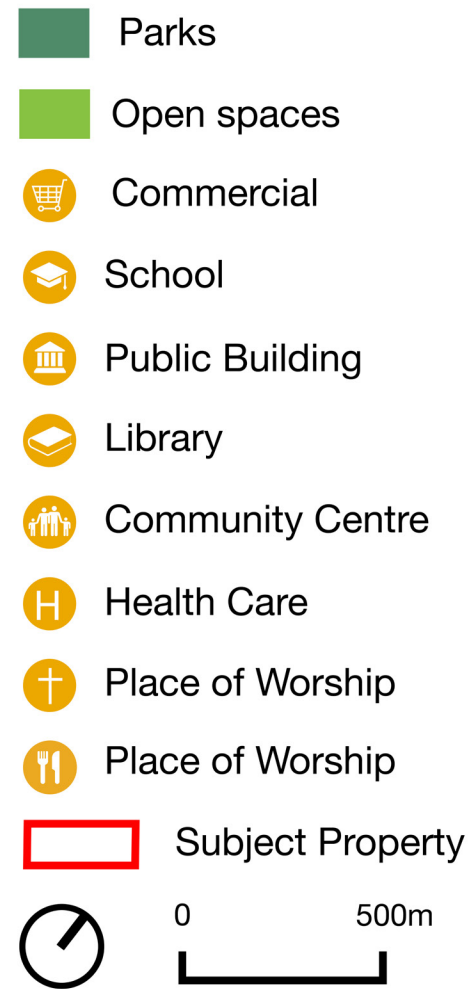
North Side Stands & BERM PROFILES

SHADOW ANALYSIS



KEY USES & SPATIAL ELEMENTS

The subject property enjoys proximity to a variety of neighbourhood amenities, whether within Lansdowne Park itself, or within the larger Glebe neighbourhood. Amenities include restaurants, bakeries and coffee shops, retail stores, a movie theatre, parkland, schools, and churches. The subject property and surrounding area benefits from access to two (2) grocery storeys within 500 metres of Lansdowne Park – Whole Foods Market at 951 Bank Street (within Lansdowne Park) and Metro at 754 Bank Street. The Great Lawn, Lansdowne Skatepark, and Lansdowne Park Skating Rink and Basketball Court all create the municipal park within Lansdowne Park itself, while Sylvia Holden Park, Olympic Garden, Lionel Britton Park, Firehall Park, Brown's Inlet Park and Capital Park, among others, provide for additional municipal and federal parkland that serve Lansdowne Park and the surrounding area. The figure below highlights some key amenities in the area.



CHARACTERISTICS OF PUBLIC REALM

Public realm improvements for sections of Lansdowne Park managed by the City are under consideration, though not necessarily part of the ongoing Site Plan Control application. The improvements and upgrades recommended for the site will provide the City additional options for site programming in the future and simplify the operations of the existing facilities.

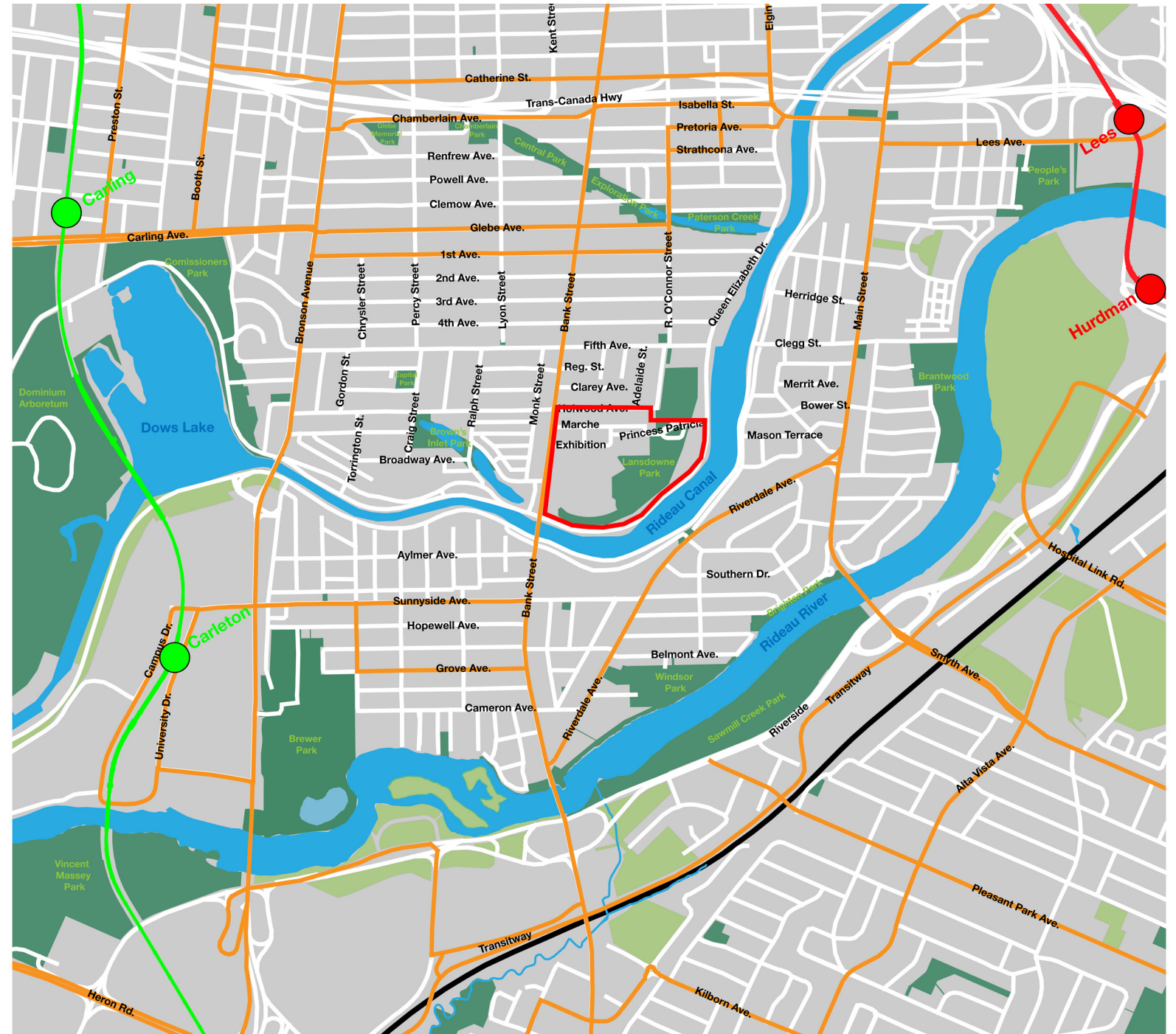
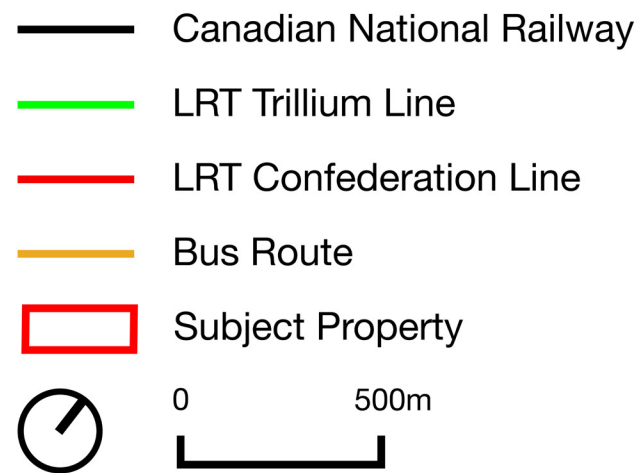
The 2022 proposal approved in principle by Council included a dedicated plan for investment in the urban park to improve connectivity to the site and make the park more appealing. The redevelopment program as part of Lansdowne 2.0 includes strategic investment for the publicly controlled portions of the site. Implementation of these improvements will be phased and will require input from the community. Public realm improvements may include:

1. Additional seating in and around park. Park tables and umbrellas to provide more seating and additional shade.
2. Small bandshell for varied events. Portable bandshell for smaller events to attract visitors to the site.
3. Additional covered bike parking New covered bike parking throughout the site.
4. Interpretive panels throughout the site Erect permanent interactive panels throughout the site to display history of Lansdowne.
5. Enhanced delineation of square versus road. Installation of more permanent features that can help delineate the square and make it place for pedestrians.
6. Increased lighting and better sound equipment at skating rink. Enhanced infrastructure around skating rink to support better lighting and sound equipment.
7. Additional storage on-site. Construct an aesthetically pleasing single storey unheated storage unit that accommodate storage for equipment to support events on-site.
8. Bring WiFi to the site. Serves a purpose to track and understand the demographics of those visiting the park.
9. Food vendors. Food trucks and other similar vendors inside the park during events and festivals.
10. Redesigned entrance to the park at Queen Elizabeth Driveway Redesign and reconstruct the entrance to the park to better accommodate cyclists and pedestrians. Consider adding a signalized crosswalk.
11. Forestry Plan for the site which includes a floral plan along the QED. Landscape plan for the entire site, includes a floral plan along Queen Elizabeth Driveway.
12. Provide additional shade. Permanently installed shade sails to encompass all seating areas at the water feature. Long term plan will involve shade being provided by trees, which links to the landscaping plan.
13. Redesign and rebuild of Great Lawn. Reconfigure paved pathways and redefine the berm elevations optimizing the barrier free routes as well as south facing steps.
14. New permanent art feature. A permanent visual draw that can attract visitors to the site and create instagrammable moments.
15. Upgraded electrical across the site A redesign of the lighting plan across the site can support more support varied programming, festivals and concerts.
16. New permanent skate shack This would eliminate the need to rent one every year and can double as storage.
17. More water fountains. Tie this to electrical redesign, and consider water leads and part of design.
18. New play area When time comes for renewal of play area, consider including a water feature or splash pad to the park.
19. Community Garden. New community garden for residents living on-site.
20. Aberdeen roof repairs. Currently in design, construction expected for 2023 under the Capital Budget.
21. Aberdeen climate control - Feasibility Study Undertake a feasibility study to understand what can be done to adjust climate control while maintaining the heritage nature of the building.
22. Aberdeen sound system, masking, lighting, electrical. Recommend undertaking a feasibility study to upgrade infrastructure across the entire site, and a corresponding phasing plan.
23. This connected to item above. To be costed as part of Aberdeen Feasibility Study
24. Venting in Horticulture to support kitchen use. Upgrade kitchen facilities to allow more events to occur.
25. Horticulture sound system. New electrical and audio equipment, with sound masking, could support more events.
26. Access to washrooms Improve access to public washrooms throughout the site. This could include retrofitting buildings to allow access from the outside or create a corridor for public use of washrooms while events are happening.



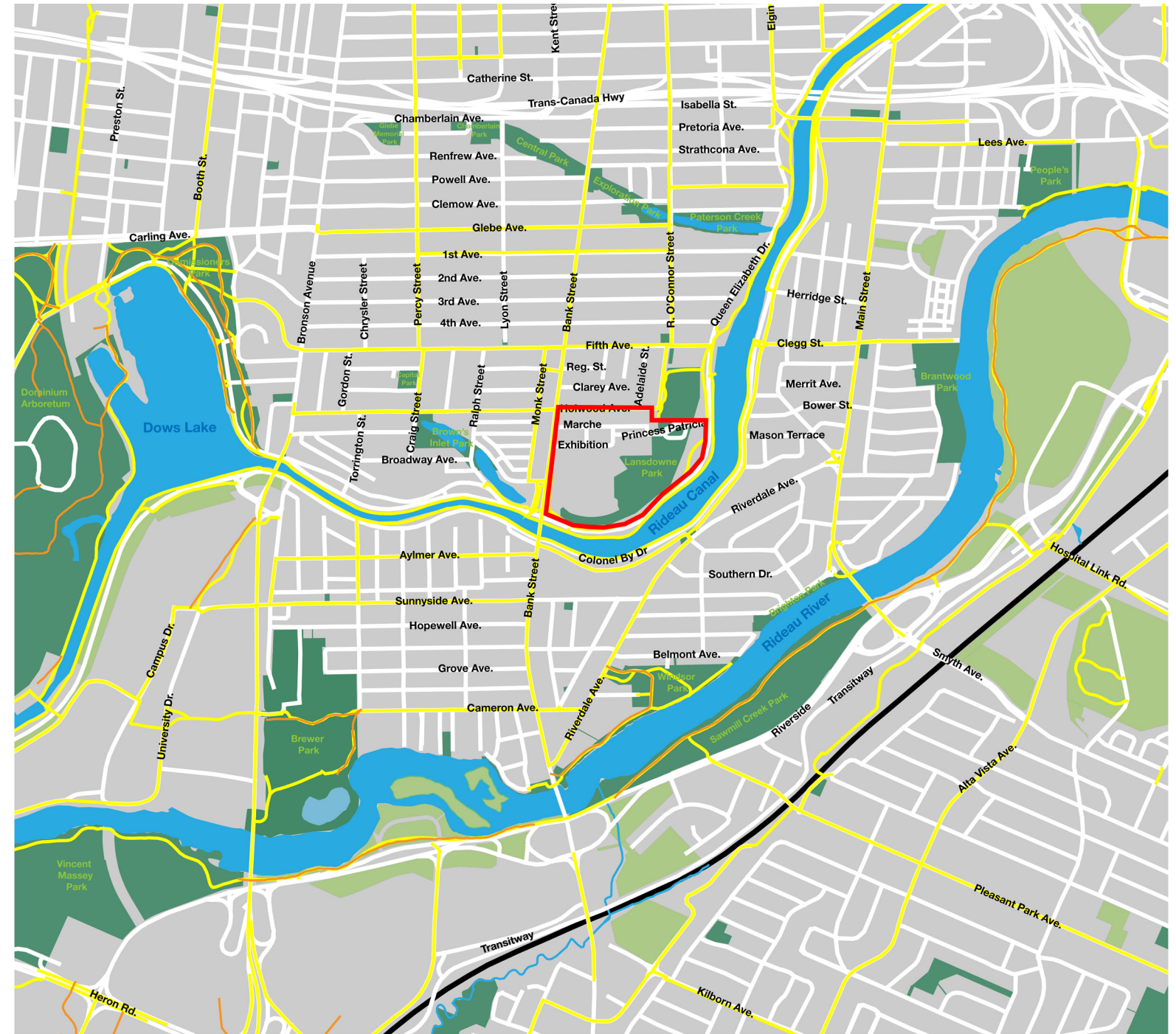
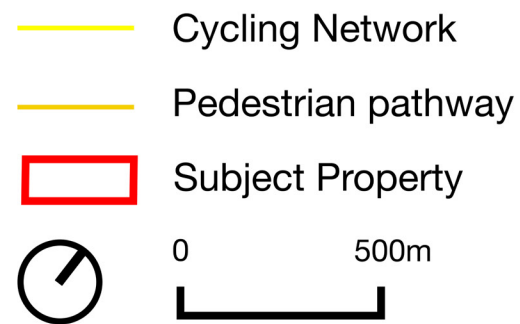
MOBILITY NETWORKS (TRANSIT)

Transportation Network: The subject property is served by public transit options. As per Schedule C2 – Transit Network-Ultimate, the subject property is located along a Transit Priority Corridor. The nearest bus stop is on the east side of Bank Street, between Exhibition Way and Marché Way in front of one of the existing mixed use buildings on the subject property, and on the west side of Bank Street adjacent to the existing signalized intersection. The bus stops on both sides of the street service OC Transpo bus routes #6 and #7, which are both frequent bus routes, with service every 15 minutes or less on weekdays, and operating seven days per week in all time periods.



MOBILITY NETWORKS (ACTIVE TRANSPORTATION)

Active Transportation Network: The subject property is well served by the City of Ottawa's planned cycling network and active transportation network, as shown on GeoOttawa and as per Schedule C3 – Active Transportation Network, of the City of Ottawa's Official Plan (Figure 6 and Figure 7). A pathway link is located along the east and south edges of the property, with additional links located at the northeast and southwest corners of the subject property. The pathway link at the northeast corner of the site connects to O'Connor Street, which is an identified cross-town bikeway and cycling spine route. This pathway link also connects to Fifth Avenue, which connects to the Flora Footbridge, an identified cross-town bikeway and cycling spine route. The pathway links around the subject property provide connectivity to the greater cycling network via municipal roads and federally owned lands.

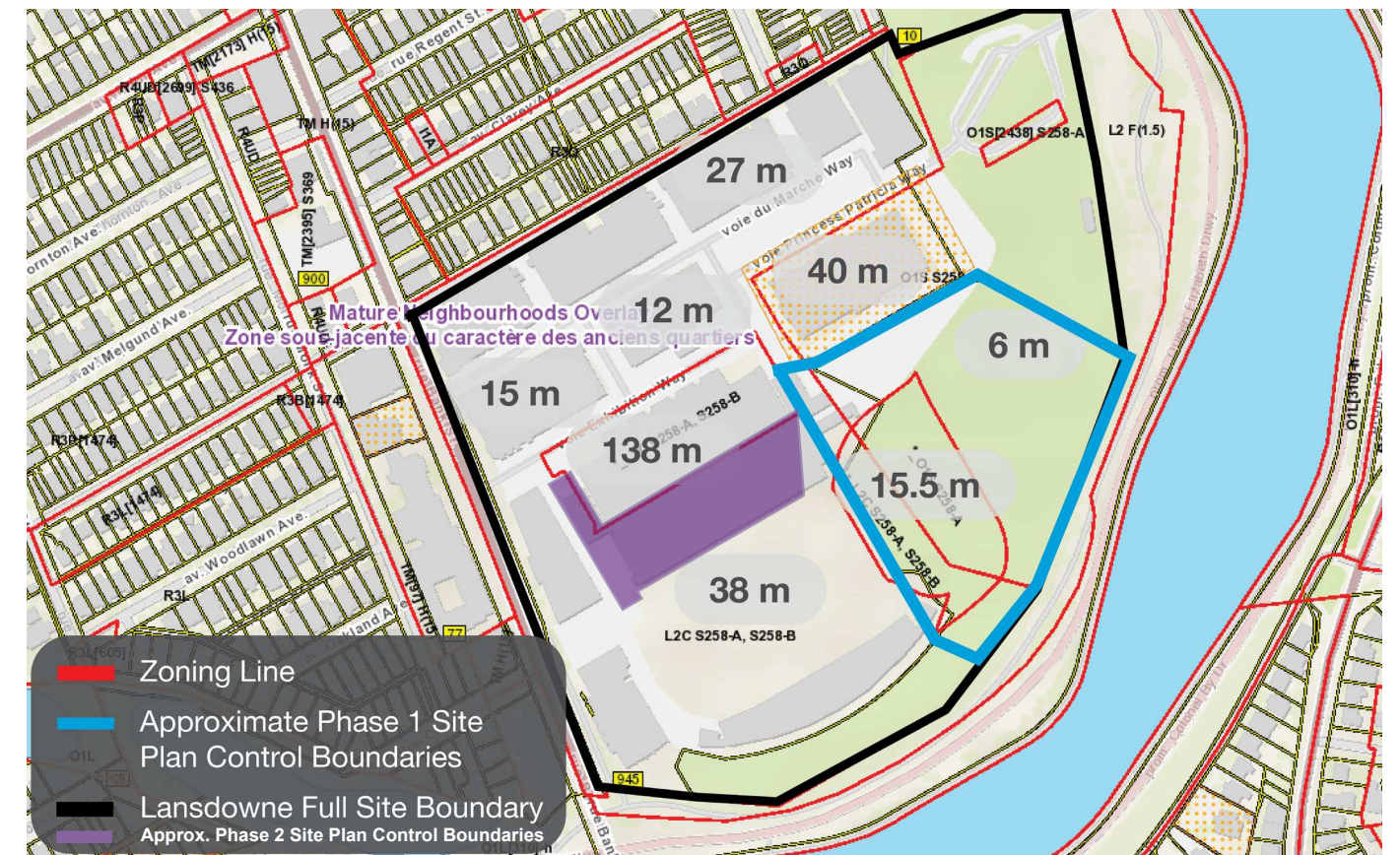
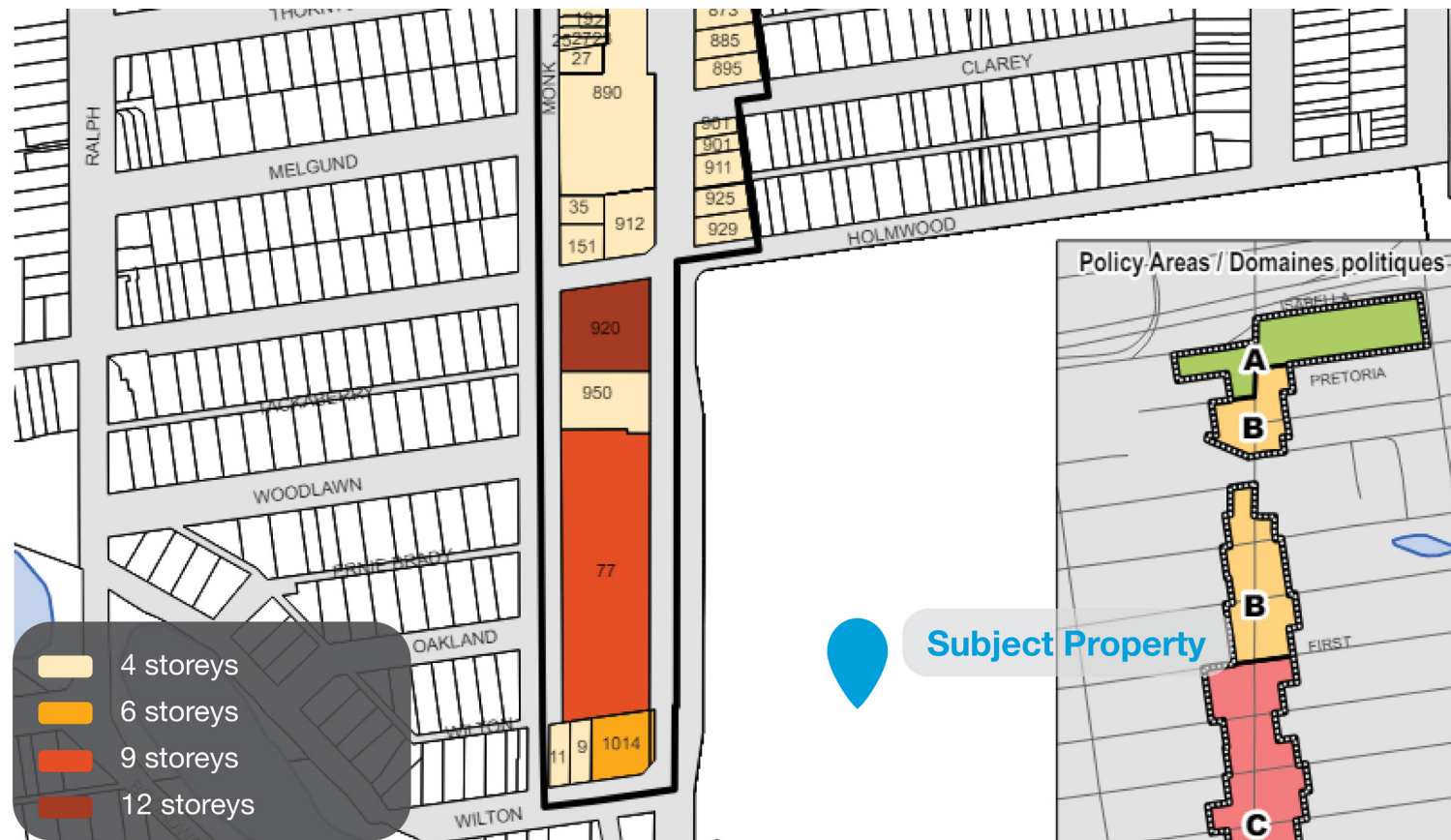


SURROUNDING DEVELOPMENT & PLANNED FUNCTION

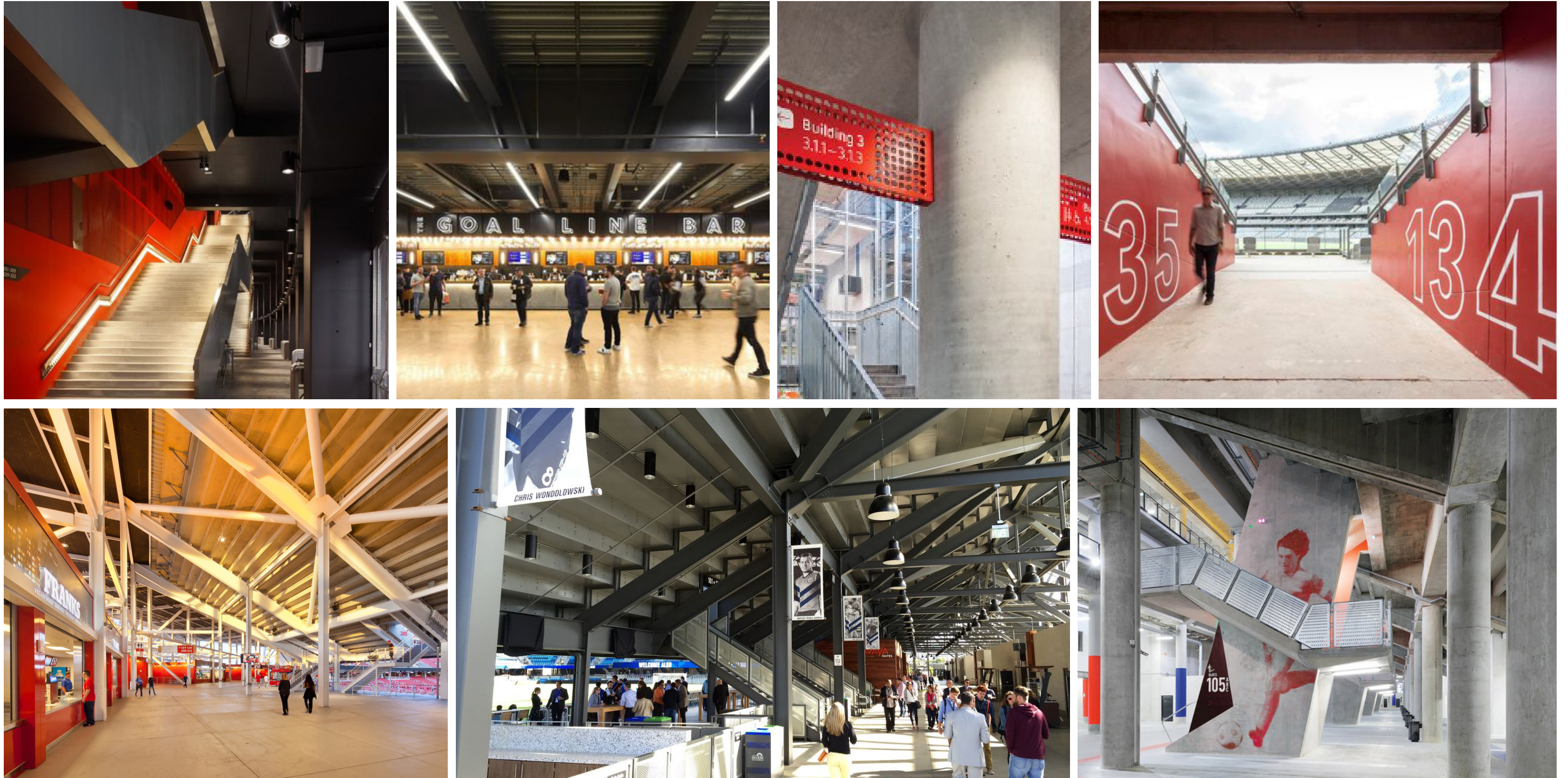
Through the ongoing Lansdowne 2.0 redevelopment program, the planned function of Lansdowne Park remains consistent; a mixed-use community hub and entertainment district, consisting of residential, retail and office uses, along with major sports/event facilities, recreational and open space uses.

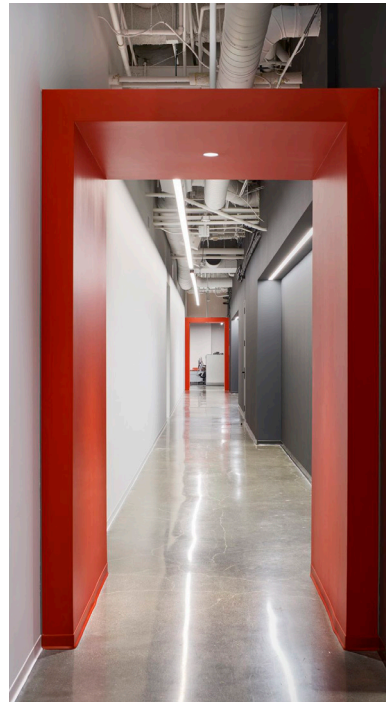
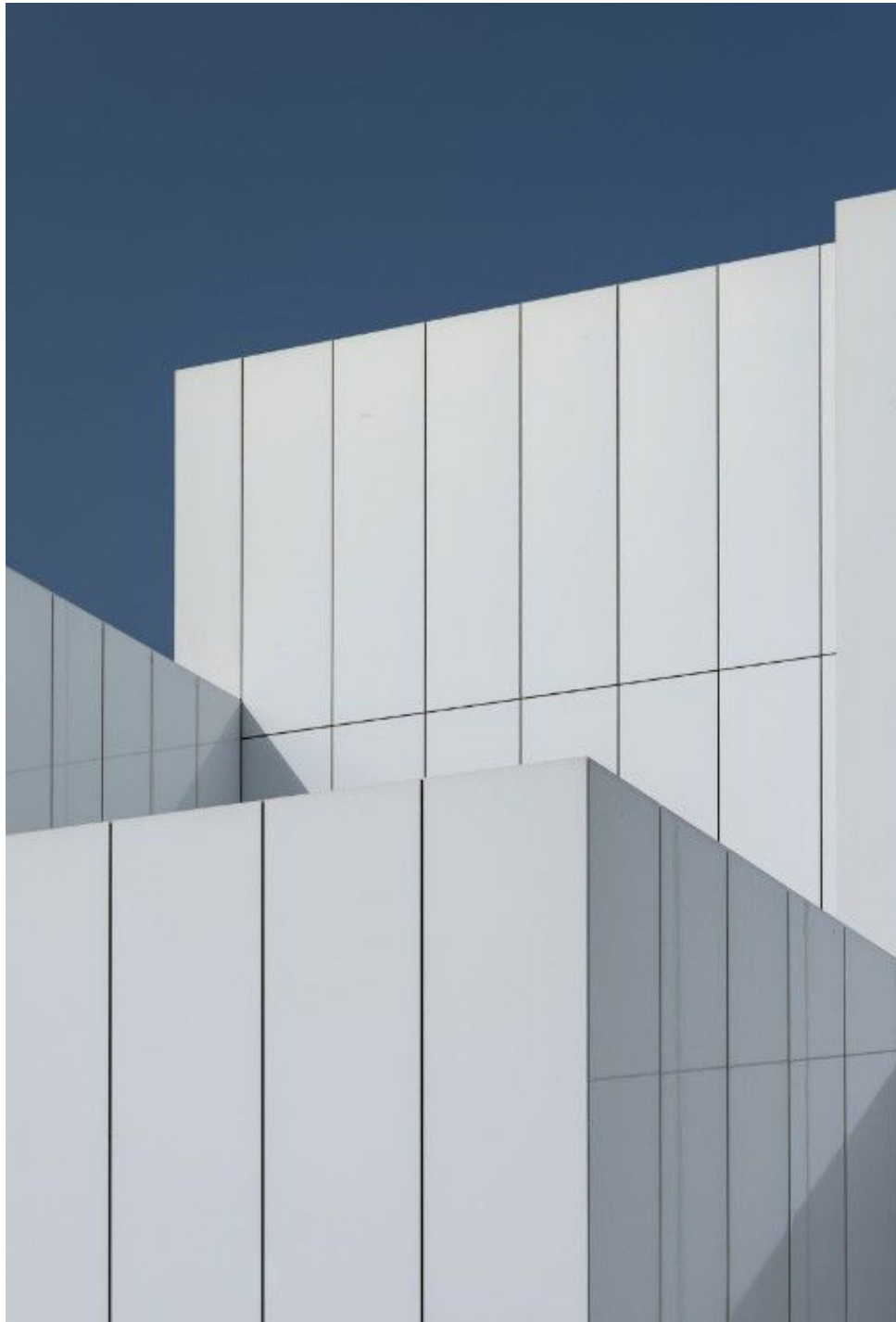
The area immediately surrounding the proposed north side stands is planned to be developed with the new retail podium immediately north of the stands and the event centre to the east of the east end-zone. Sitting atop the new retail podium will be two (2) residential towers that are zoned for heights up to 40 storeys.

The area immediately abutting the Lansdowne Park on Bank Street to the west is planned for taller heights up to twelve (12) storeys directly across from Lansdowne Park, with heights gradually decreasing to four (4) storeys further north on Bank Street, demonstrated by Schedule A of the Bank Street in the Glebe Secondary Plan. To the south and further east, Lansdowne Park directly abuts municipal parkland, and National Capital Commission properties including Queen Elizabeth Driveway, Rideau Canal Multi-Use Pathway, and the Rideau Canal itself. Given the NCC's ownership of these lands, and their historic significance and heritage classification, no development is anticipated.

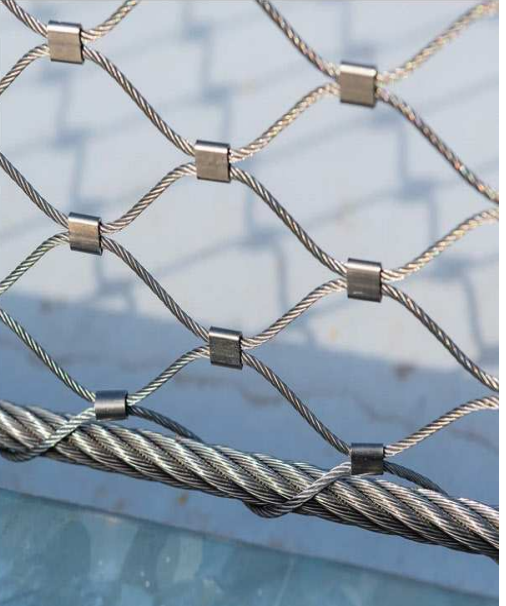
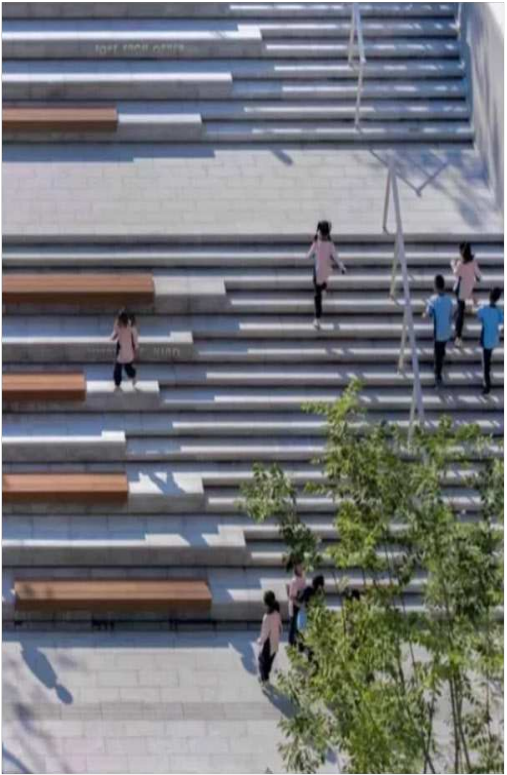


5. DESIGN RESEARCH



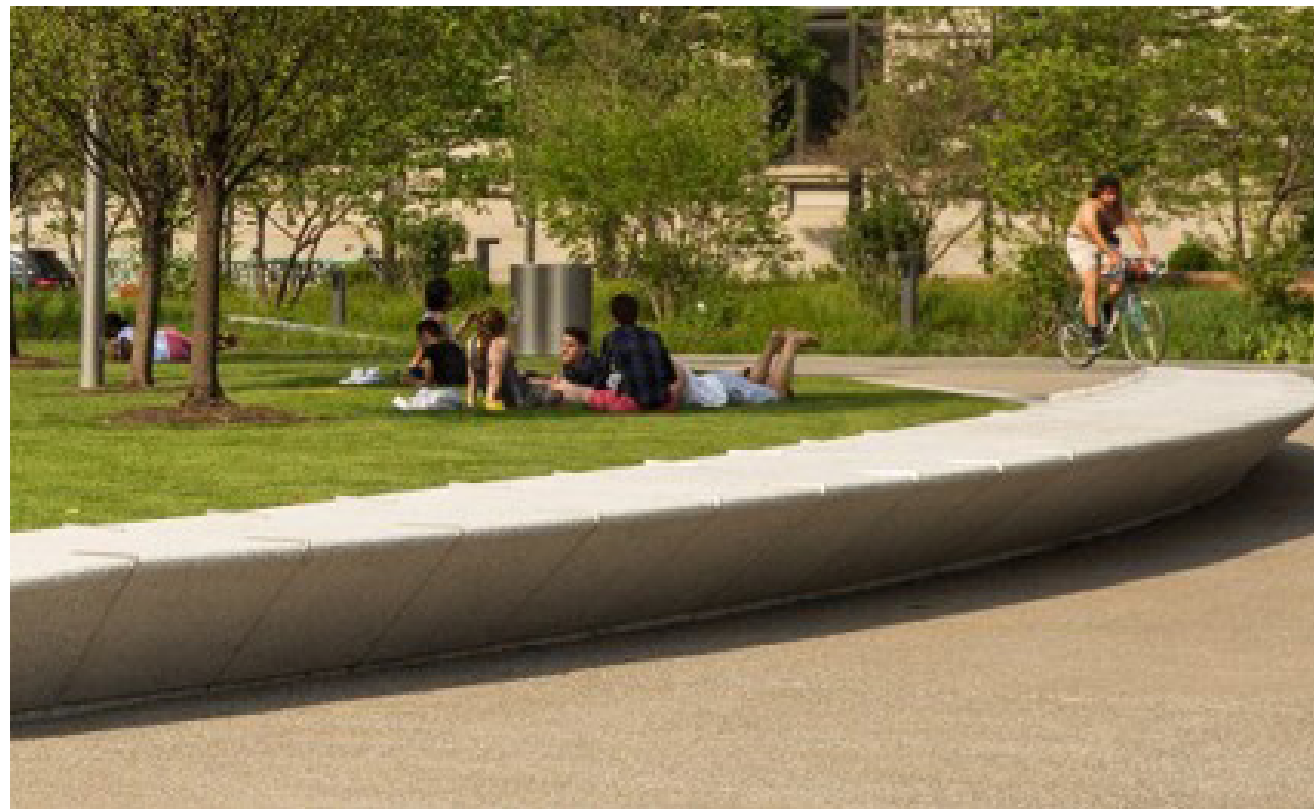


LANDSCAPE ARCHITECTURE PRECEDENTS



CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

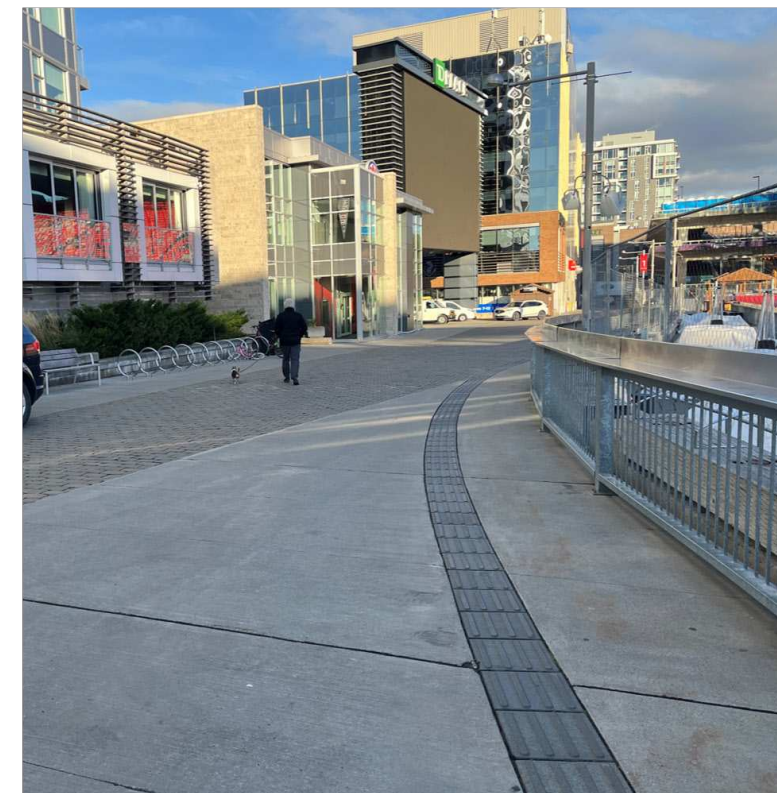
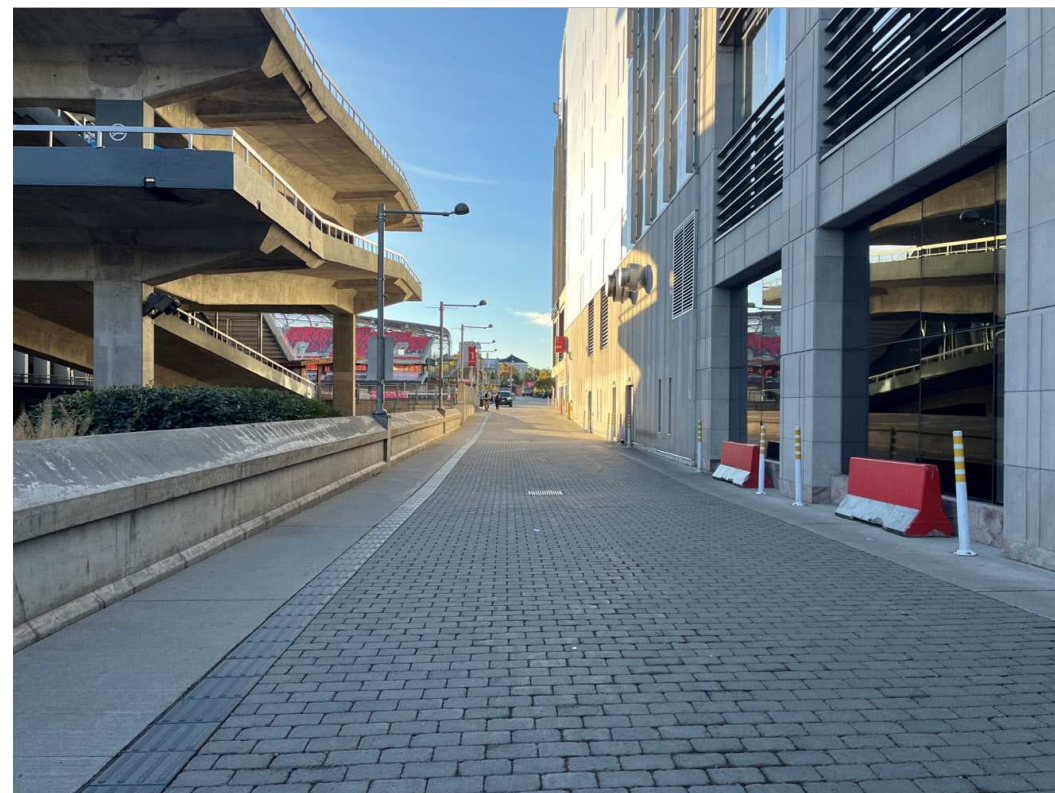
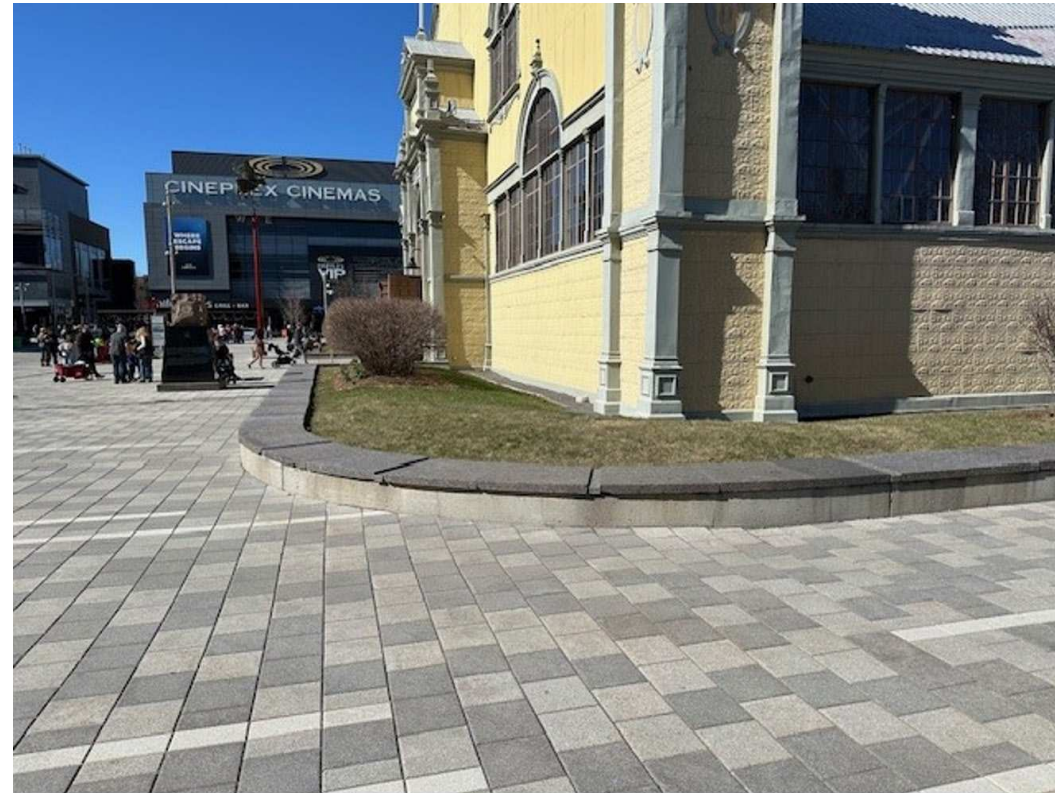
With consideration to the guiding principles of CPTED, natural surveillance techniques have been employed to increase visual permeability of the site. The driveways and paths have been oriented towards building entrances to establish clear sightlines. Adding to this, north façade facing the public ground-level laneway was carefully designed with several key features. Downlights were installed at the columns to illuminate the walkways, enhancing visibility and safety. To further enhance the openness and transparency of the space, we included glazing in the facade of the OSEG office, which helps create visual permeability and contributes to a more welcoming and secure environment.



LANDSCAPE LANGUAGE AND MATERIALITY

The existing materiality of Lansdowne (Exhibition Way) will carry through to the new design surrounding the North side stands. Paving materials and patterning will be consistent with the existing materials and will seamlessly transition to Frank Clair lane. Cast-in-place retaining walls will define a lower patio (Gate 2) and support the fence extending the limits of the stadium. The intent is also to re-use existing site furniture and light columns where possible.

A new plaza will cover partially the existing parking ramp and allow for small gatherings thus widening the shared street entering the site.



MASSING OF PROPOSED DEVELOPMENT (EXISTING)



MASSING OF PROPOSED DEVELOPMENT (FUTURE)



North Side Stands WITH PHASE 2 NEW NORTH SIDE STANDS MASSING — NORTH



North Side Stands WITH PHASE 2 NEW NORTH SIDE STANDS MASSING — SOUTH

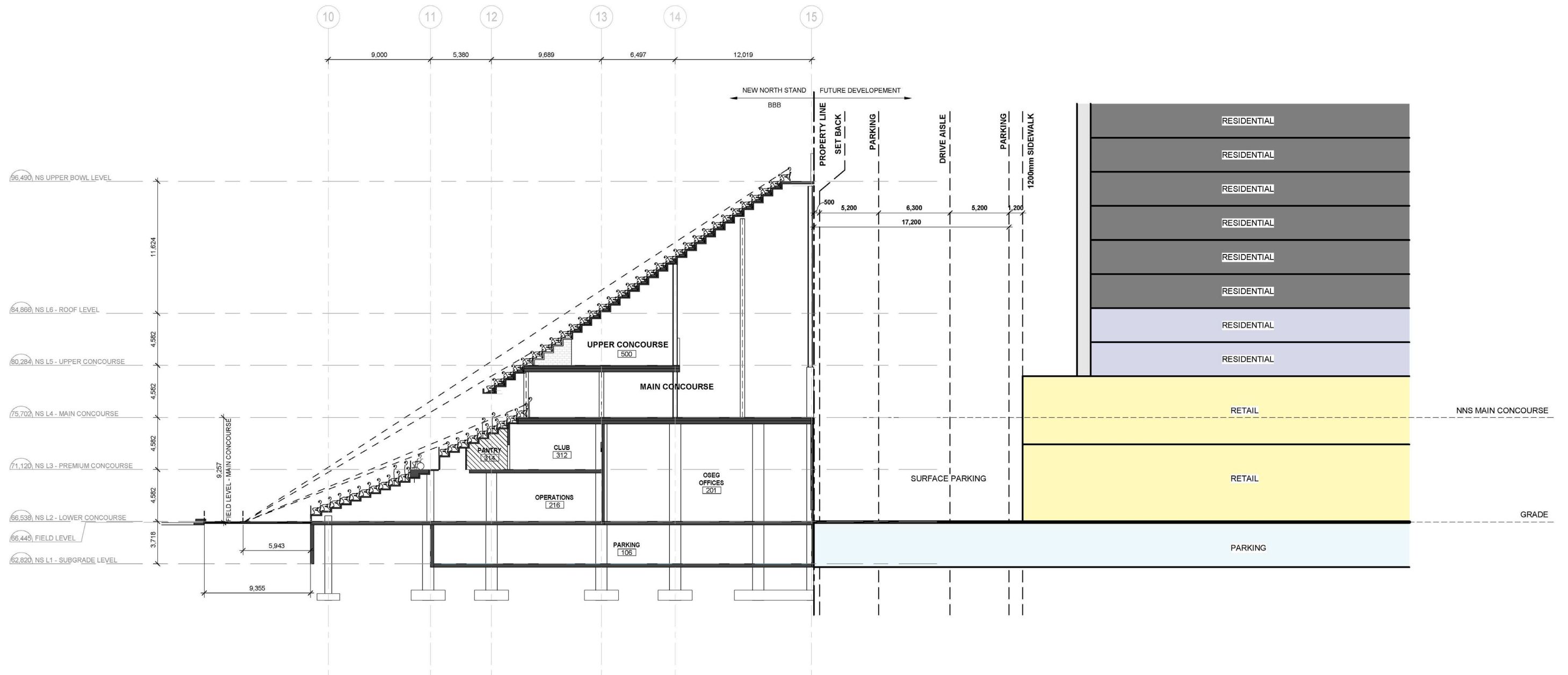


North Side Stands WITH PHASE 3 FUTURE DEVELOPMENT TOWERS MASSING — NORTH



North Side Stands WITH PHASE 3 FUTURE DEVELOPMENT TOWERS MASSING — SOUTH

STREET CROSS SECTION



SUSTAINABLE DESIGN

HIGH PERFORMANCE DEVELOPMENT STANDARDS

The proposed development of the North Stands is designed in conformance with the City's High Performance Development Standards. The North Stands Site Plan Tier 1 Metrics are as outlined:

Building Energy Efficiency

Mechanical: The building will use a heat pump system which allows it to share heating and cooling energy between different areas in the building. The heat pump loop will be utilized to provide heating and cooling to the building and to recover heat. The building envelope will be designed to meet ASHRAE and local code requirements for insulation and performance. Demand control ventilation will be deployed throughout the building to ensure that ventilation is provided only in the quantities required based on occupancy of the building saving energy during low and unoccupied times. High-efficiency condensing boilers will be used to provide additional heat to the building if there is insufficient recovered heat. Variable speed drives will be provided on all pumps and fans to ensure minimal energy consumption of these devices. Where possible, free cooling will be utilized to maintain interior space temperatures during the winter and shoulder seasons.

Electrical: The electrical design for the Project will provide efficiency, reliability, ease of maintenance and flexibility through robust and secure power distribution systems of sufficient capacity and redundancy; and will support the immediate, short-term and long-term requirements of the functional technologies and functional programs identified for the North Stands.

The electrical systems will be coordinated to minimize interferences while maximizing efficiency e.g. vertically stacked electrical and IT riser rooms that will be strategically located centrally to service the program areas, whereas mechanical shafts will be located to ensure there are minimum crossings between mechanical and electrical services. This process will enable the team to optimize systems and reduce operating and maintenance costs. Some specific electrical strategies that will be implemented to fulfil this goal include:

- most efficient and effective use of all power distribution components to ensure major components such as the power transformers and associated switchgear are not left idle;
- all electrical equipment is provided with sufficient clearance, access routes and panels to allow for easy removal and replacement;
- adequate space, spare capacity and cable pathways are provided

to allow for future use;

- selection of electrical equipment from reputable manufacturers based upon lifecycle, energy efficiency, maintenance, accessibility and serviceability;
- lighting systems design with effective application of natural lighting c/w daylight harvesting sensors to dim or turn off lights where possible;
- high efficiency and high colour rendering LED lamps and energy saving electronic drivers complete with an average lamp life of 50,000 hours that minimizes material use and failures;
- luminaires that meet CUL/CSA and LM-79 and LM-80 standards, complete with 5-year warranties on all components, and are Energy Star qualified;
- lighting controls that provide flexibility, easy set up and quick reconfiguration of program spaces.

Site Plan Accessibility

The accessibility document developed for the site provides directions and guidelines to achieve the highest universal accessibility standards for the outdoor environment, be it in the mixed-use, the urban park or around the North Stands. The document also speaks to considerations for accessibility for other disciplines as well such as lighting, transportation, public art and interpretation and signage and wayfinding. It also identifies accessibility challenges that are often found in developments, and ways in which the project team can implement best design practices and sets out a process where the detailed design development and construction would be undertaken through a compliance review process to ensure that the highest possible universal accessibility standards have been met.

Lansdowne 2.0 site demonstrates a sustainable universally accessible site that is inclusive of all people. Universal Design principles will inform the requirements of the site as a whole and will be an integral component of each separate design element. Taking a comprehensive accessible design approach to the entire site and applying Universal Design principles to all of the site elements ensures a cohesive and symbiotic relationship between individual elements and the neighborhood as a whole. In addition, each built design element of the site, from the North Stands and the Event Centre to the mixed use and residential components will be evaluated using a universal design lens to ensure it is accessible to all possible users.

Fresh Air Intake

The intakes will be located above grade in areas that are not accessible to the public. They will maintain the required clearances to all exhaust outlets

and other building openings. The intakes will be protected with louvres, bird screens and other measures to ensure the function as designed.

Tree Planting

A substantial tree planting strategy is a key element of civic infrastructure that enhances the attractiveness, comfort and safety of the public realm. Not only do trees elevate civic status, they help to mitigate urban heat island effects, filter the air, absorb and filter stormwater, and provide habitat. They also slow the pace and intensity of street activity and reduce pedestrians' perception of traffic volume and speed, ultimately creating more desirable places in which to linger and socialize. Close attention should be paid to the conditions in which they are planted and to their long-term maintenance. Robust tree plantings will establish a new and consistent identity throughout Lansdowne. Important considerations for the tree strategy are:

- A large canopy of broadleaf deciduous trees should be selected for disease resistance, distinct winter form and a continuous overhead canopy.
- Coniferous trees should not be used in the pedestrian realm for visibility, microclimate and safety reasons. Most trees proposed are deciduous trees.
- Native or adapted species with low watering requirements should be used wherever possible.
- Species should be selected to provide shade and cooling during summer and wind protection in winter and should be appropriately matched to urban conditions.
- Street trees should be planted in subsurface soil volumes that are sufficient for the growth of substantial, healthy tree canopies. Structural soil cells or equivalent should be utilized to maximize root access to required soil volumes. Where continuous trenches and soil cells aren't feasible, structural soils or equivalent should be used.
- Where trees are planted over slab, sunken slab or other structural strategies should be used to enable sufficient soil volume for tree planting.
- To enhance the livability of the public realm without excessive clutter, the use of raised planters should be avoided unless their use enhances the design of the public realm (such as taking up grade or providing seating).

- Shrubs and perennials should be native or adapted species with low watering requirements. They should be selected for their contribution to the form, performance, and connection to the park.

Plant Species

The trees selected for the Lansdowne 2.0 project have been chosen based on their connection to the existing Lansdowne site and their environmental value. The plan uses trees that are either native or disease resistant varieties of native trees. The proposed trees also reflect the species that are currently doing well on the site while taking new site conditions into consideration.

Exterior Lighting

Perception of Safety - Night lighting must provide a level of visibility which is suitable for the intended activities in the space. Full colour, glare free light is required for movement in otherwise dark environments. People need to be able to see in all directions to sense danger and to have a feeling of security. The psychological perception of safety is as important as actual protection from danger.

Brightness management - It is essential to understand how the eye perceives the effect of light at night. People see the brightness of light reflected from a surface. It is the impact of the relative brightness and relative colour that gives visual recognition. Good lighting design is the management of the relative brightness. Excessive relative brightness becomes glare and restricts one's ability to see. Glare is to be avoided.

Adaptation - As people move from one space to another, adaptation time is required for the eye to adjust to changes in light quantity.

Vertical Illumination - Lit vertical surfaces provide silhouetted revelation of form especially as people are seen moving against the lit background. Vertical illumination on people's faces is essential throughout the public realm to allow for safe recognition. Most of the spaces and pathways at Lansdowne 2.0 will require light from sources above head height.

Lighting Fixtures - Lansdowne 2.0 offers a challenge and opportunity to answer many of the, sometimes conflicting, lighting requirements with an innovative solution. Today's environmental issues of wasting light energy combined with new LED technologies (2500-3000 °K), combined with safety and wayfinding, all add up to a role for a lighting solution.

General Lighting Hardware - Except for featured lighting fixtures,

lighting hardware should be chosen from the catalogs of time tested, major manufacturers. If custom parts or modifications are required the availability of a product over a long time period must be considered. It is a good strategy to acquire and store additional fixtures.

Energy Efficiency - We will specify the correct efficient light source that will meet all the visual requirements, thereby helping people to see and feel comfortable

without using more light than is absolutely necessary. If the light does not meet these needs it is not saving energy. The most successful lighting designs use light only where needed for the task, for the periods of time required and they use it as little as possible. The lighting control system will assist in saving energy by turning lights off and on as required for various functions.

Bird-Safe Design

The bird-safe design elements to be implemented are included in the next section of this report.

Cool Landscape and Paving

Paving is the most pervasive element connecting the North Stands to the Event Centre, thus creating a new plaza and large gathering space. Coordinated paving materials, paver dimensions, colours, and textures contribute to the visual coherence of the overall site by communicating distinct streetscape activity and transition zones. Throughout the site, all paved surfaces will be articulated as public spaces, safe for loading areas. Different paved surface typologies hold differing performance criteria. The paved surfaces within the site include vehicular traffic, shared vehicular and pedestrian zones, pedestrian-only zones, and pedestrian paths (formal, informal and fine-grained).

- The project is targeting non-roof impervious surfaces to have an SRI (Solar Reflectance Index) greater than 29. High albedo (light-coloured) pavers and concrete will be used to mitigate the urban heat island. Colour and finish will be coordinated through Detail Design and to match Exhibition Way guidelines.
- Paving types should be differentiated through integral distinctions rather than temporary applications.
- Pedestrian crosswalks shall be distinguished through slight paving variation and the use of banding to communicate pedestrian access.
- Durability to snow clearing equipment, freeze-thaw cycles and general wear and tear should be of high priority. Load requirements will be met for all paving types through appropriate base courses,

materials and thicknesses.

- Tactile wayfinding surfacing for accessibility will be coordinated and integrated with paving so as to be part of the overall paving pattern. The sidewalk should be continuous across private vehicle access and egress points so vehicles do not interfere with pedestrian priority.
- Where not over slab, a rigid base course should be used for stability and drainage.
- Accessible crossings should be clearly communicated but integrated into the overall paving pattern and colour scheme.
- The areas accessible to vehicles are clearly communicated through a hierarchy of paving types and layouts.

Common Area Waste Storage

There is an interior common waste and recycling storage area located on Level 1 of the Event Centre, which is shared between the two buildings.

Electric Vehicle Parking

Electric vehicle parking is included in the L1 subgrade level of the North Stands.

Bicycle Access and Storage

Exterior bike supports are provided near the North Stands entrance and bike storage is also provided in the L1 subgrade level.

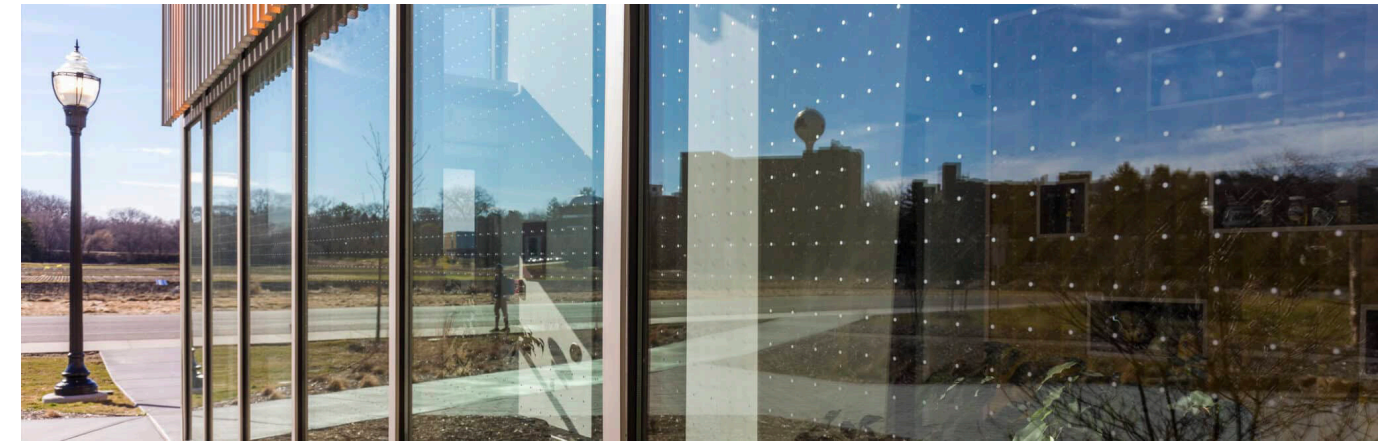
LEED® CERTIFICATION

Additionally, the North Stands will target LEED® certification, which implements a point system across several categories, including energy efficiency, water usage, sustainable site development, material selection. Sustainable strategies for the North Stands may include implementing a high-performance building envelope, efficient lighting, heat recovery, external shading, daylight harvesting, natural ventilation, low-flush fixtures, rainwater capture, enhanced energy metering, and advanced control systems allowing facility operators to adjust energy consumption based on power needs at any given time.

BIRD SAFE DESIGN GUIDELINES

The following bird-safe design elements will be implemented to reduce risks to birds:

- Use of specified bird-safe glass or integrated protection measures to treat at least 90% of exterior glazing within the first 16 m of height or to the height of the adjacent mature tree canopy.
- Use of specified bird-safe glass or integrated protection measures to treat any glazing adjacent to a green roof, rooftop garden or garden terrace to a height of 4 m or to the height of the adjacent mature vegetation.
- Elimination of fly-through effects (e.g., glass corners, parallel glass) and other traps from building design or use specified bird-safe glass or integrated protection measures.
- Adherence to bird safe glass that follow these specifications:
 - High colour contrast to the glass surface.
 - Application to the exterior (first) surface of the glass.
 - A visual marker (i.e. lines, dots, etc.) with spacing of 50 mm by 50 mm is used.
 - Individual marker elements with a minimum of 4 mm diameter, or 2 mm wide by 8 mm long for linear elements.



APPENDICES

- A) Site Plans Phased & Detailed
- B) Floorplans & Elevations
- C) Landscape Plan
- D) Grading and Drainage Plan
- E) Site Servicing Plan
- F) Shadow Analysis
- G) Wind Analysis
- H) Heritage Impact Statement

IN PROGRESS



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MULVEY & BANANI

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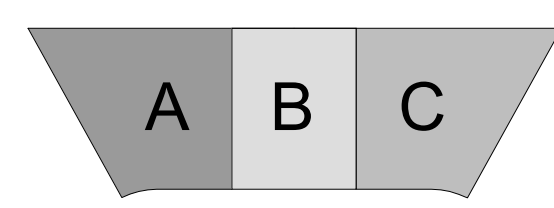


319 MCRAE AVENUE, SUITE 502
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NO.	DESCRIPTION	DATE
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3	ISSUED FOR DD PROGRESS SET - 75%	2024/11/01
2	ISSUED FOR DD PROGRESS SET - 50%	2024/10/18
1	ISSUED FOR DD PROGRESS SET	2024/10/04

REVISIONS/ ISSUES

CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY OMISSIONS OR DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK. DO NOT SCALE THE DRAWINGS



SEAL

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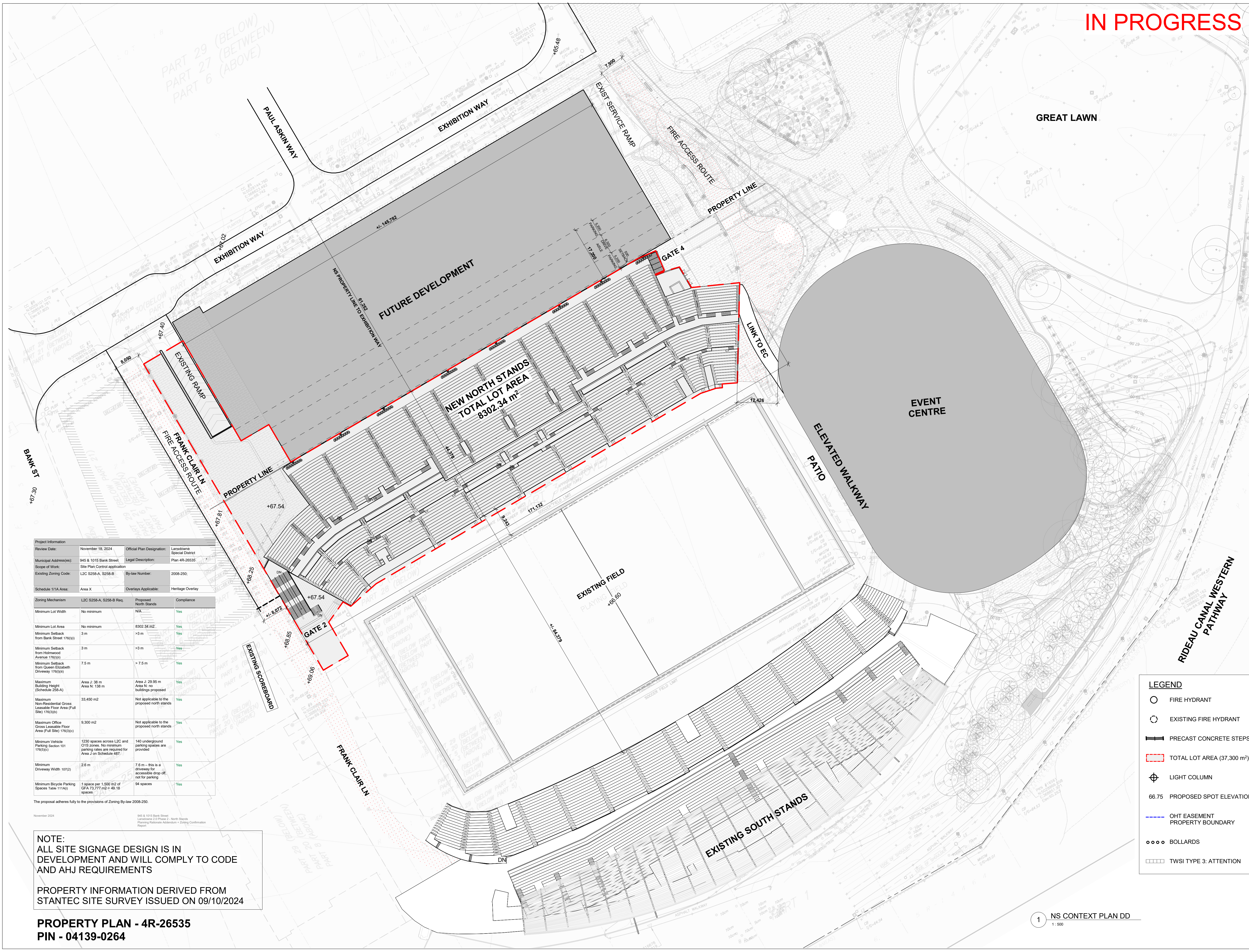
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LANDSDOWNE 2.0 EVENT CENTRE, NORTH SIDE STANDS AND PUBLIC REALM ENHANCEMENTS

1015 Bank st, Ottawa, ON K1S 5J3

DWG TITLE SITE PLAN CONTEXT

SCALE	As indicated	DWG. NO.	NS-A1-001
PROJ. NO.	2008.3		



Project Information			
Review Date:	November 18, 2024	Official Plan Designation:	Lansdowne Special District
Municipal Address(es):	945 & 1015 Bank Street	Legal Description:	Plan 4R-26535
Scope of Work:	Site Plan Control application		
Existing Zoning Code:	L2C S258-A, S258-B	By-law Number:	2008-250
Schedule 1/1A Area:	Area X	Overlays Applicable:	Heritage Overlay
Zoning Mechanism			
L2C S258-A, S258-B Req.	Proposed North Stands	Compliance	
Minimum Lot Width	No minimum	N/A	Yes
Minimum Lot Area	No minimum	8302.34 m ²	Yes
Minimum Setback from Bank Street 1760(x)	3 m	>3 m	Yes
Minimum Setback from Holmwood Avenue 1760(y)	3 m	>3 m	Yes
Minimum Setback from Queen Elizabeth Driveway 1760(z)	7.5 m	> 7.5 m	Yes
Maximum Building Height (Schedule 258-A)	Area J: 38 m Area N: 138 m	Area J: 29.95 m Area N: m buildings proposed	Yes
Maximum Non-Residential Gross Leasable Floor Area (Full Site) 1763(x)	33,450 m ²	Not applicable to the proposed north stands	Yes
Maximum Office Gross Leasable Floor Area (Full Site) 1763(y)	9,300 m ²	Not applicable to the proposed north stands	Yes
Minimum Vehicle Parking spaces 101 1765(c)	1230 spaces across L2C and O15 zones. No minimum parking rates are required for Area J on Schedule 487	140 underground parking spaces are provided	Yes
Minimum Driveway Width 1072)	2.6 m	7.6 m - this is a driveway for accessible drop off, not for parking	Yes
Minimum Bicycle Parking Spaces Table 111A(i)	1 space per 1,500 m ² of GFA 73,777 m ² = 49.18 spaces	94 spaces	Yes

The proposal adheres fully to the provisions of Zoning By-law 2008-250.

NOTE: ALL SITE SIGNAGE DESIGN IS IN DEVELOPMENT AND WILL COMPLY TO CODE AND AHJ REQUIREMENTS

PROPERTY INFORMATION DERIVED FROM STANTEC SITE SURVEY ISSUED ON 09/10/2024

PROPERTY PLAN - 4R-26535
PIN - 04139-0264

1 NS CONTEXT PLAN DD
1:500

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2	ISSUED FOR DD PROGRESS SET - 50%	2024/10/18
1	ISSUED FOR DD PROGRESS SET - 25%	2024/10/04

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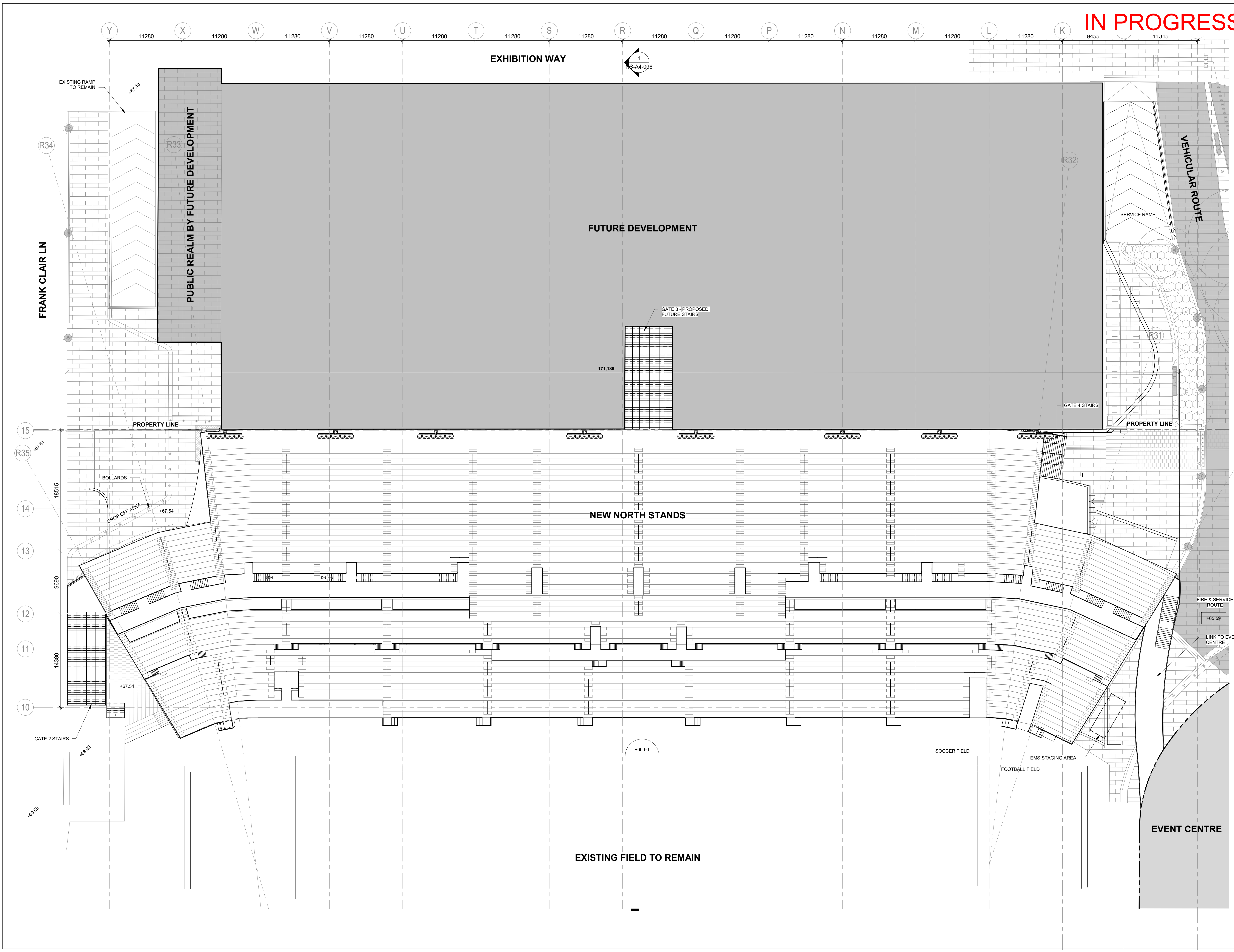
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EVENT CENTRE,
NORTH SIDE STANDS
AND PUBLIC REALM
ENHANCMENTS
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DWG. TITLE
SITE PLAN

SCALE	1 : 250	DWG. NO.	NS-A1-002
PROJ. NO.	2008.3		



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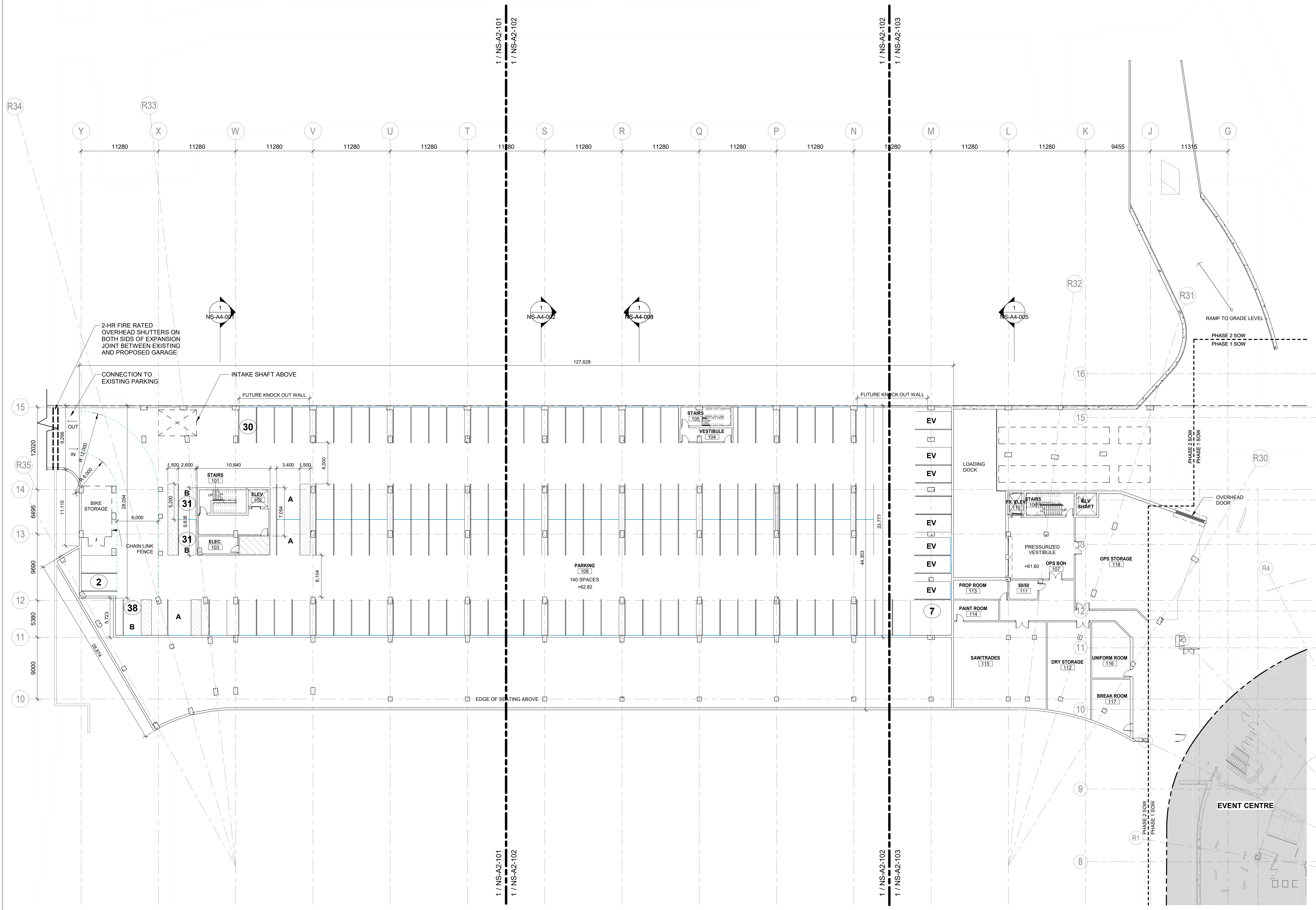
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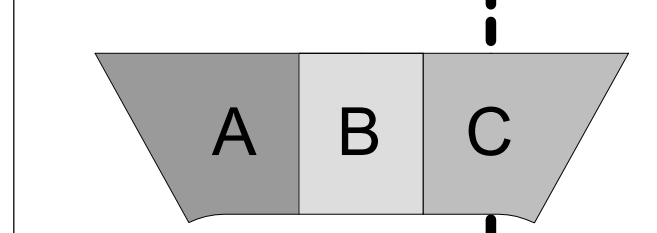
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NO.	DESCRIPTION	DATE
1	ISSUED FOR DD PROGRESS SET - 50%	2024/10/04
2	ISSUED FOR DD PROGRESS SET - 50%	2024/10/04
3	ISSUED FOR DD PROGRESS SET - 75%	2024/11/01
4	ISSUED FOR SITE PLAN APPROVAL	TBD

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NORTH SIDE STANDS
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ENHANCEMENTS

1015 Bank st, Ottawa, ON K1S 5J3

DWG. TITLE
LEVEL 1 - SUBGRADE LEVEL -
FLOOR PLAN

SCALE 1 : 250
PROJ. NO. 2008.3
DWG. NO. NS-A2-100

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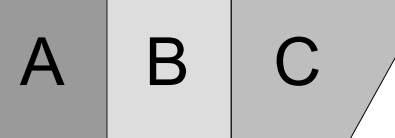
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(613) 729-4536
LANDSCAPE ARCHITECT

4	ISSUED FOR SITE PLAN APPROVAL	TBD
3	ISSUED FOR DD PROGRESS SET - 75%	2024/11/01
2	ISSUED FOR DD PROGRESS SET - 50%	2024/10/18
1	ISSUED FOR DD PROGRESS SET	2024/10/04

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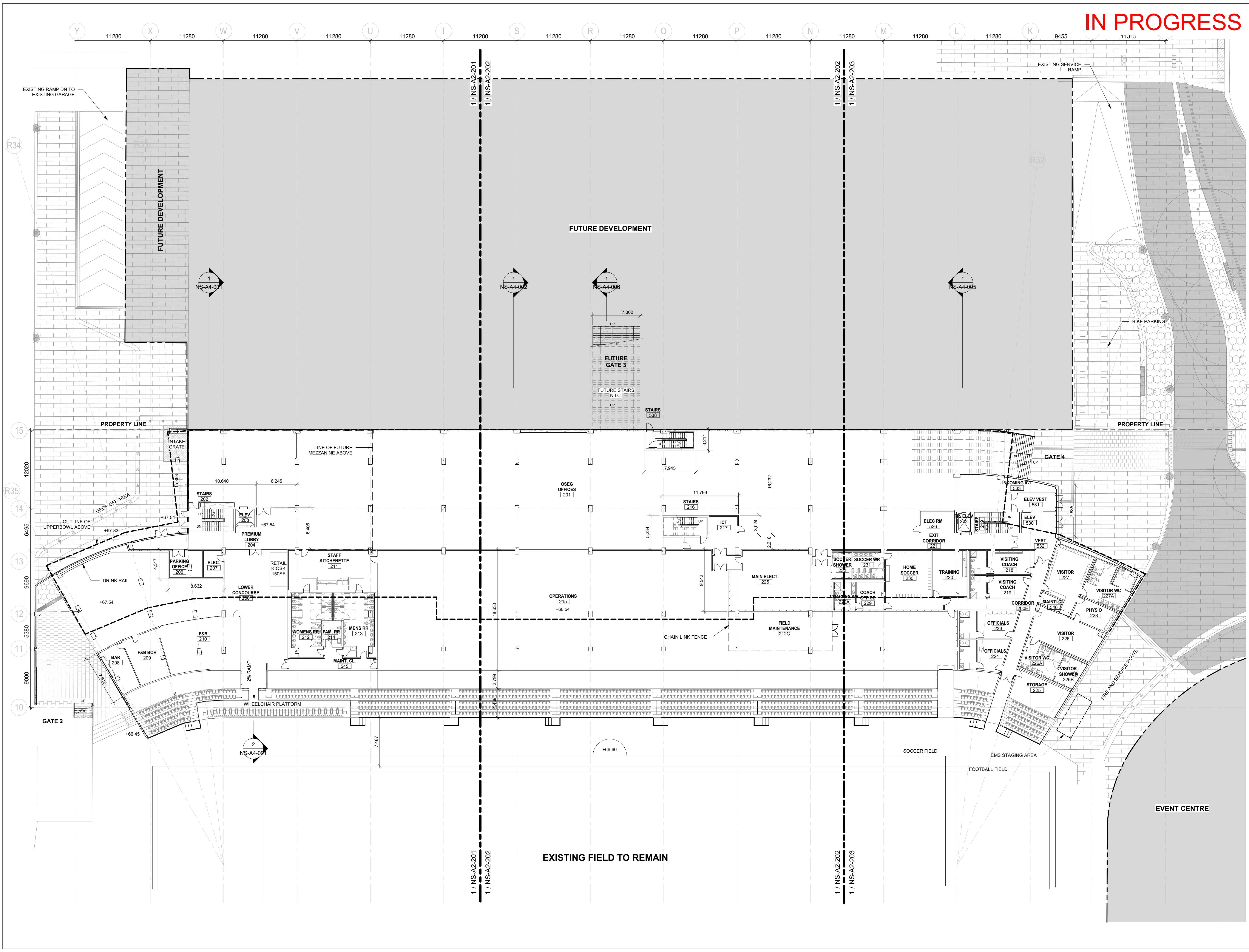
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EVENT CENTRE,
NORTH SIDE STANDS
AND PUBLIC REALM
ENHANCMENTS

1015 Bank st, Ottawa, ON K1S 5J3

DWG. TITLE
LEVEL 2 - LOWER CONCOURSE
- FLOOR PLAN

SCALE 1 : 250
PROJ. NO. 2008.3
DWG. NO. NS-A2-200



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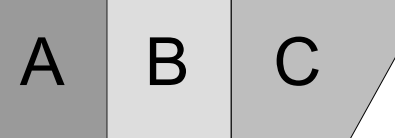
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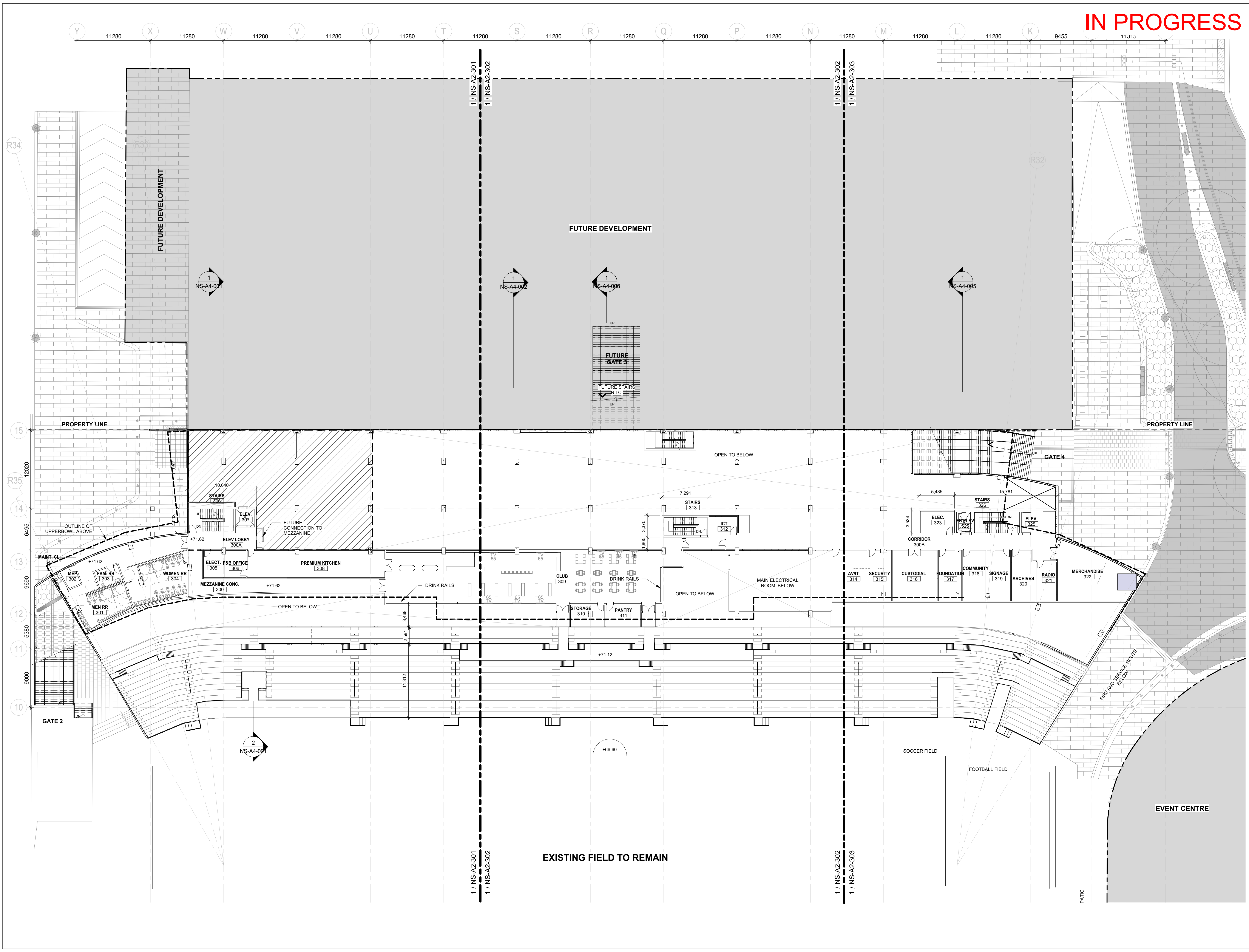
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EVENT CENTRE,
NORTH SIDE STANDS
AND PUBLIC REALM
ENHANCMENTS

1015 Bank st, Ottawa, ON K1S 5J3

DWG. TITLE
LEVEL 3 - PREMIUM
CONCOURSE - FLOOR PLAN

SCALE 1 : 250
PROJ. NO. 2008.3
DWG. NO. NS-A2-300



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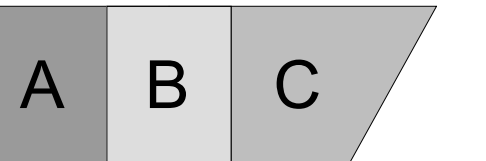
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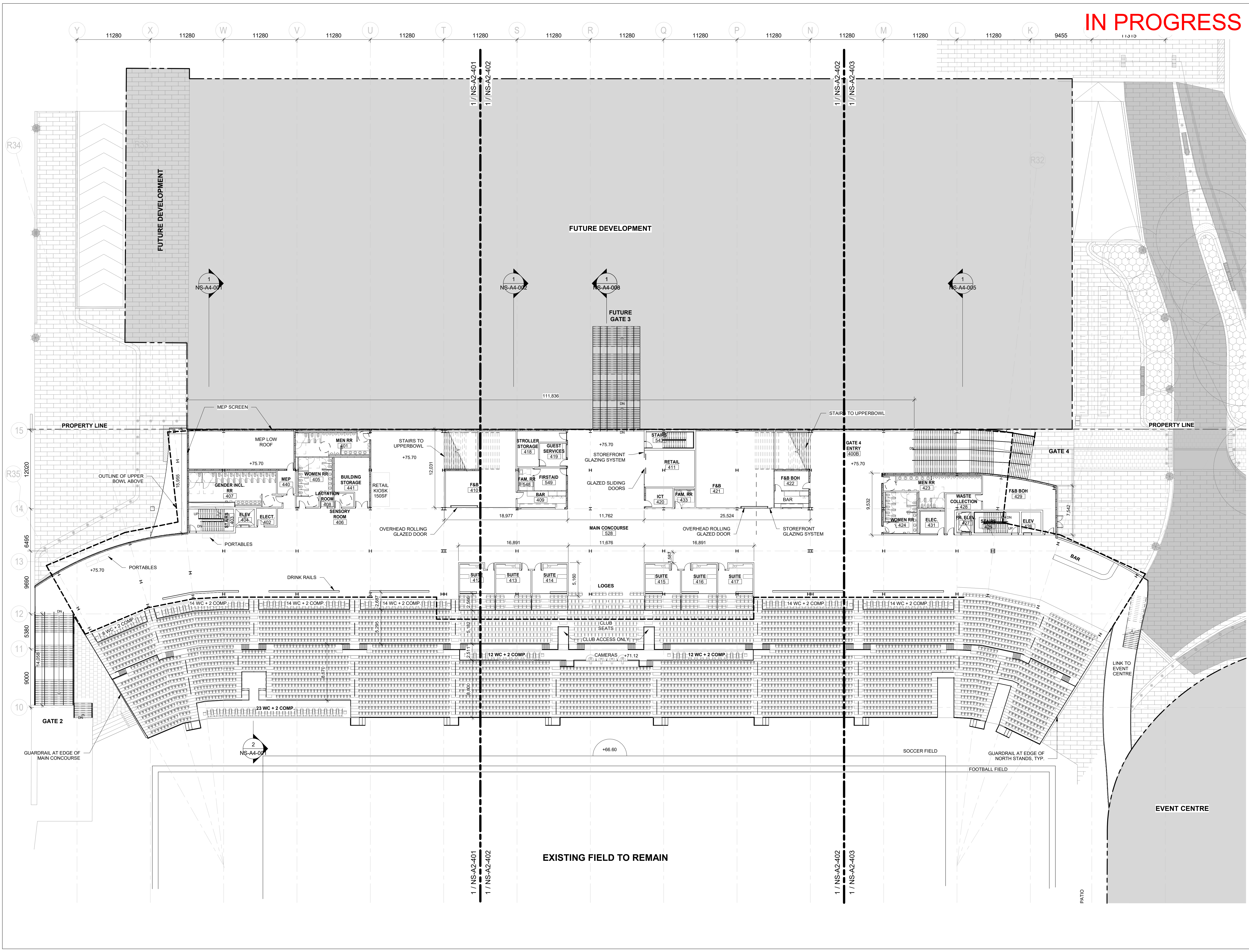
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DWG. TITLE
LEVEL 4 - MAIN CONCOURSE -
FLOOR PLAN

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PROJ. NO. 2008.3
DWG. NO. NS-A2-400



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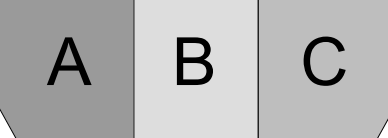
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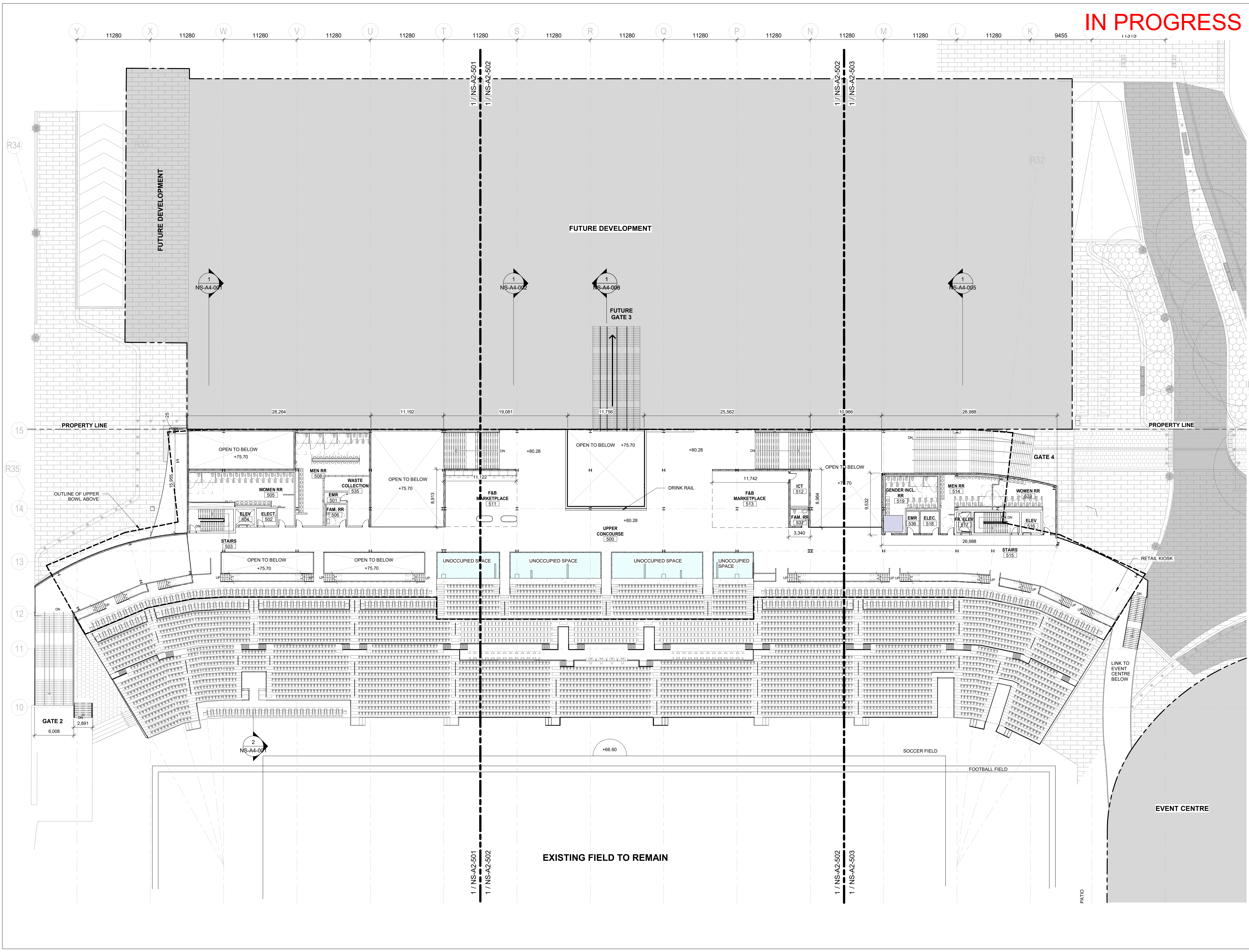
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LANDSDOWNE 2.0 EVENT CENTRE, NORTH SIDE STANDS AND PUBLIC REALM ENHANCMENTS

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DWG. TITLE
LEVEL 5 - UPPER CONCOURSE - FLOOR PLAN

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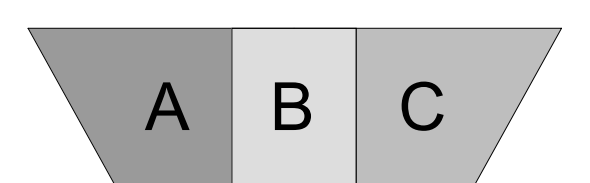


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3	ISSUED FOR DD PROGRESS SET - 75%	2024/11/01
2	ISSUED FOR DD PROGRESS SET - 50%	2024/10/18
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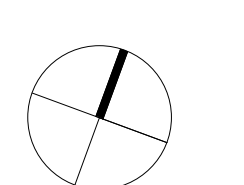
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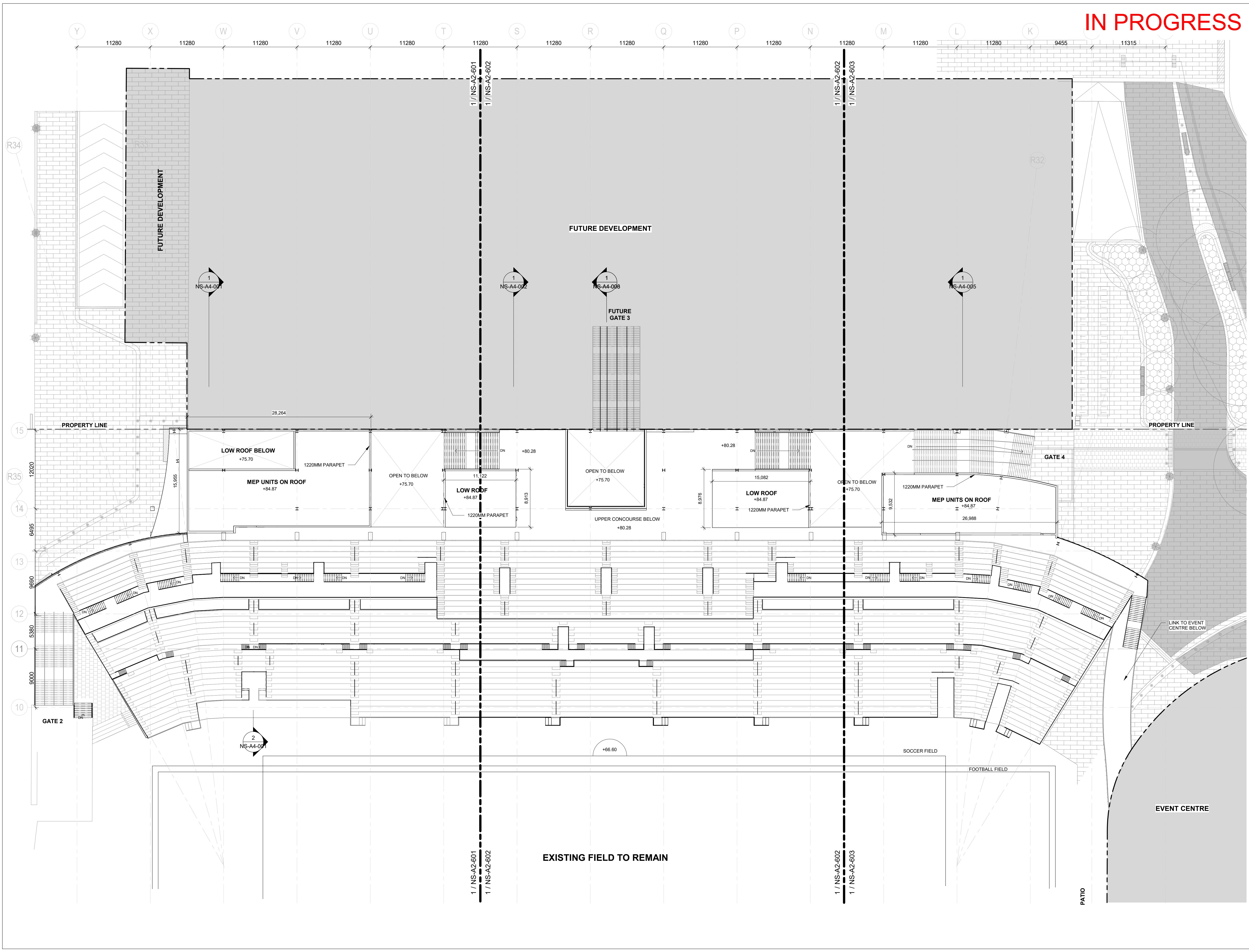
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DWG. TITLE
LEVEL 6 - ROOF LEVEL - FLOOR
PLAN

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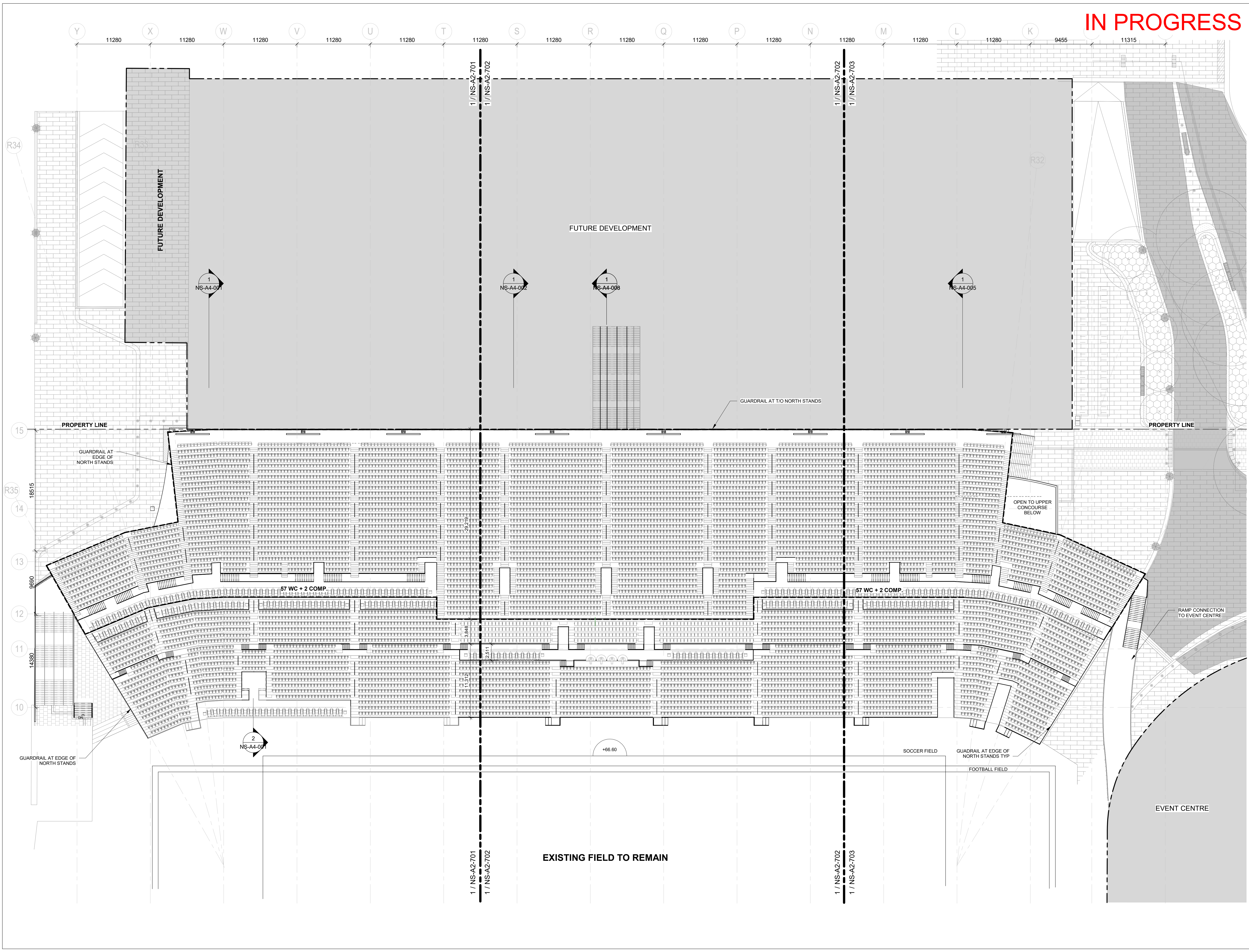
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EVENT CENTRE,
NORTH SIDE STANDS
AND PUBLIC REALM
ENHANCMENTS**

1015 Bank st, Ottawa, ON K1S 5J3

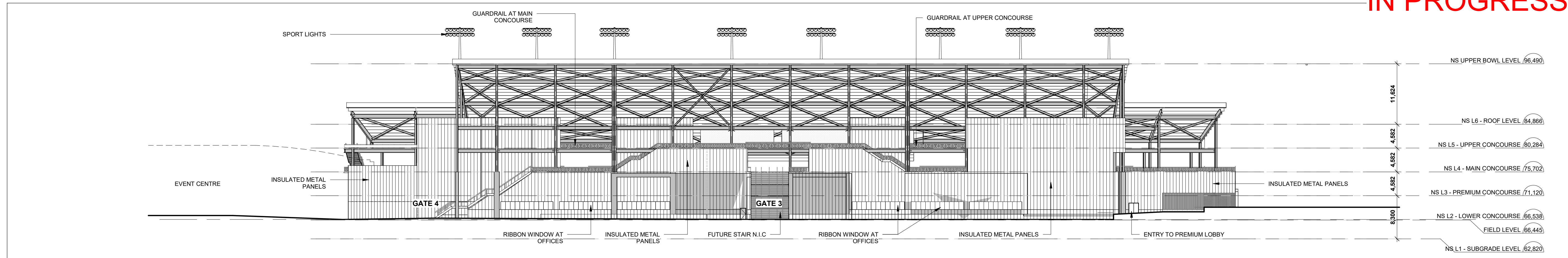
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**LEVEL 7 -T/O NORTH STANDS -
FLOOR PLAN**

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PROJ. NO.	2008.3		

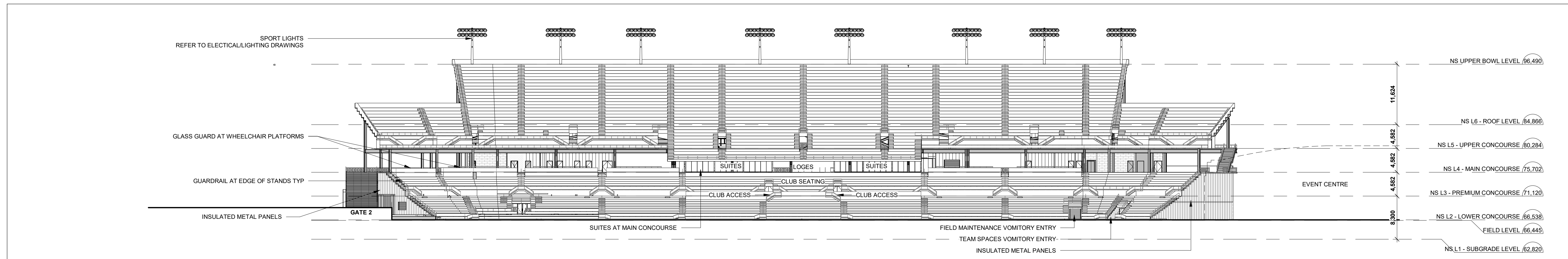


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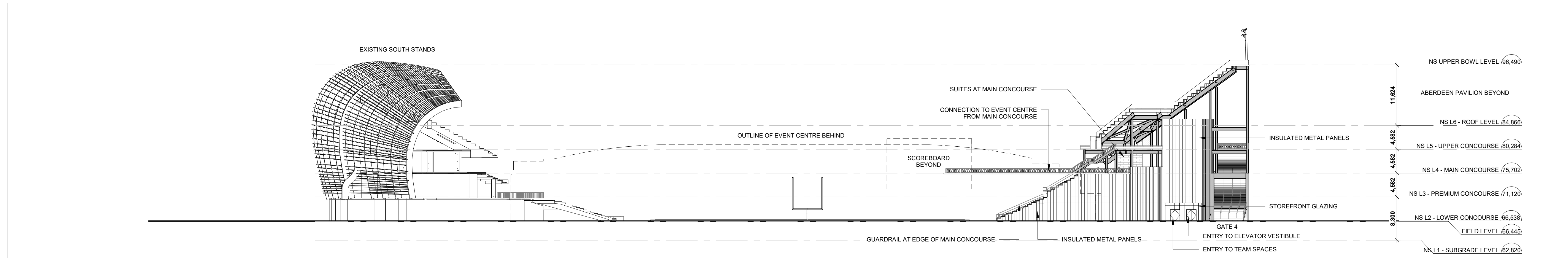
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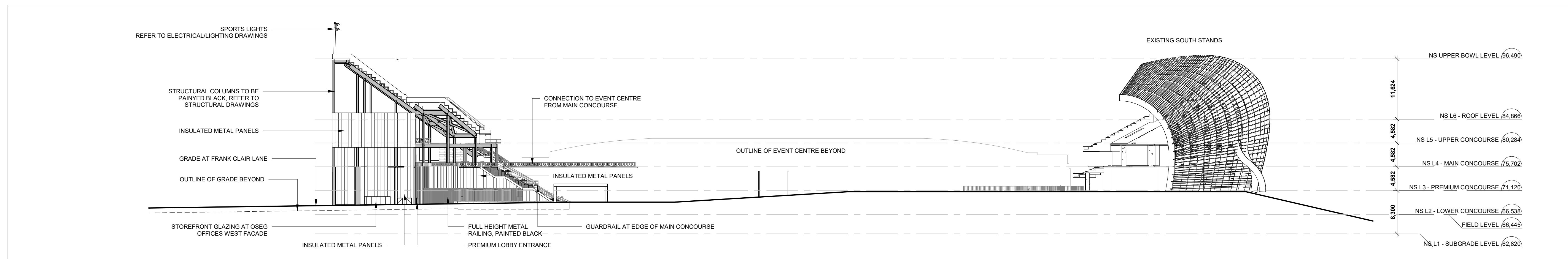
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1:400



3 NORTH STANDS - SOUTH ELEVATION DD
1:400



2 NORTH STANDS - EAST ELEVATION DD
1:400



1 NORTH STANDS - WEST ELEVATION DD
1:400



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ARCHITECT

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STRUCTURAL ENGINEER

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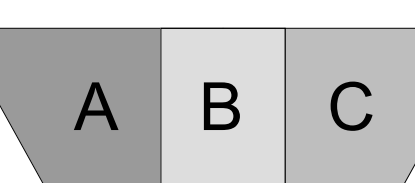
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LANDSCAPE ARCHITECT

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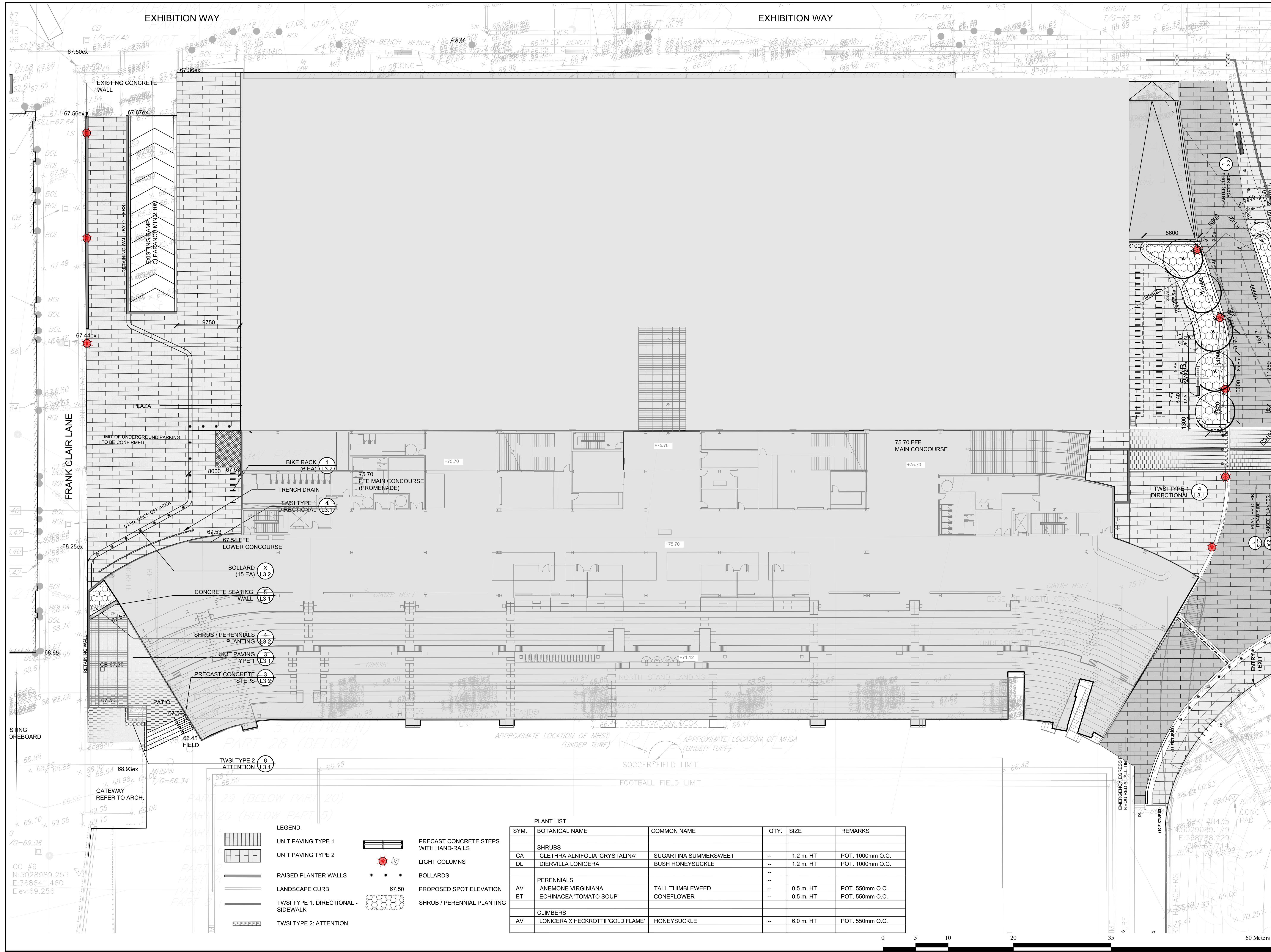
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DATE	24/10/04
CHECKED	TF

LANSDOWNE 2.0
EVENT CENTRE,
NORTH SIDE STANDS
AND PUBLIC REALM
ENHANCMENTS

1015 Bank st, Ottawa, ON K1S 5J3

DWG TITLE
OVERALL ELEVATIONS

SCALE	1 : 400	DWG. NO.	NS-A3-001
PROJ. NO.	2008.3		



NO.	DESCRIPTION	DATE
1	ISSUED FOR UDRP	2024-11-18
2	ISSUED FOR 50% DD	2024-10-18
3	ISSUED FOR 35% DD	2024-10-04

REVISONS/ ISSUES
 CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY OMISSIONS OR DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
DO NOT SCALE THE DRAWINGS



SEAL THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF PRELIMINARY SUBMITTAL



IT IS NOT TO BE USED FOR CONSTRUCTION PURPOSES

DRAWN	CM / JA
DATE	05/31/24
CHECKED	JC

LANSDOWNE 2.0
EVENT CENTRE,
NORTH SIDE STANDS AND
PUBLIC REALM
ENHANCEMENTS
 945 & 1015 BANK STREET

DWG. TITLE

LANDSCAPE PLAN
GROUND FLOOR

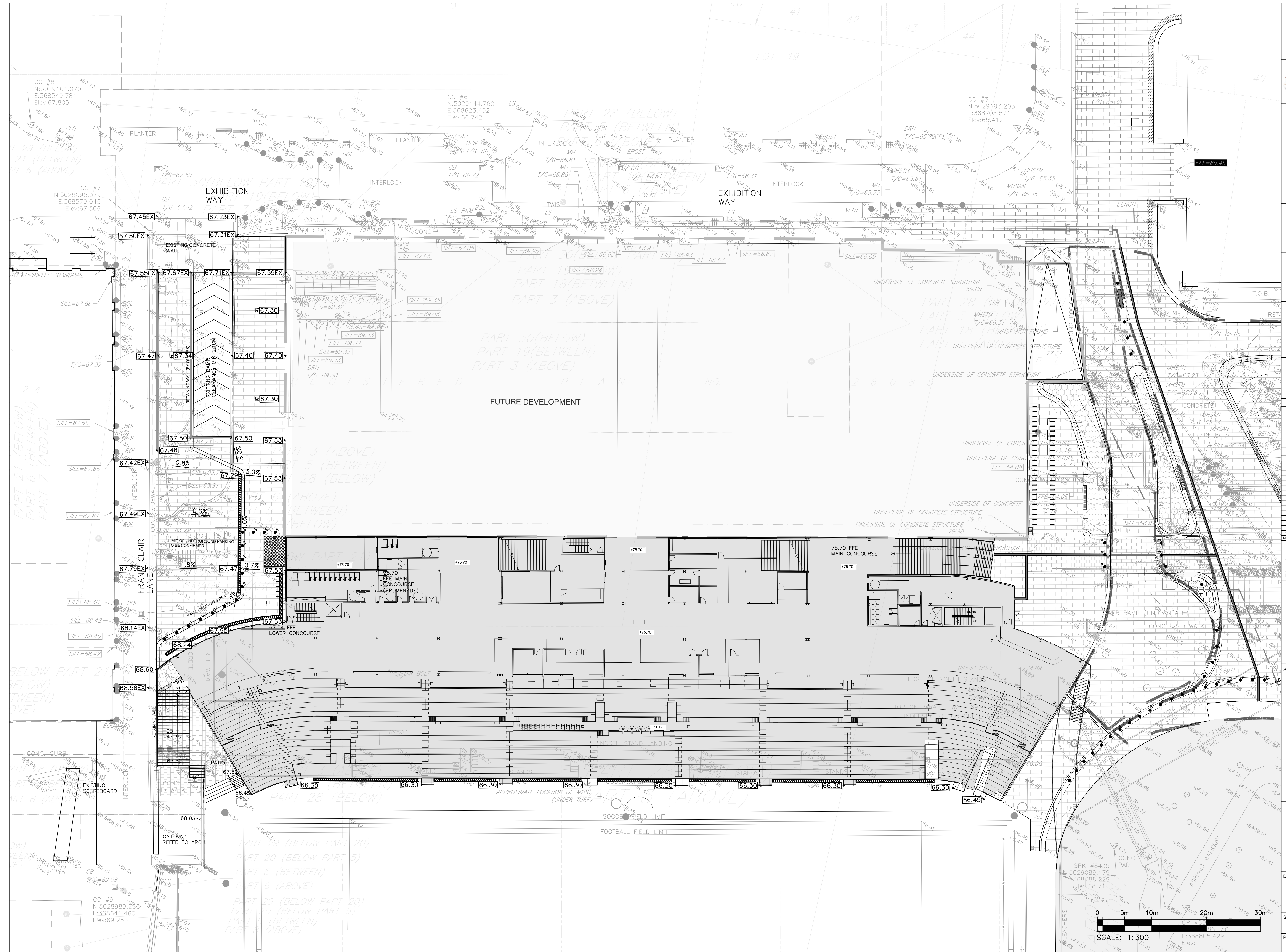
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PROJ. NO.	CSW #1766-12		

PLANT LIST

SYM.	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	REMARKS
	SHRUBS				
CA	CLETHRA ALNIFOLIA 'CRYSTALLINA'	SUGARTINA SUMMERSWEET	--	1.2 m. HT	POT. 1000mm O.C.
DL	DIERVILLA LONICERA	BUSH HONEYSUCKLE	--	1.2 m. HT	POT. 1000mm O.C.
	PERENNIALS				
AV	ANEMONE VIRGINIANA	TALL THIMBLEWEED	--	0.5 m. HT	POT. 550mm O.C.
ET	ECHINACEA 'TOMATO SOUP'	CONEFLOWER	--	0.5 m. HT	POT. 550mm O.C.
	CLIMBERS				
AV	LONICERA X HECKROTTII 'GOLD FLAME'	HONEYSUCKLE	--	6.0 m. HT	POT. 550mm O.C.

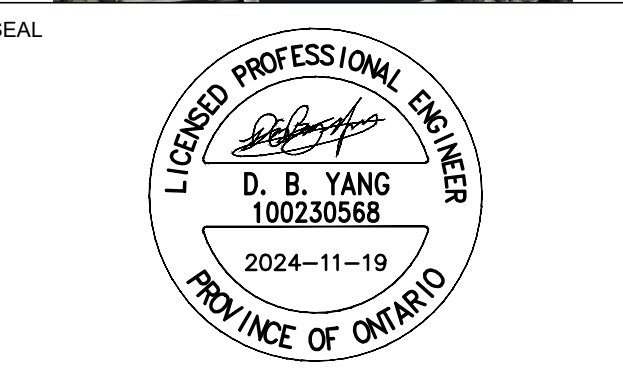
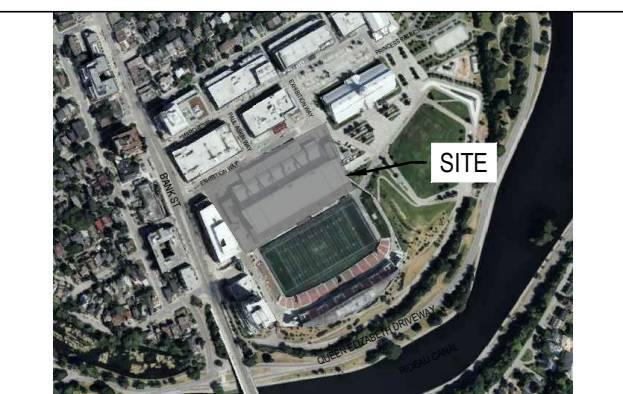
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- [Symbol] UNIT PAVING TYPE 1
 - [Symbol] UNIT PAVING TYPE 2
 - [Symbol] RAISED PLANTER WALLS
 - [Symbol] LANDSCAPE CURB
 - [Symbol] TWSI TYPE 1: DIRECTIONAL - SIDEWALK
 - [Symbol] TWSI TYPE 2: ATTENTION
 - [Symbol] PRECAST CONCRETE STEPS WITH HAND-RAILS
 - [Symbol] LIGHT COLUMNS
 - [Symbol] BOLLARDS
 - [Symbol] PROPOSED SPOT ELEVATION
 - [Symbol] SHRUB / PERENNIAL PLANTING

DATE PLOTTED: CC #9 N:5028989.253 E:368641.460 Elev:69.256



NO.	DESCRIPTION	DATE

REVISIONS/ ISSUES
 CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY OMISSIONS OR DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK. DO NOT SCALE THE DRAWINGS.



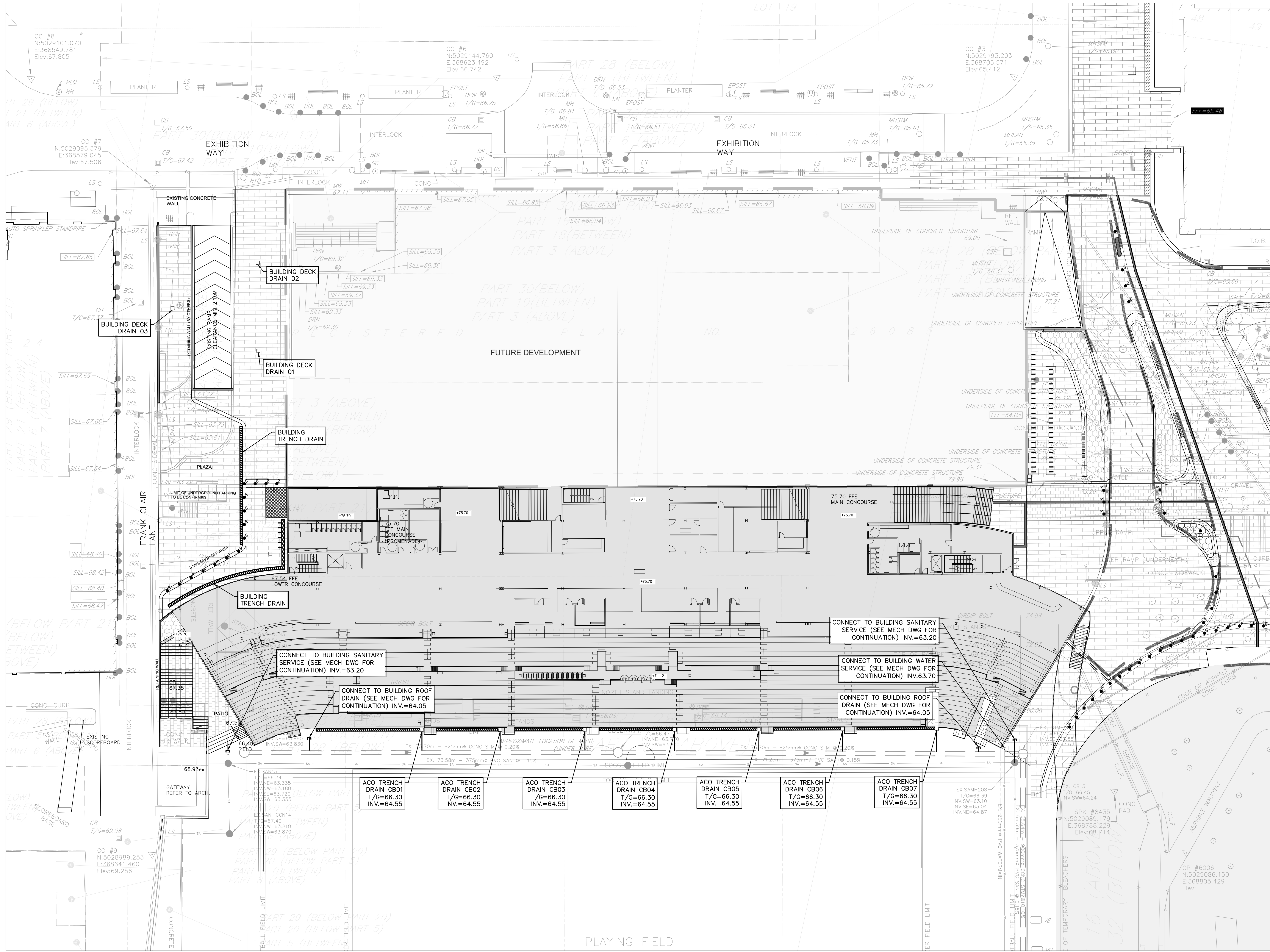
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DATE	2024/11/19
CHECKED	W.Y

LANSLOWNE NSS

DWG. TITLE	GRADING PLAN
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DWG. NO.	C04



DATE PLOTTED:



NO.	DESCRIPTION	DATE
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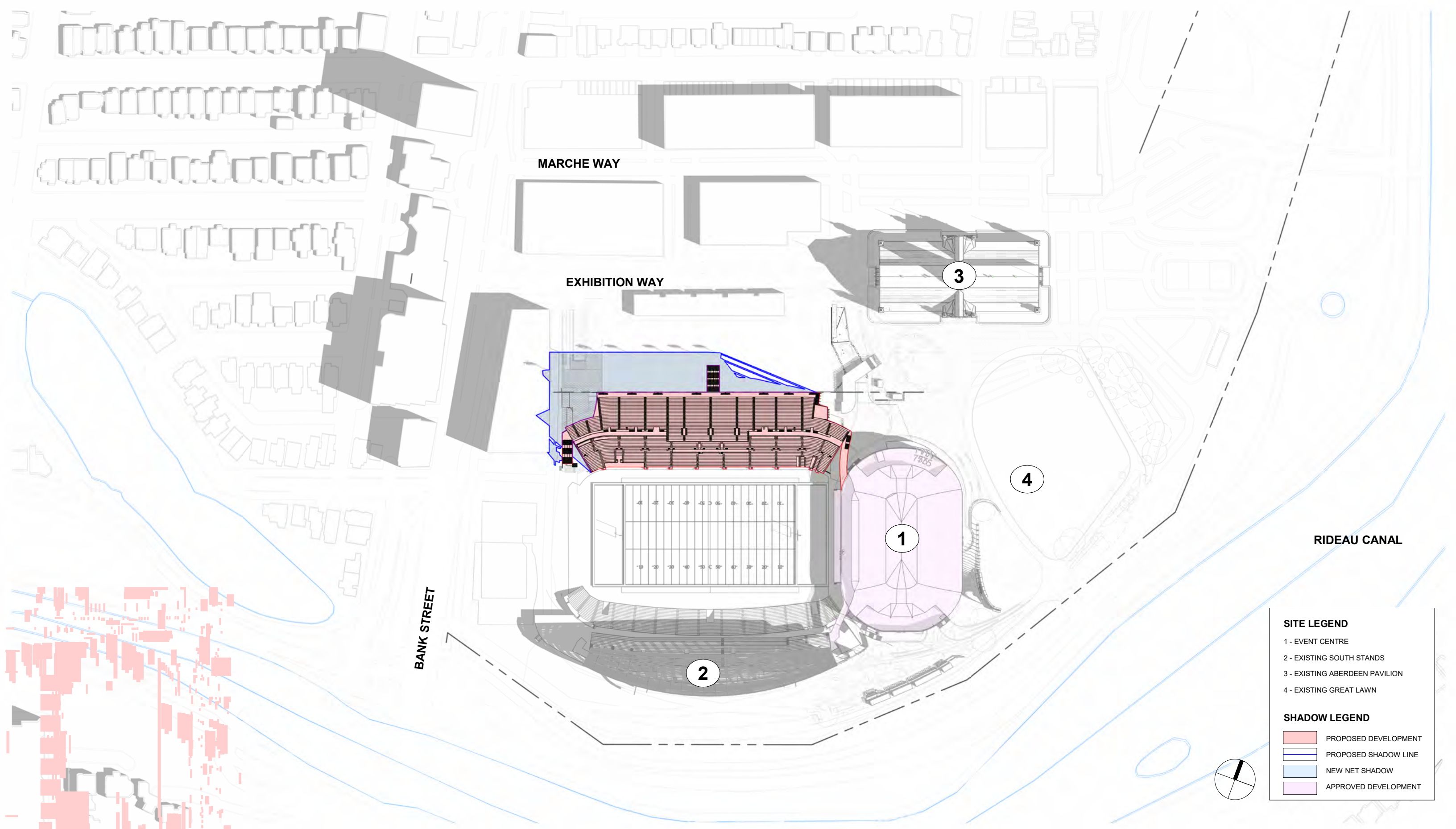
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DATE	2024/11/19
CHECKED	W.Y

LANSDOWNE NSS

DWG TITLE
SERVICING PLAN

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DATE PLOTTED:



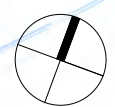
**LANSDOWNE NEW NORTH STANDS
SHADOW STUDY (JUNE 21 - 8 AM)**

SITE LEGEND

- 1 - EVENT CENTRE
- 2 - EXISTING SOUTH STANDS
- 3 - EXISTING ABERDEEN PAVILION
- 4 - EXISTING GREAT LAWN

SHADOW LEGEND

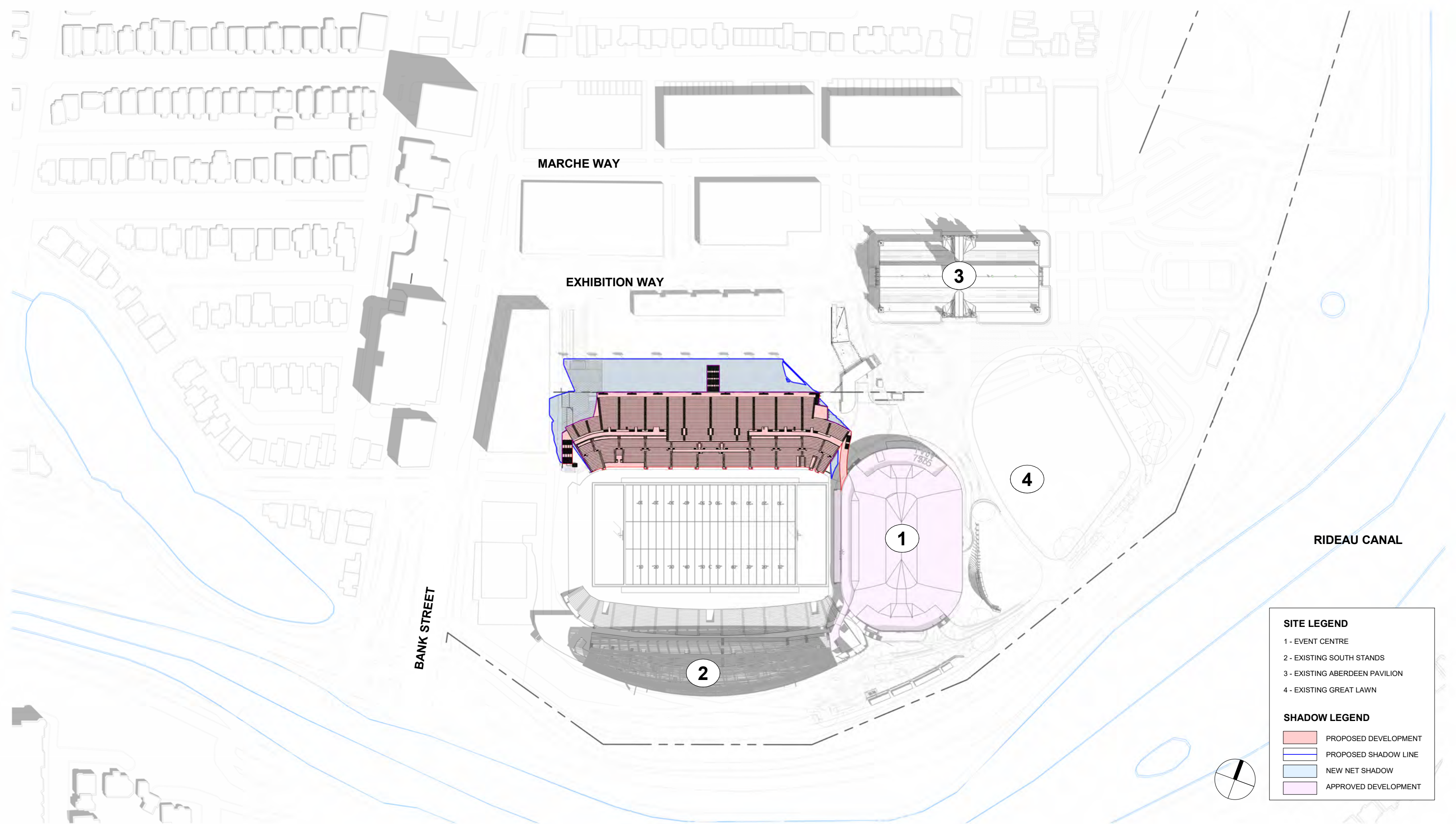
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- PROPOSED SHADOW LINE
- NEW NET SHADOW
- APPROVED DEVELOPMENT



SCALE: 1 : 2000

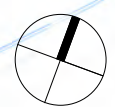
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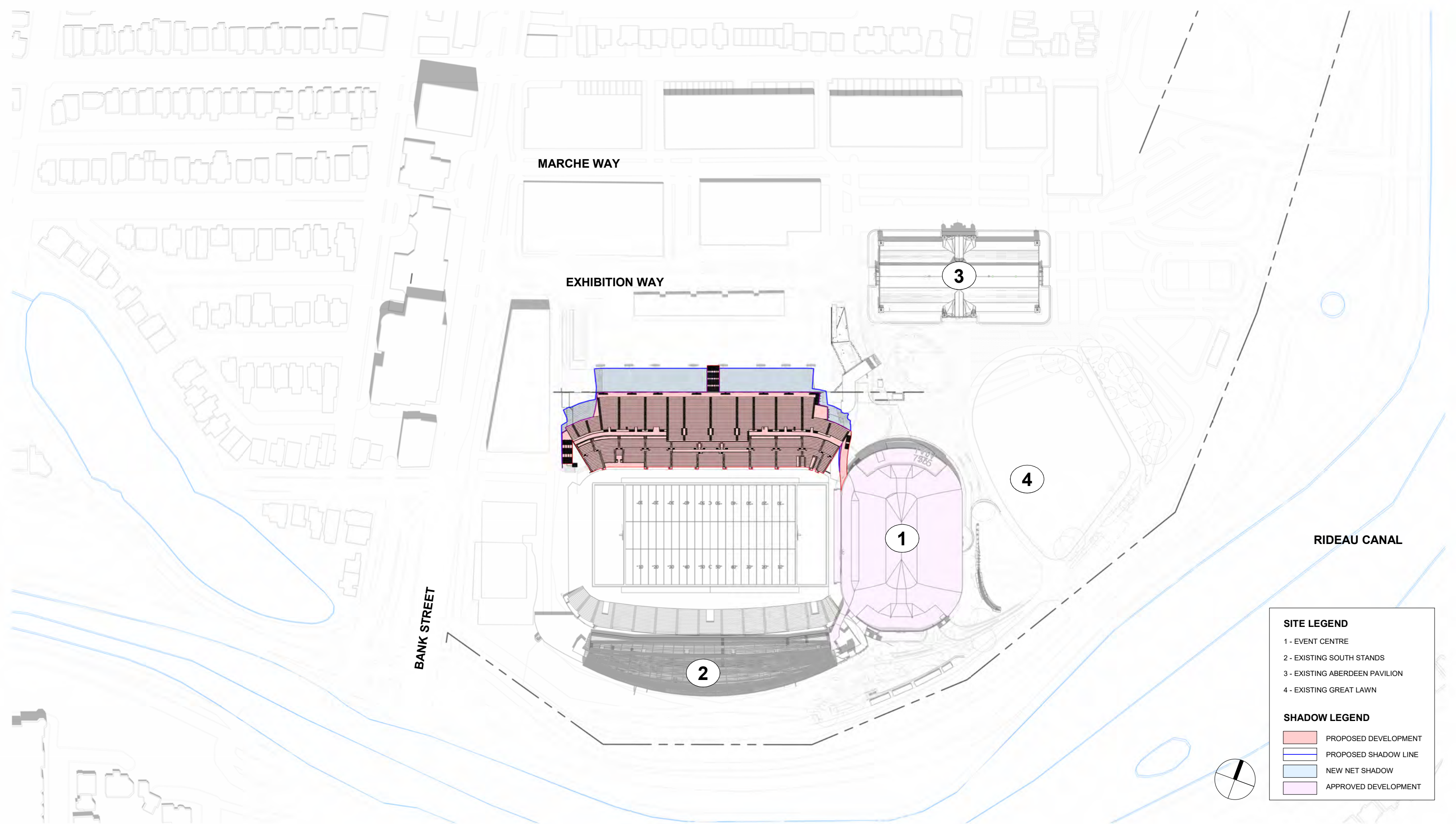
**LANSDOWNE NEW NORTH STANDS
SHADOW STUDY (JUNE 21 - 10 AM)**

SITE LEGEND	
1	- EVENT CENTRE
2	- EXISTING SOUTH STANDS
3	- EXISTING ABERDEEN PAVILION
4	- EXISTING GREAT LAWN
SHADOW LEGEND	
■	PROPOSED DEVELOPMENT
■	PROPOSED SHADOW LINE
■	NEW NET SHADOW
■	APPROVED DEVELOPMENT



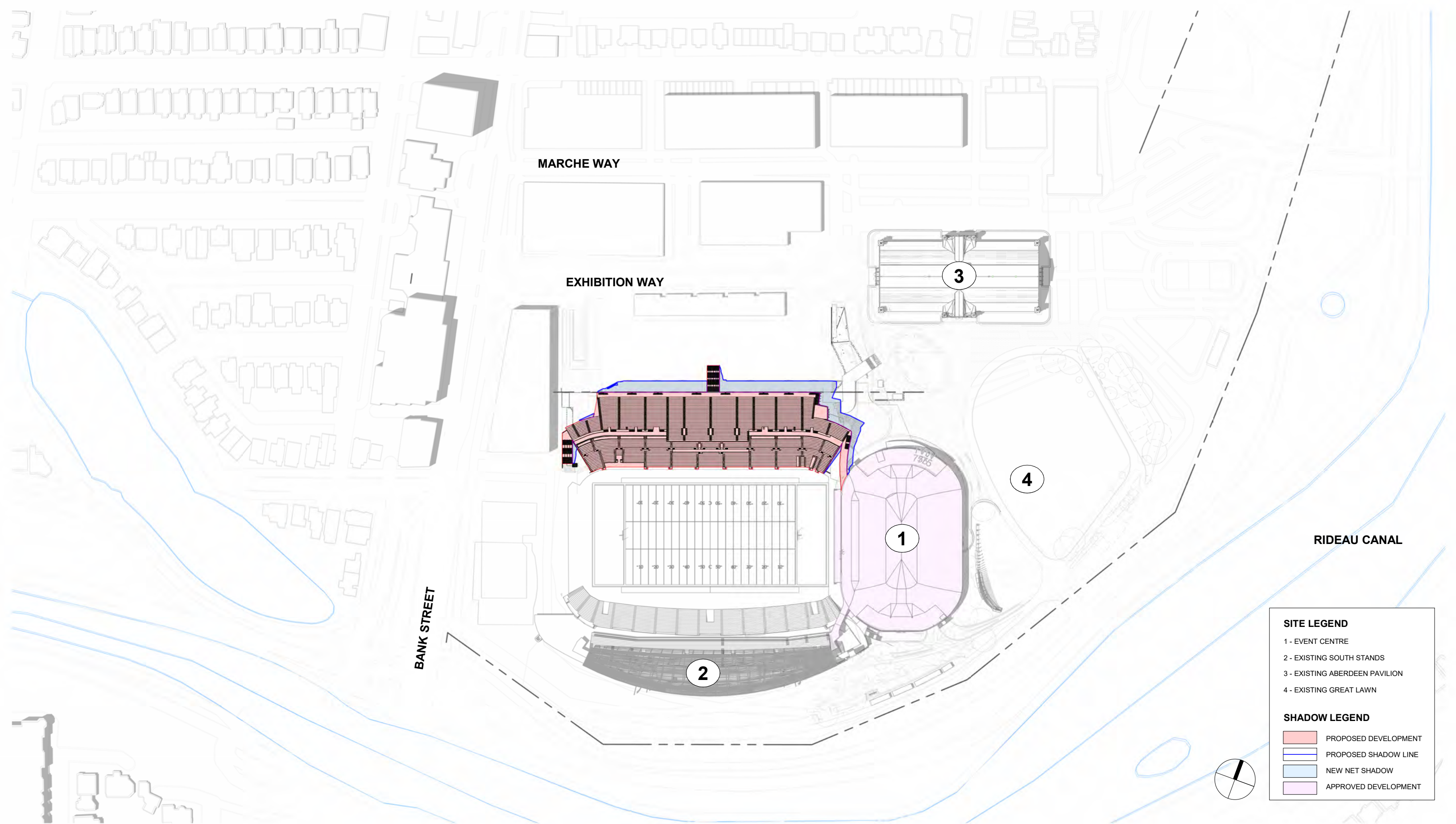
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DATE: 10/02/24



SITE LEGEND	
1	- EVENT CENTRE
2	- EXISTING SOUTH STANDS
3	- EXISTING ABERDEEN PAVILION
4	- EXISTING GREAT LAWN
SHADOW LEGEND	
■	PROPOSED DEVELOPMENT
■	PROPOSED SHADOW LINE
■	NEW NET SHADOW
■	APPROVED DEVELOPMENT

**LANSDOWNE NEW NORTH STANDS
SHADOW STUDY (JUNE 21 - 12 PM)**



**LANSDOWNE NEW NORTH STANDS
SHADOW STUDY (JUNE 21 - 2 PM)**

SITE LEGEND

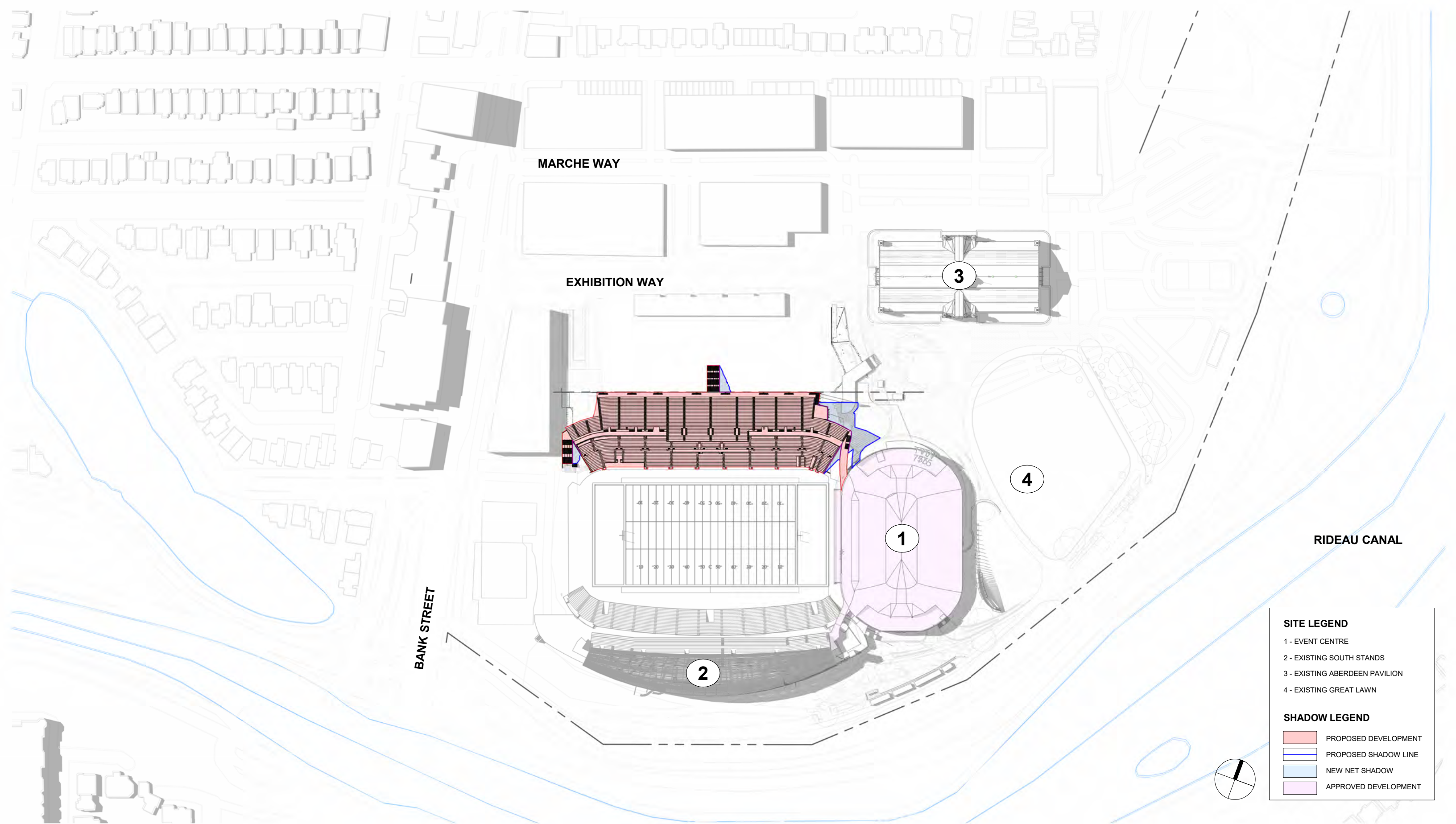
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- 2 - EXISTING SOUTH STANDS
- 3 - EXISTING ABERDEEN PAVILION
- 4 - EXISTING GREAT LAWN

SHADOW LEGEND

- PROPOSED DEVELOPMENT
- PROPOSED SHADOW LINE
- NEW NET SHADOW
- APPROVED DEVELOPMENT

SCALE: 1 : 2000

DATE: 10/02/24



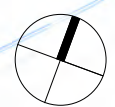
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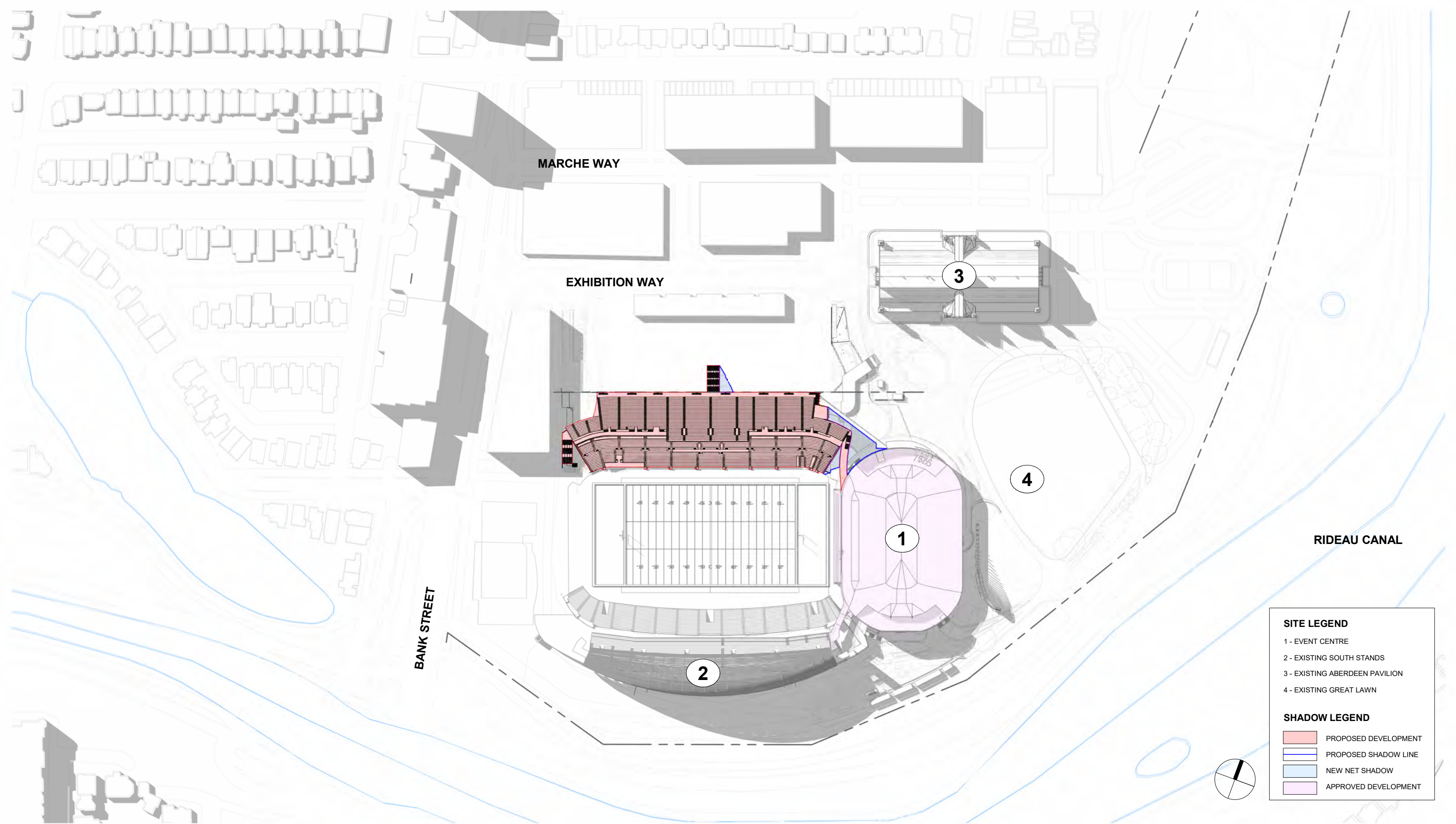
SITE LEGEND

- 1 - EVENT CENTRE
- 2 - EXISTING SOUTH STANDS
- 3 - EXISTING ABERDEEN PAVILION
- 4 - EXISTING GREAT LAWN

SHADOW LEGEND

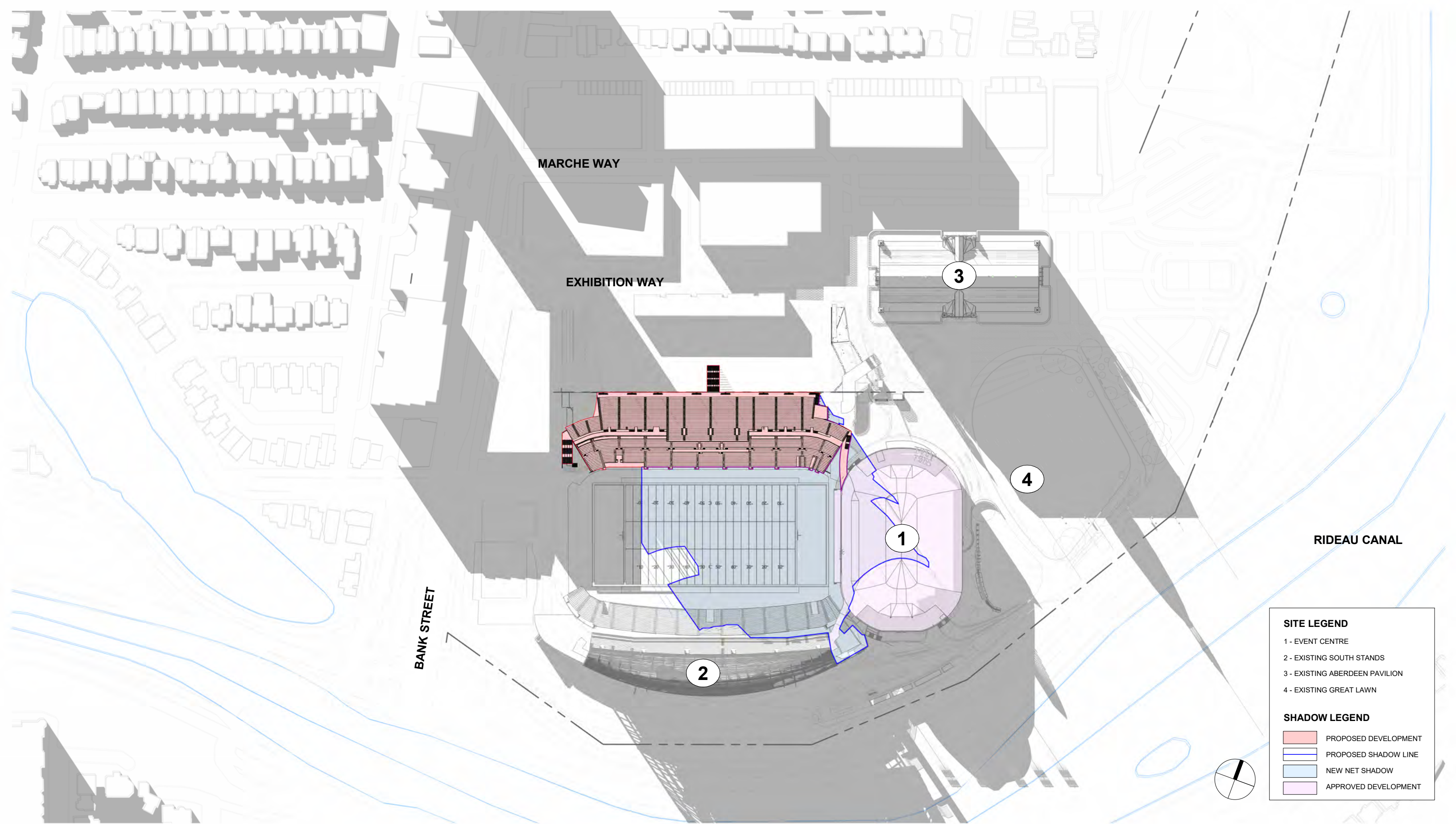
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- PROPOSED SHADOW LINE
- NEW NET SHADOW
- APPROVED DEVELOPMENT





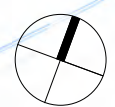
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2	- EXISTING SOUTH STANDS
3	- EXISTING ABERDEEN PAVILION
4	- EXISTING GREAT LAWN
SHADOW LEGEND	
■	PROPOSED DEVELOPMENT
—	PROPOSED SHADOW LINE
■	NEW NET SHADOW
■	APPROVED DEVELOPMENT

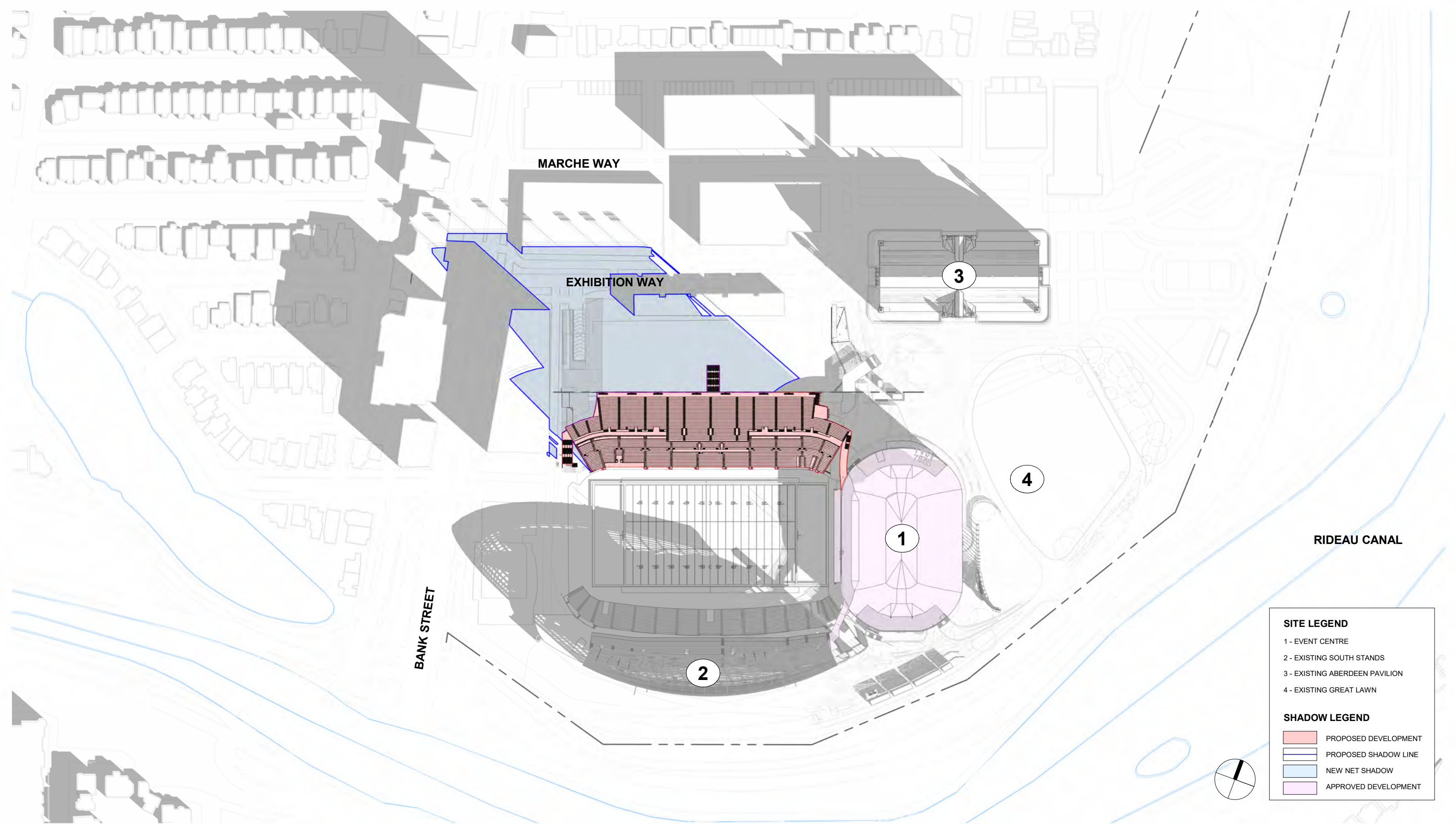
**LANSDOWNE NEW NORTH STANDS
SHADOW STUDY (JUNE 21 - 6 PM)**



**LANSDOWNE NEW NORTH STANDS
SHADOW STUDY (JUNE 21 - 8 PM)**

SITE LEGEND	
1	- EVENT CENTRE
2	- EXISTING SOUTH STANDS
3	- EXISTING ABERDEEN PAVILION
4	- EXISTING GREAT LAWN
SHADOW LEGEND	
█	PROPOSED DEVELOPMENT
█	PROPOSED SHADOW LINE
█	NEW NET SHADOW
█	APPROVED DEVELOPMENT





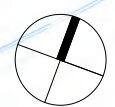
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SHADOW STUDY (SEPT 21 - 8 AM)**

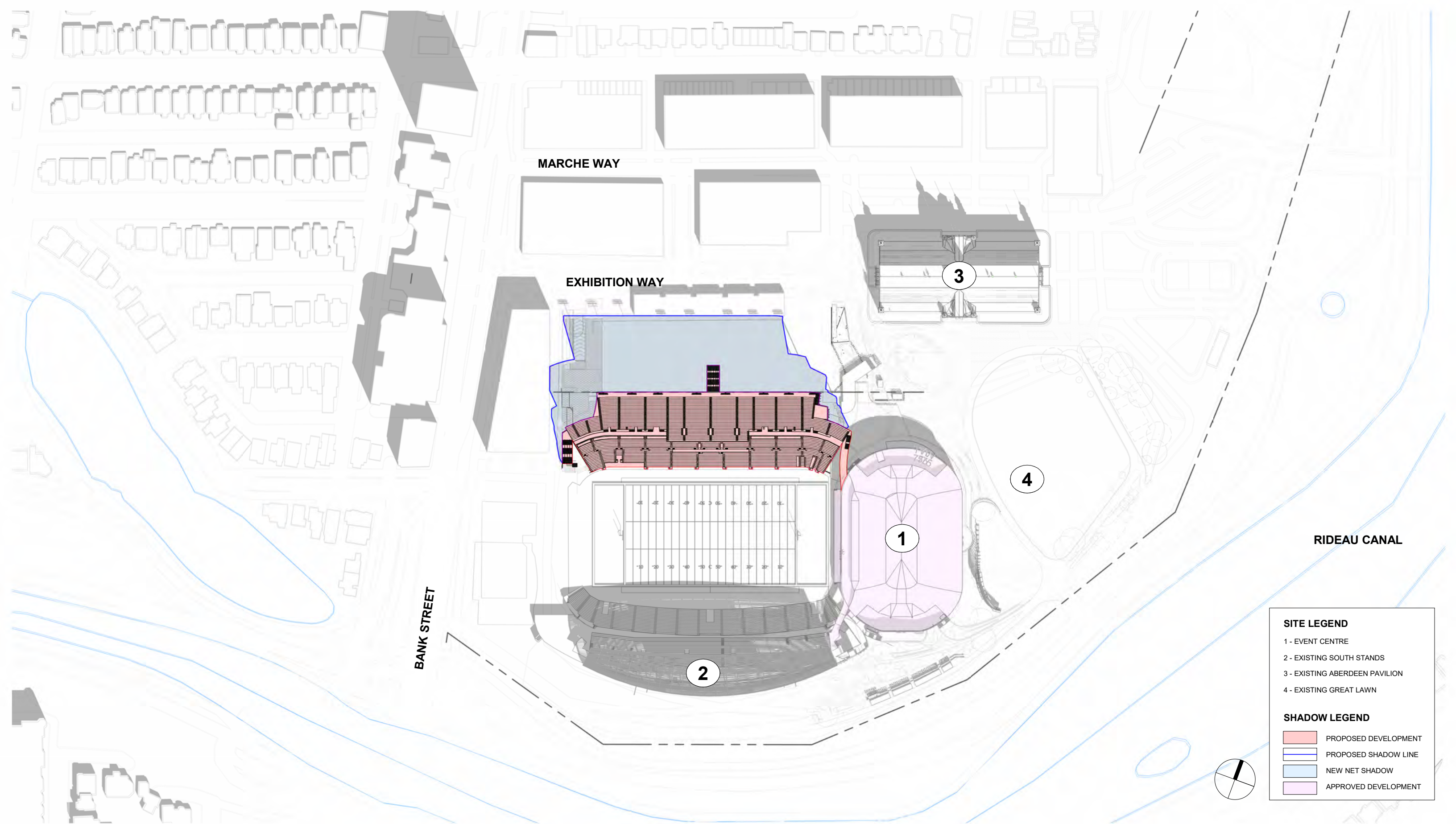
SITE LEGEND

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- 2 - EXISTING SOUTH STANDS
- 3 - EXISTING ABERDEEN PAVILION
- 4 - EXISTING GREAT LAWN

SHADOW LEGEND

- PROPOSED DEVELOPMENT
- PROPOSED SHADOW LINE
- NEW NET SHADOW
- APPROVED DEVELOPMENT





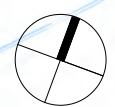
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SHADOW STUDY (SEPT 21 - 10 AM)**

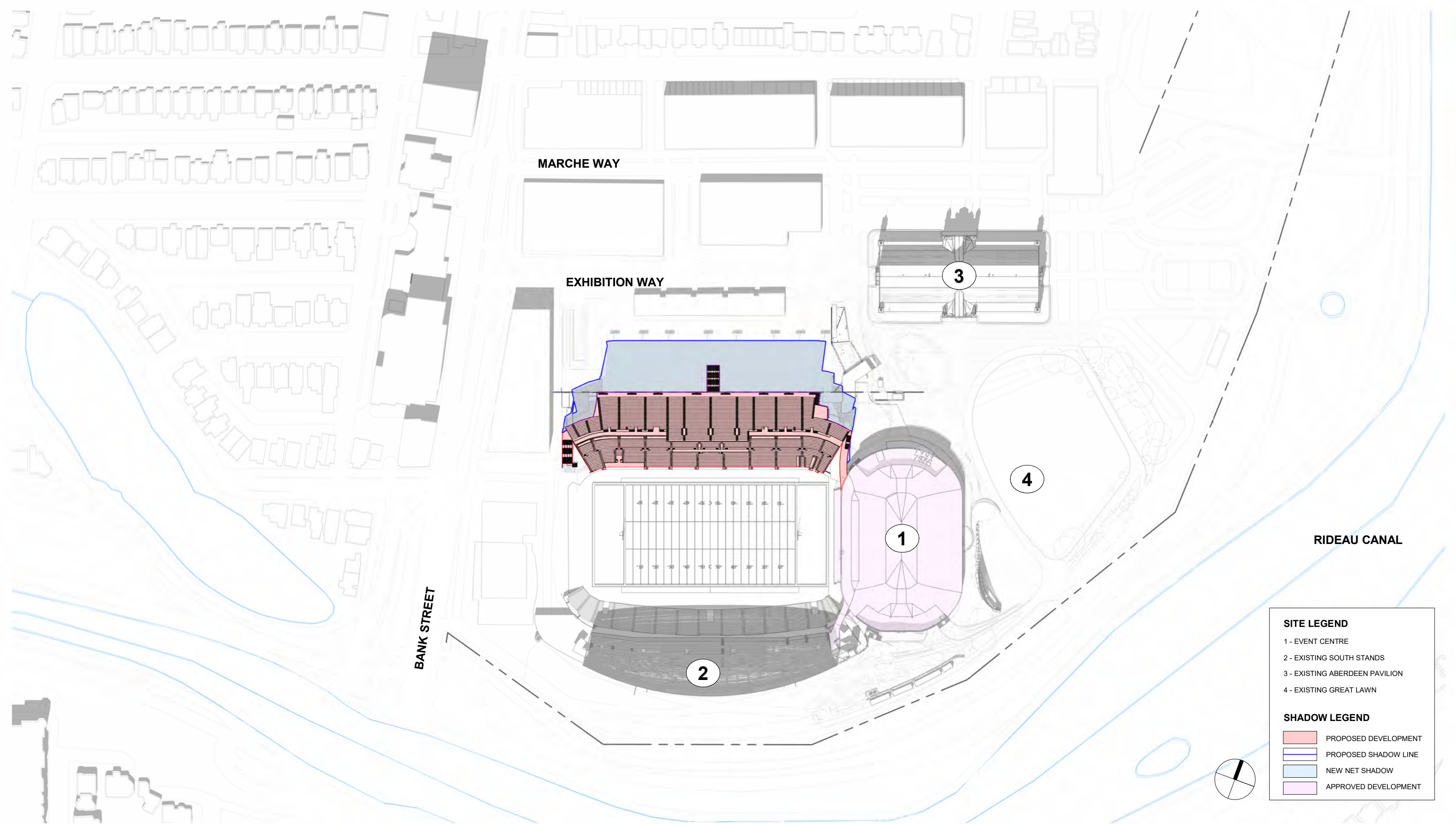
SITE LEGEND

- 1 - EVENT CENTRE
- 2 - EXISTING SOUTH STANDS
- 3 - EXISTING ABERDEEN PAVILION
- 4 - EXISTING GREAT LAWN

SHADOW LEGEND

- PROPOSED DEVELOPMENT
- PROPOSED SHADOW LINE
- NEW NET SHADOW
- APPROVED DEVELOPMENT





SITE LEGEND

- 1 - EVENT CENTRE
- 2 - EXISTING SOUTH STANDS
- 3 - EXISTING ABERDEEN PAVILION
- 4 - EXISTING GREAT LAWN

SHADOW LEGEND

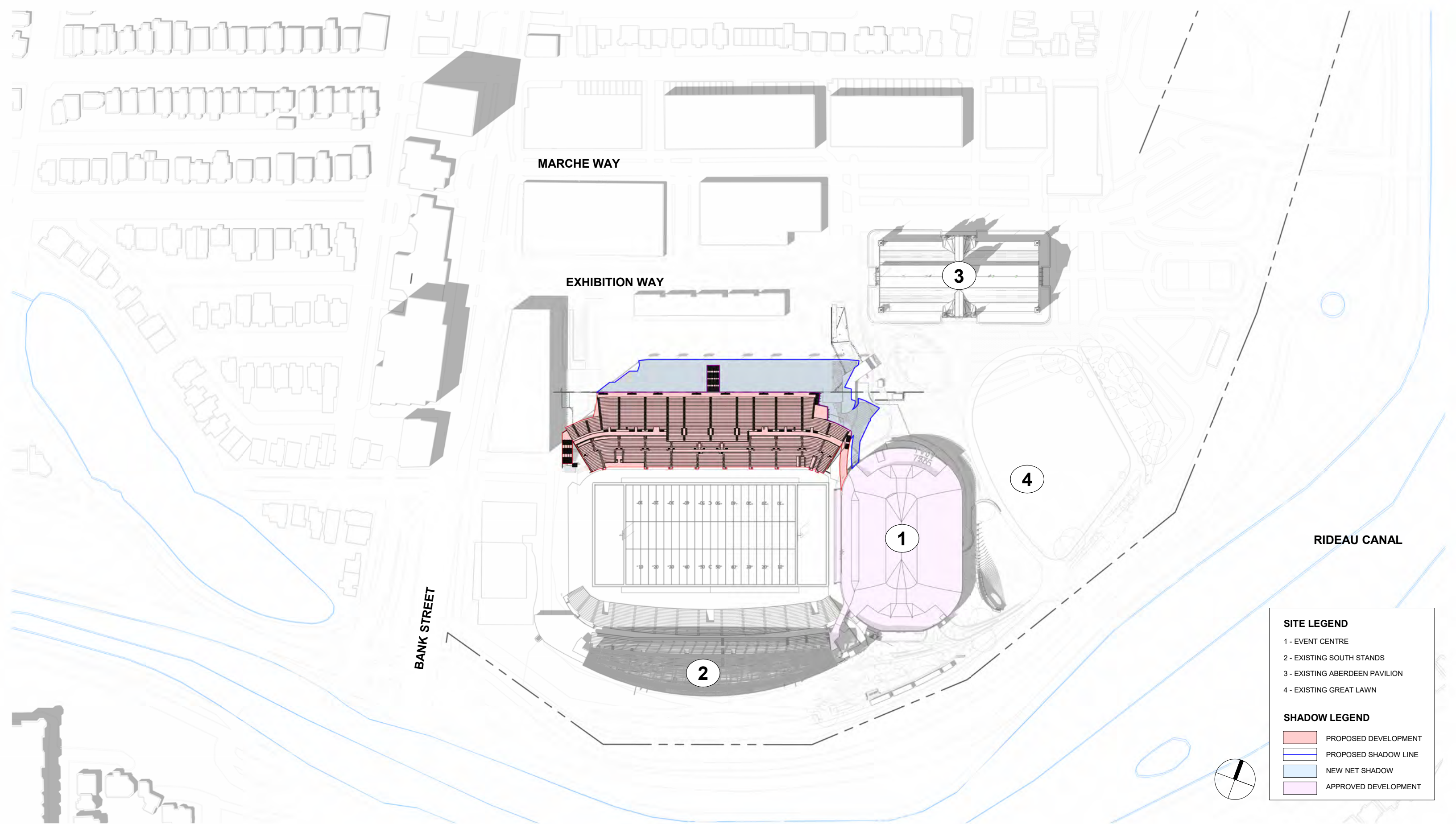
- PROPOSED DEVELOPMENT
- PROPOSED SHADOW LINE
- NEW NET SHADOW
- APPROVED DEVELOPMENT

**LANSDOWNE NEW NORTH STANDS
SHADOW STUDY (SEPT 21 - 12 PM)**



SCALE: 1 : 2000

DATE: 10/02/24

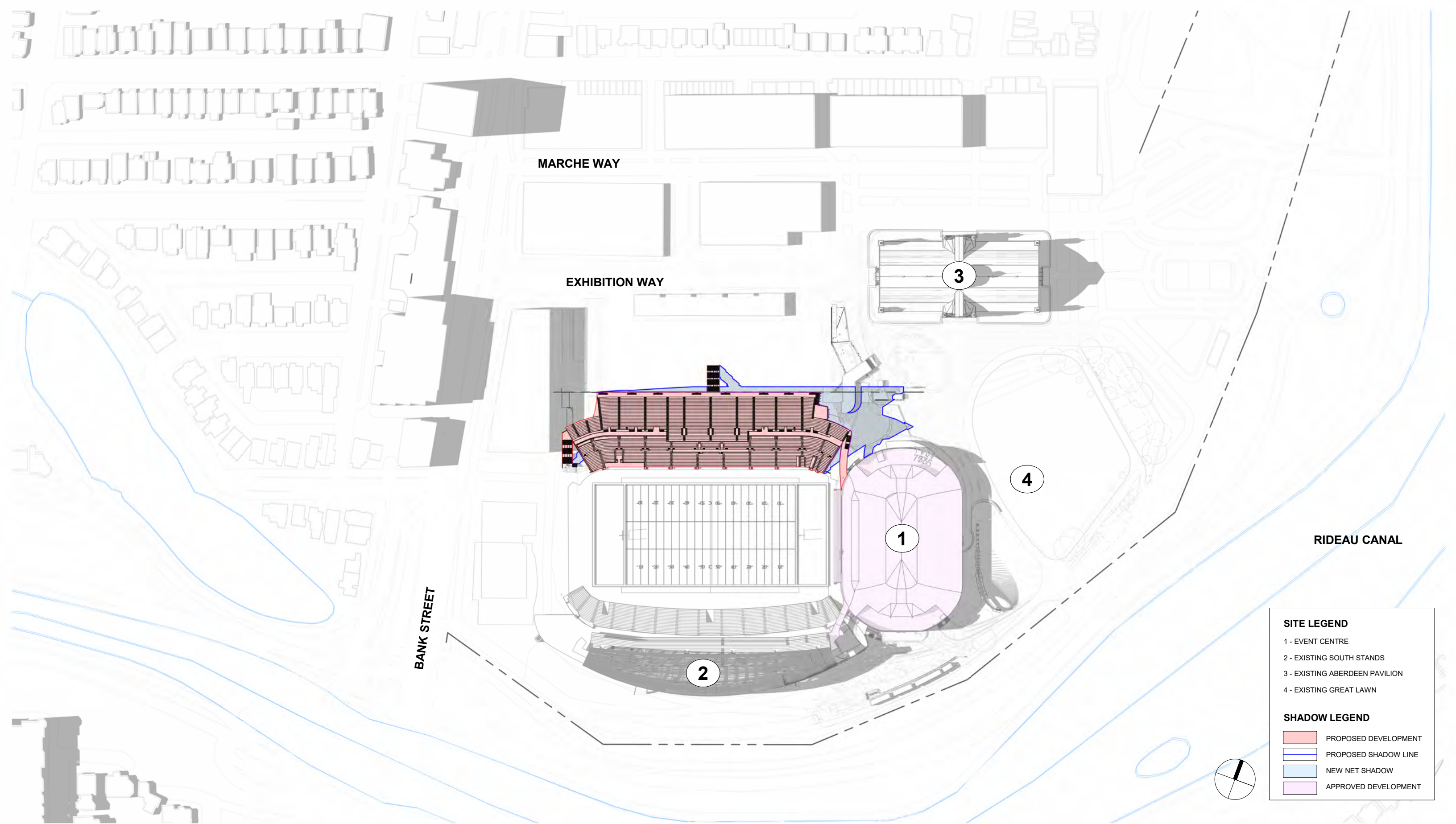


**LANSDOWNE NEW NORTH STANDS
SHADOW STUDY (SEPT 21 - 2 PM)**

SITE LEGEND	
1	- EVENT CENTRE
2	- EXISTING SOUTH STANDS
3	- EXISTING ABERDEEN PAVILION
4	- EXISTING GREAT LAWN
SHADOW LEGEND	
■	PROPOSED DEVELOPMENT
—	PROPOSED SHADOW LINE
■	NEW NET SHADOW
■	APPROVED DEVELOPMENT

SCALE: 1 : 2000

DATE: 10/02/24



**LANSDOWNE NEW NORTH STANDS
SHADOW STUDY (SEPT 21 - 4 PM)**

SITE LEGEND

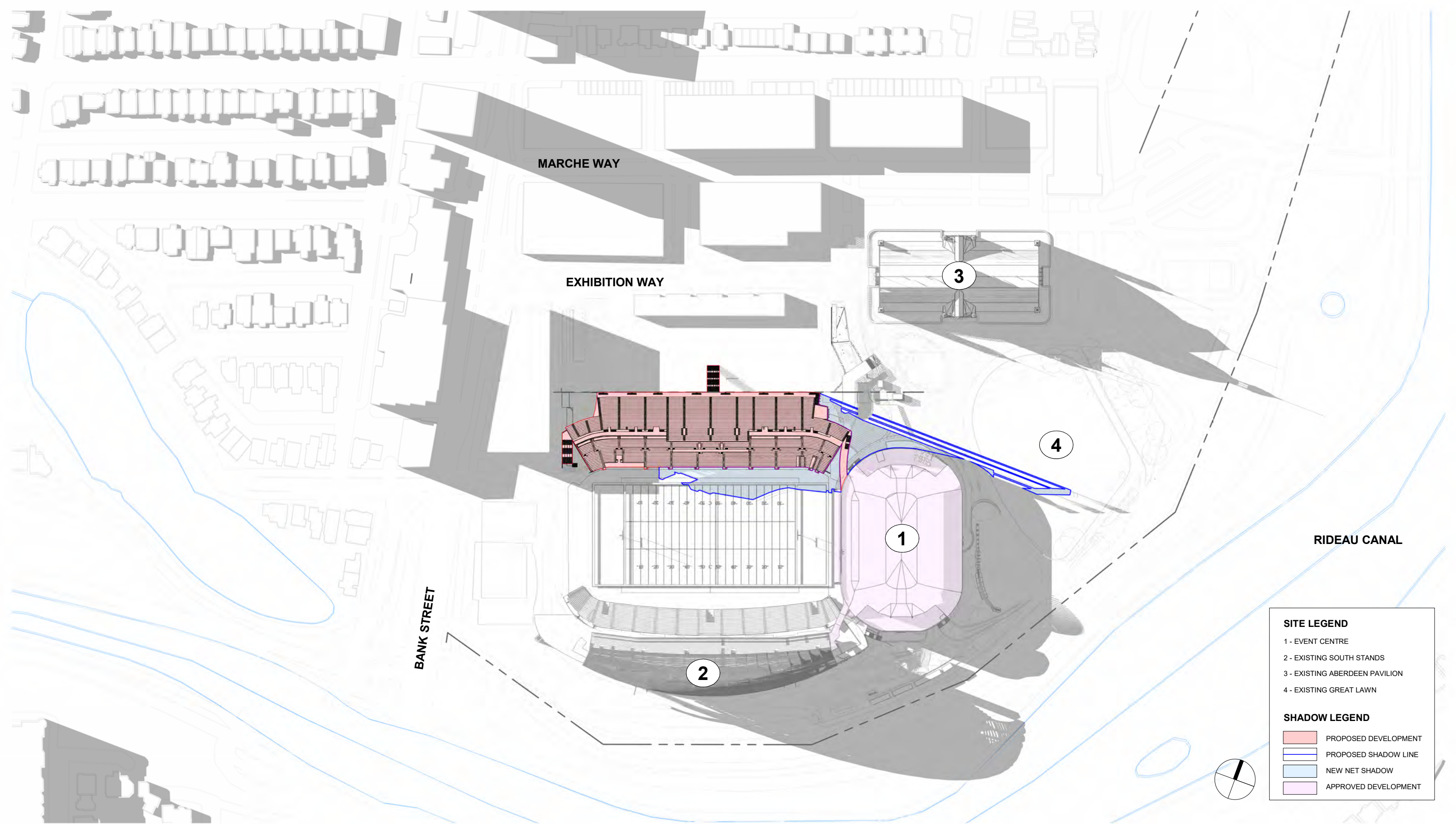
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- 2 - EXISTING SOUTH STANDS
- 3 - EXISTING ABERDEEN PAVILION
- 4 - EXISTING GREAT LAWN

SHADOW LEGEND

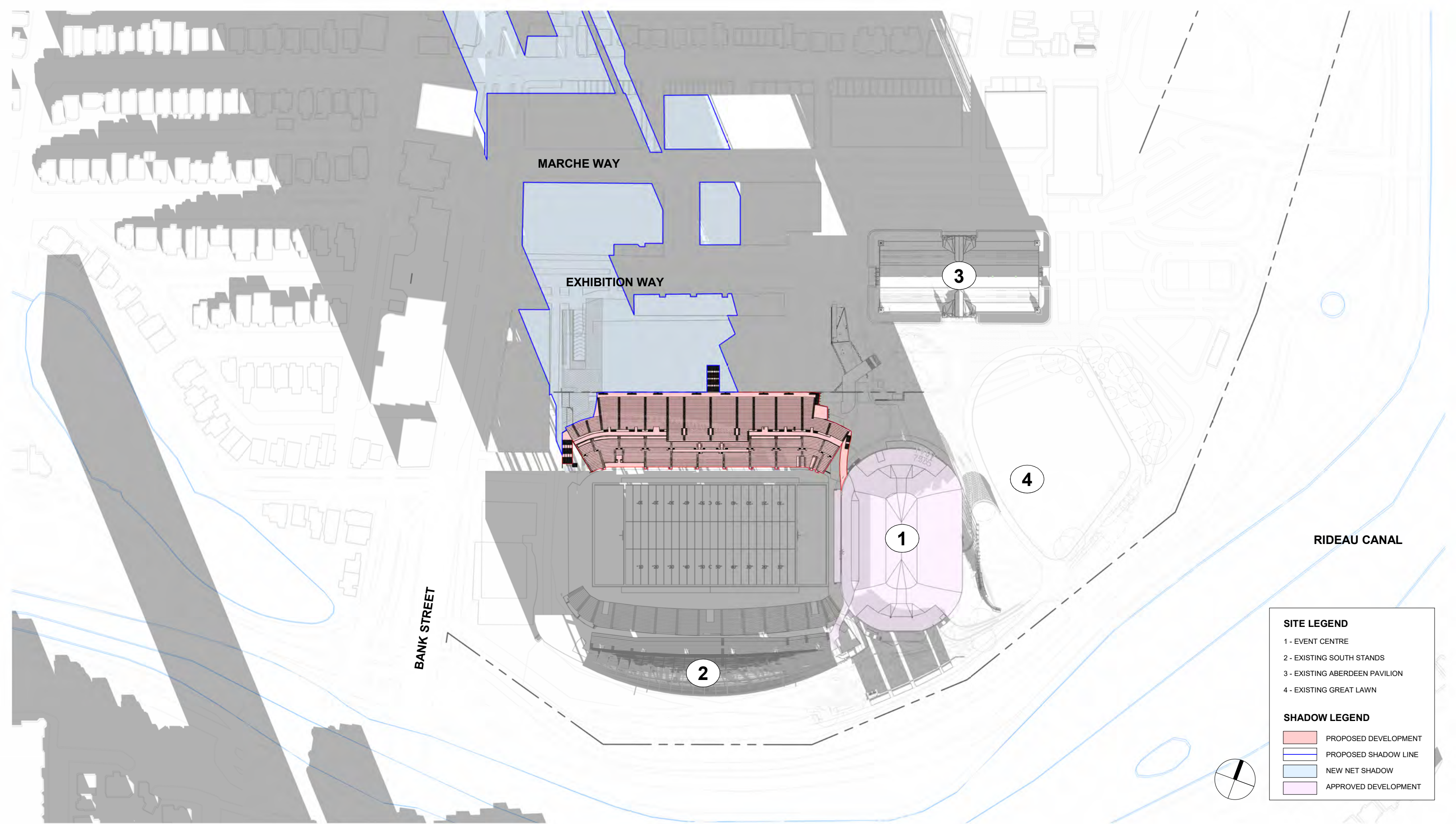
- PROPOSED DEVELOPMENT
- PROPOSED SHADOW LINE
- NEW NET SHADOW
- APPROVED DEVELOPMENT

SCALE: 1 : 2000

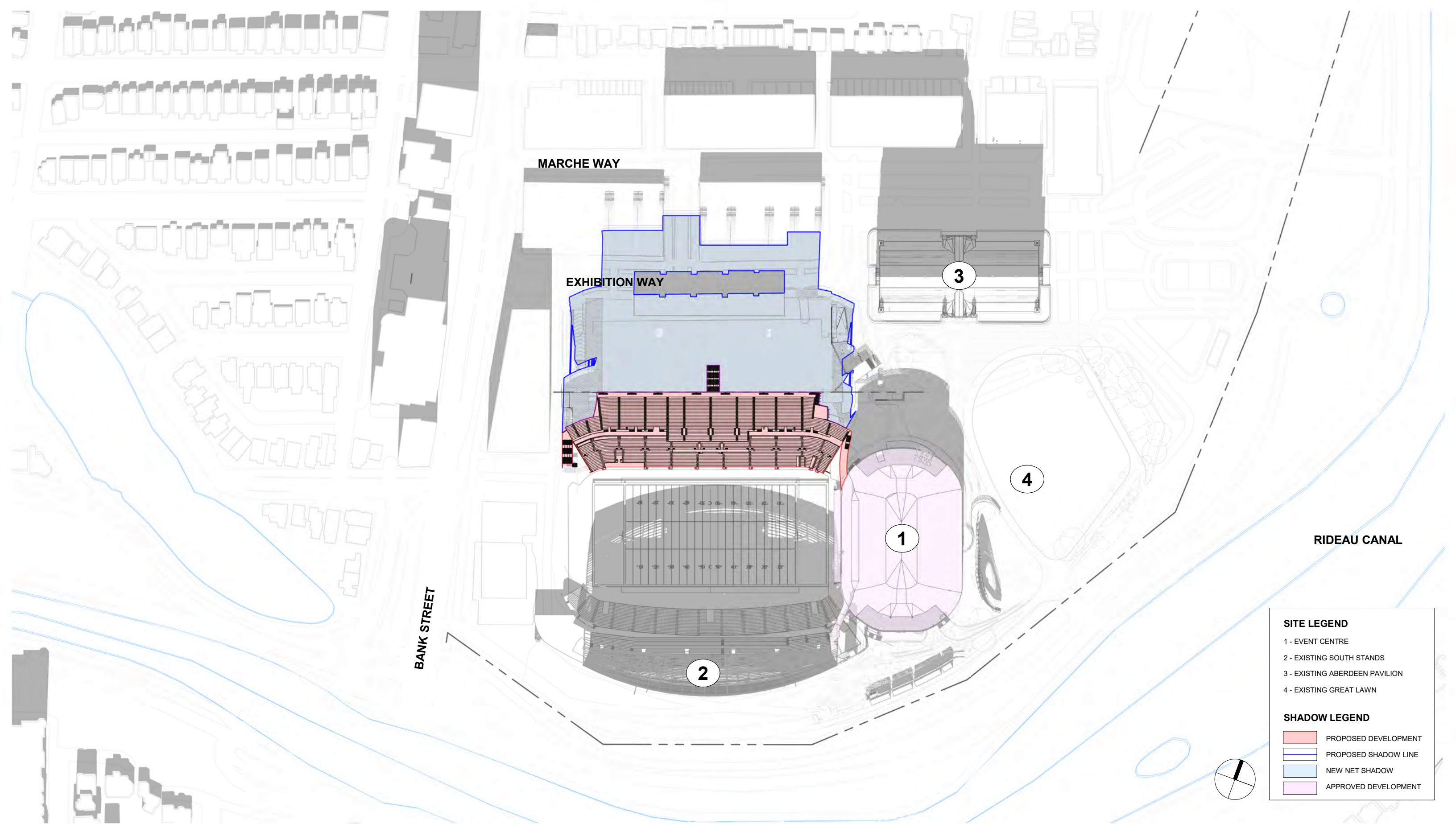
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**LANSDOWNE NEW NORTH STANDS
SHADOW STUDY (SEPT 21 - 6 PM)**



**LANSDOWNE NEW NORTH STANDS
 SHADOW STUDY (DEC 21 - 9 AM)**



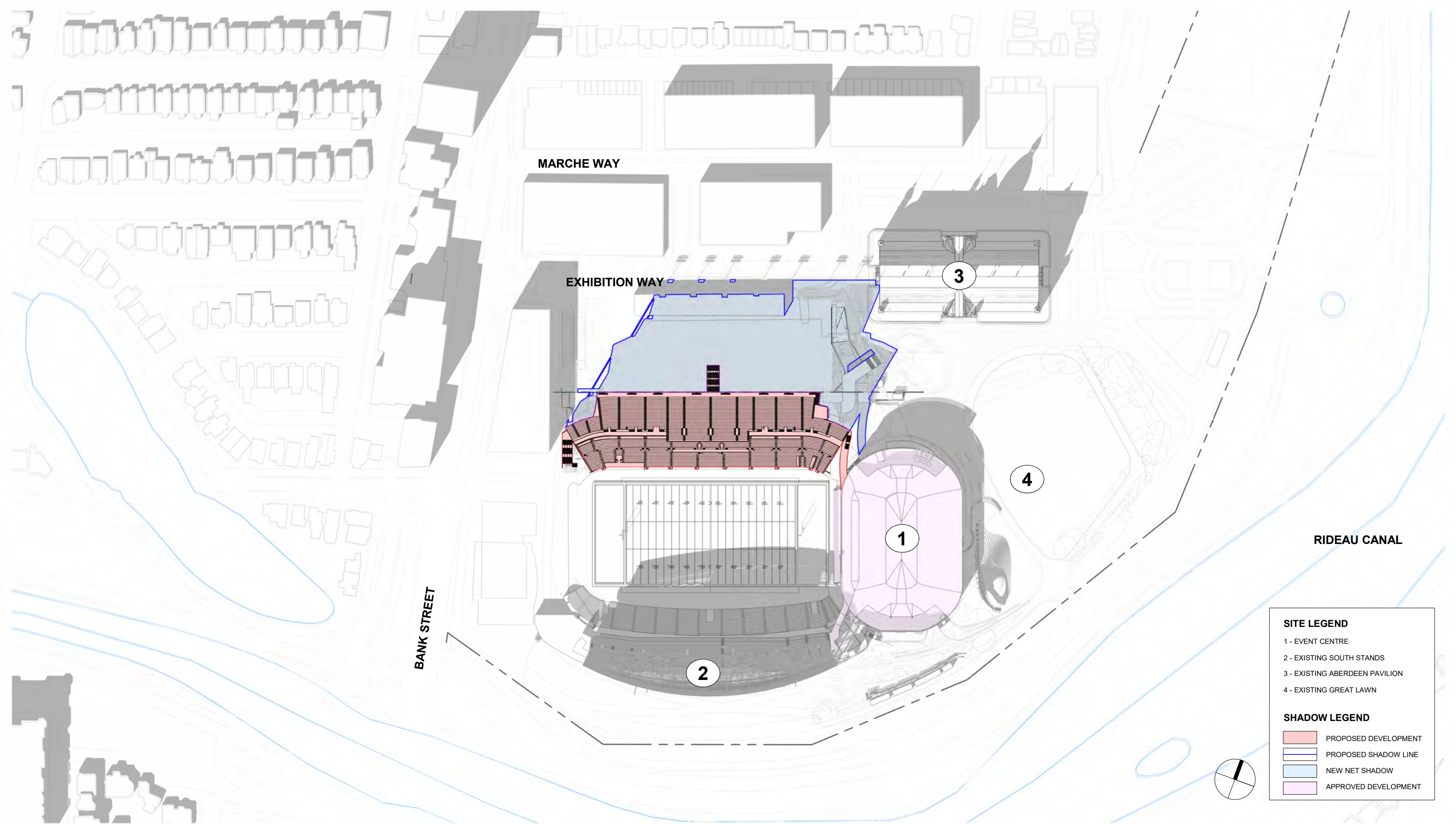
SITE LEGEND	
1	- EVENT CENTRE
2	- EXISTING SOUTH STANDS
3	- EXISTING ABERDEEN PAVILION
4	- EXISTING GREAT LAWN
SHADOW LEGEND	
■	PROPOSED DEVELOPMENT
▬	PROPOSED SHADOW LINE
■	NEW NET SHADOW
■	APPROVED DEVELOPMENT

**LANSDOWNE NEW NORTH STANDS
SHADOW STUDY (DEC 21 - 11 AM)**



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DATE: 10/02/24

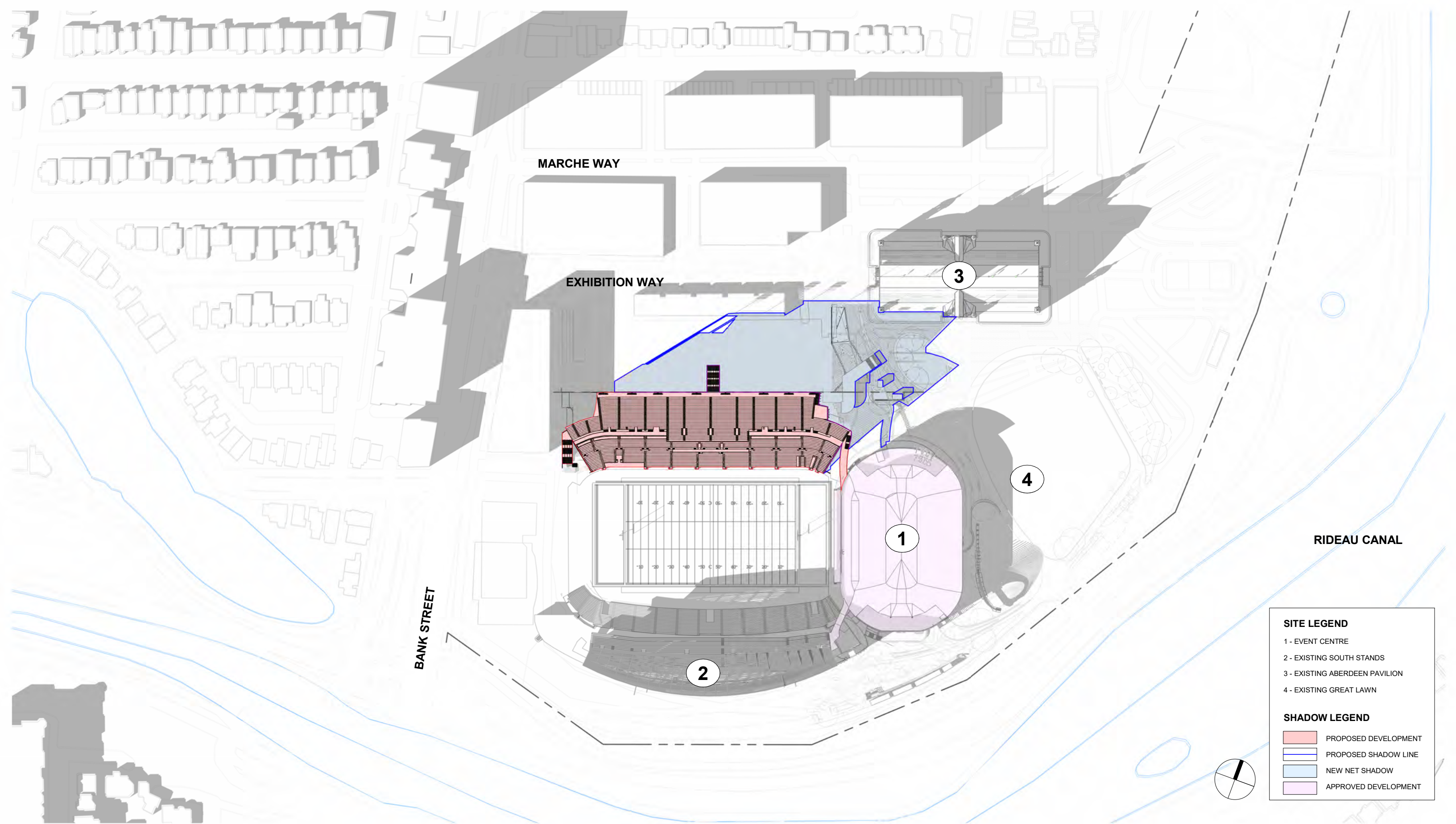


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SHADOW STUDY (DEC 21 - 1 PM)**

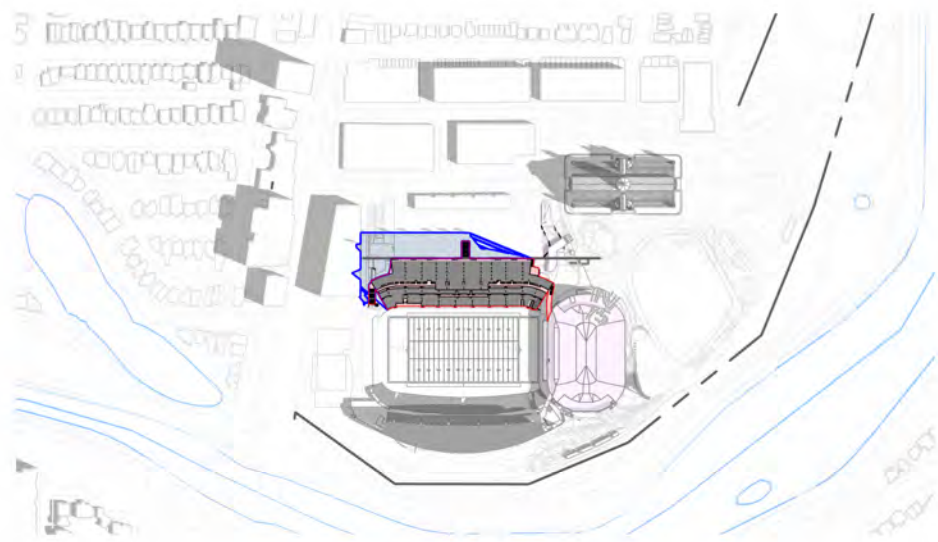


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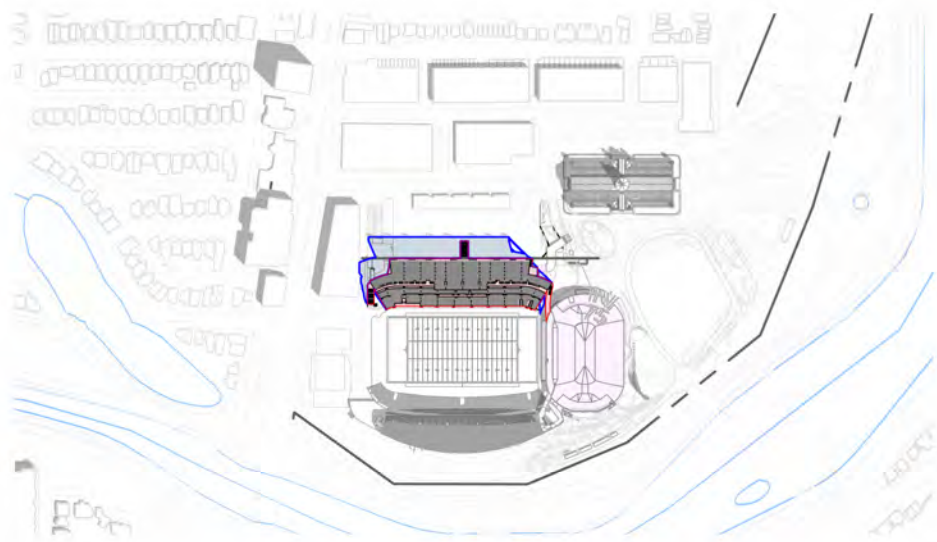
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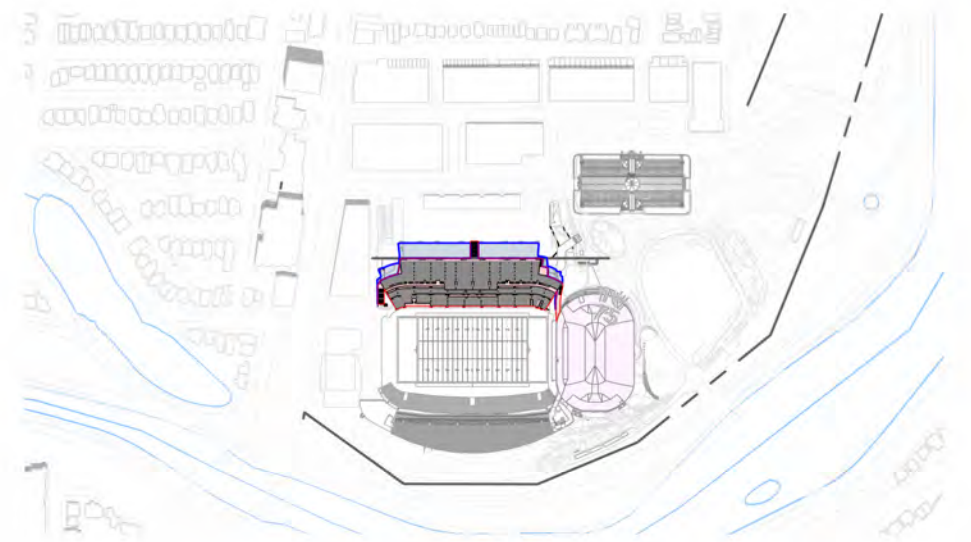
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SHADOW STUDY (DEC 21 - 3 PM)**



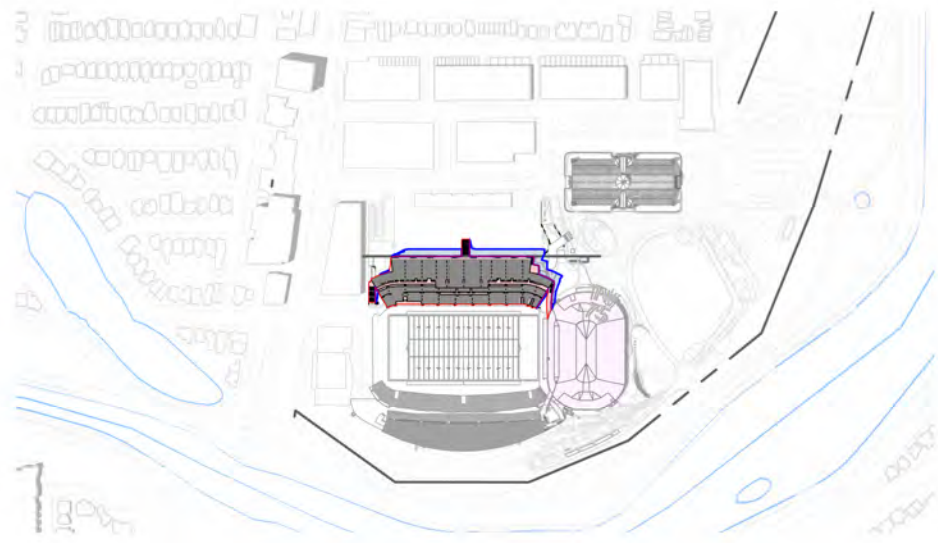
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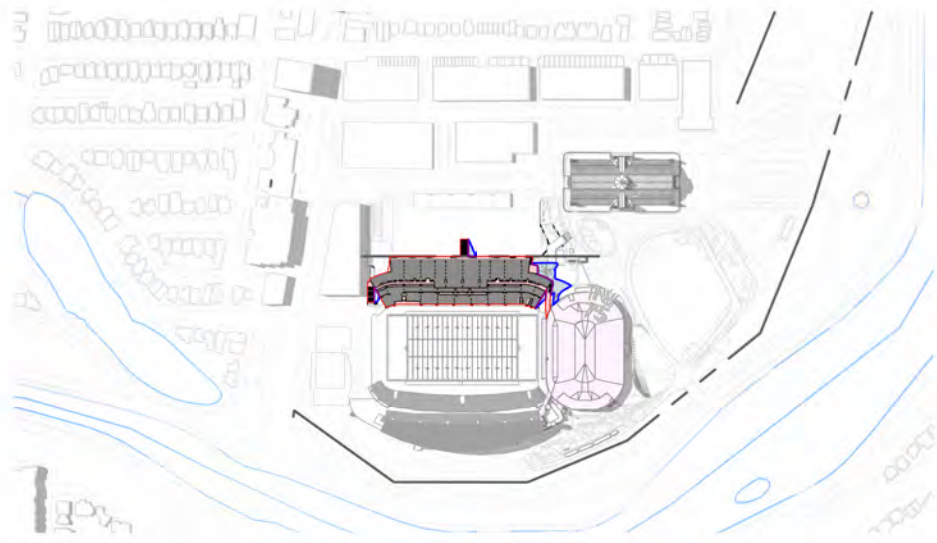
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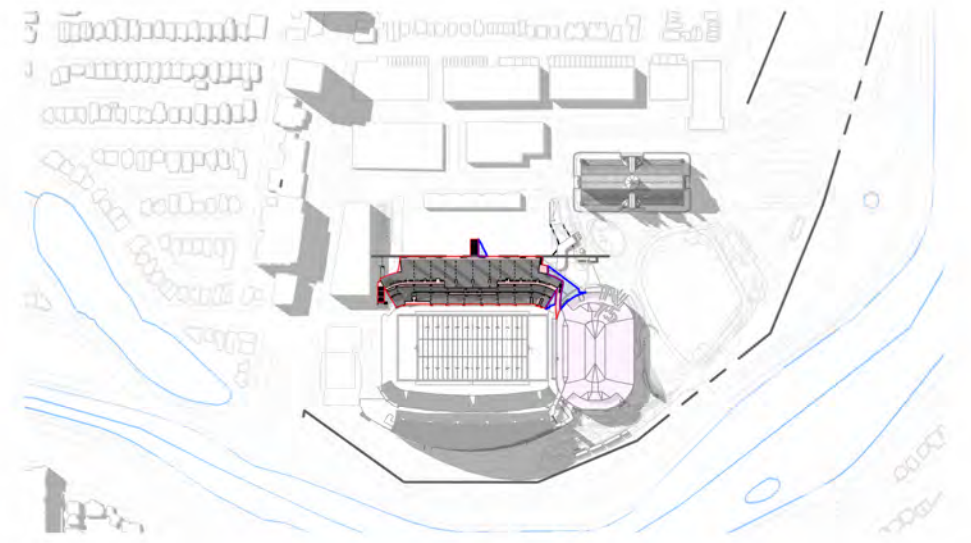
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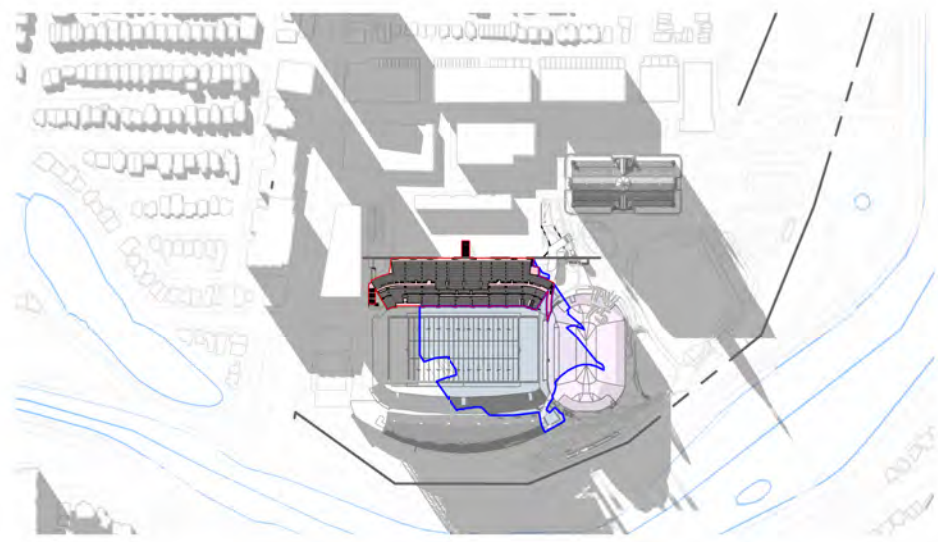
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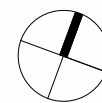
4 PM



6 PM



8 PM



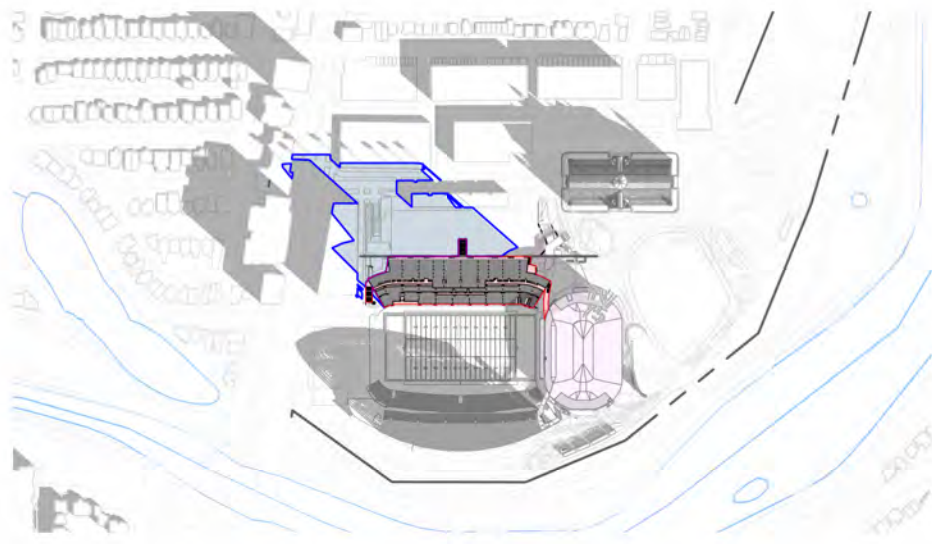
SHADOW LEGEND	
■	PROPOSED DEVELOPMENT
■	PROPOSED SHADOW LINE
■	NEW NET SHADOW
■	APPROVED DEVELOPMENT

LANSDOWNE NEW NORTH STANDS SHADOW STUDY (JUNE 21)

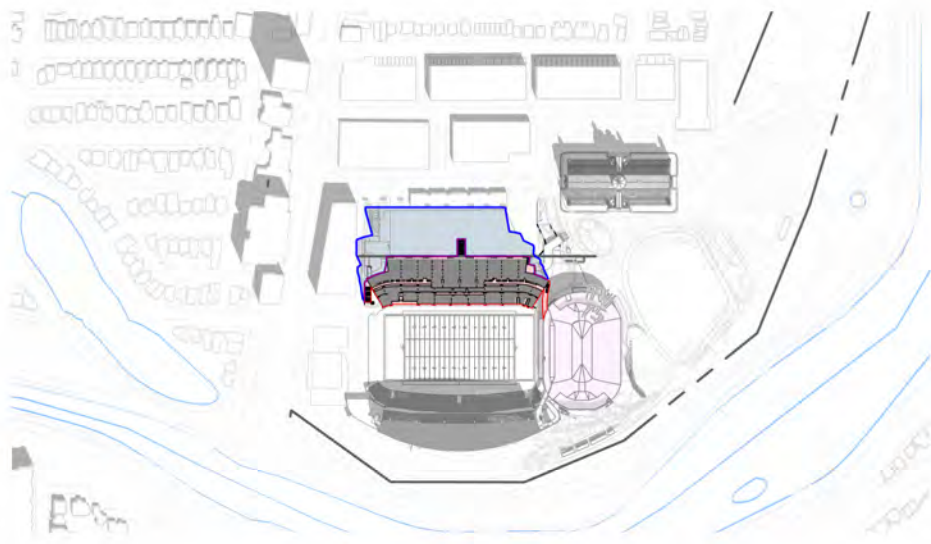


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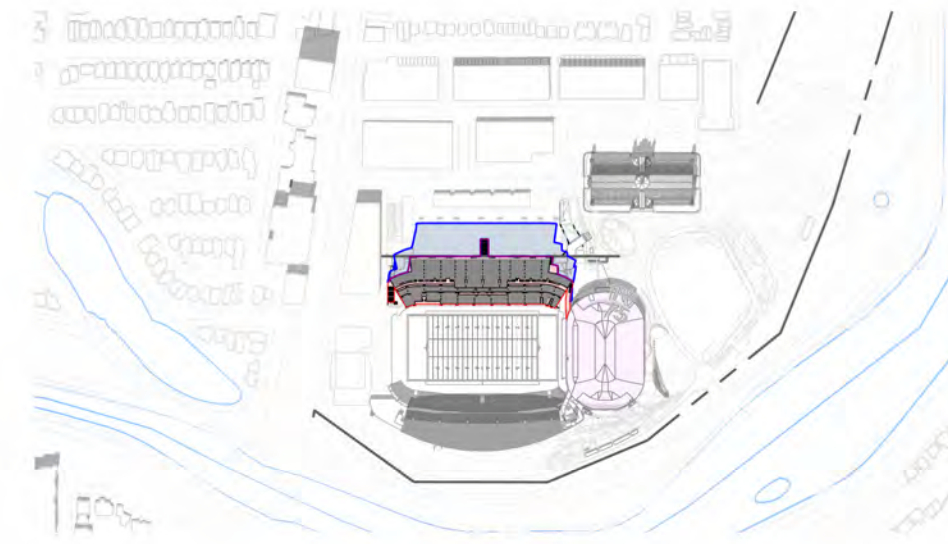
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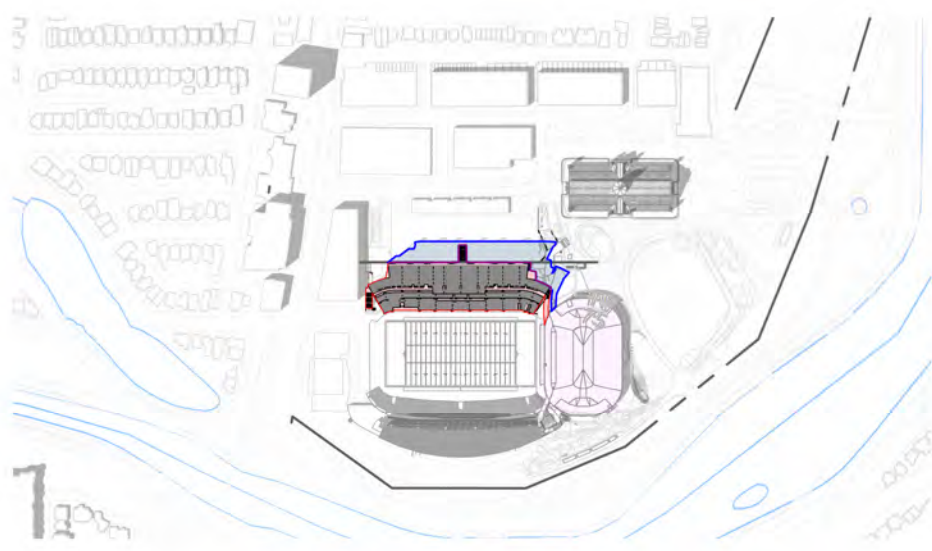
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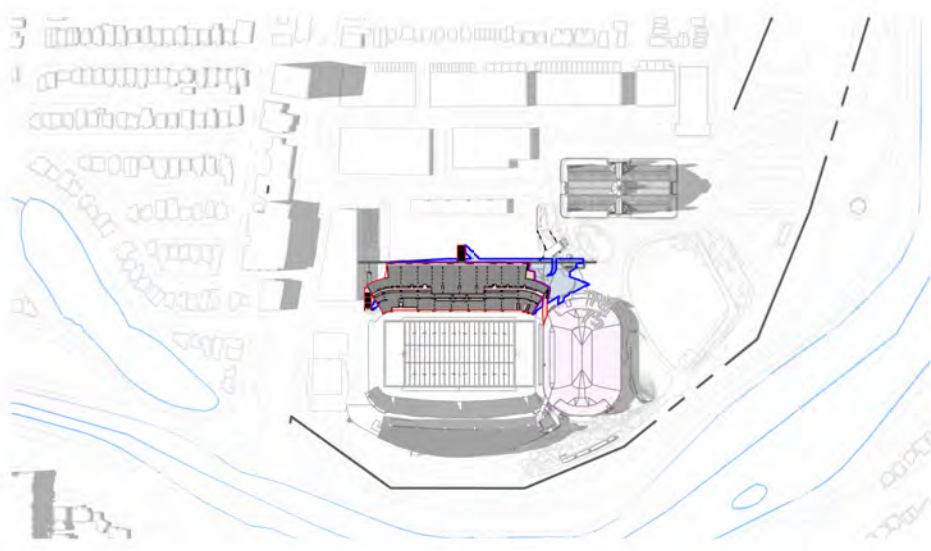
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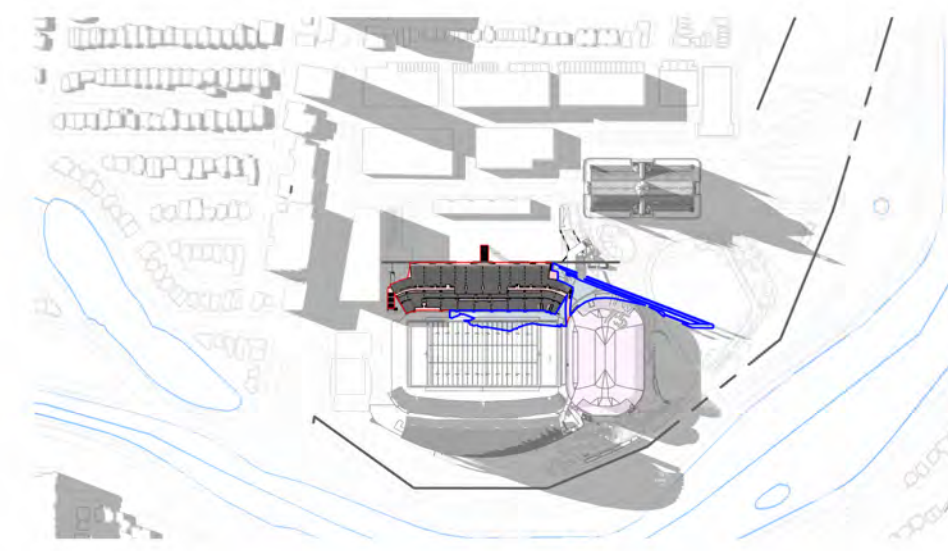
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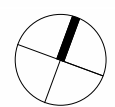
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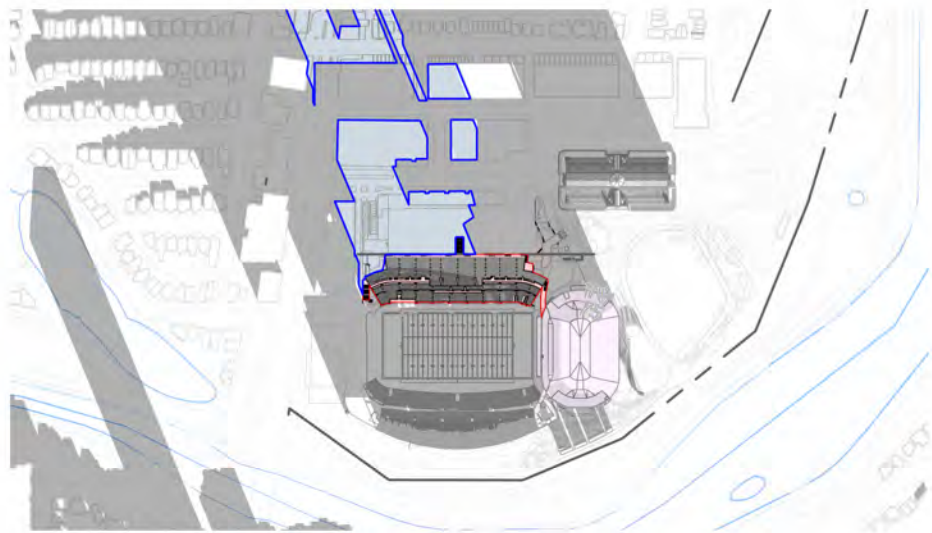
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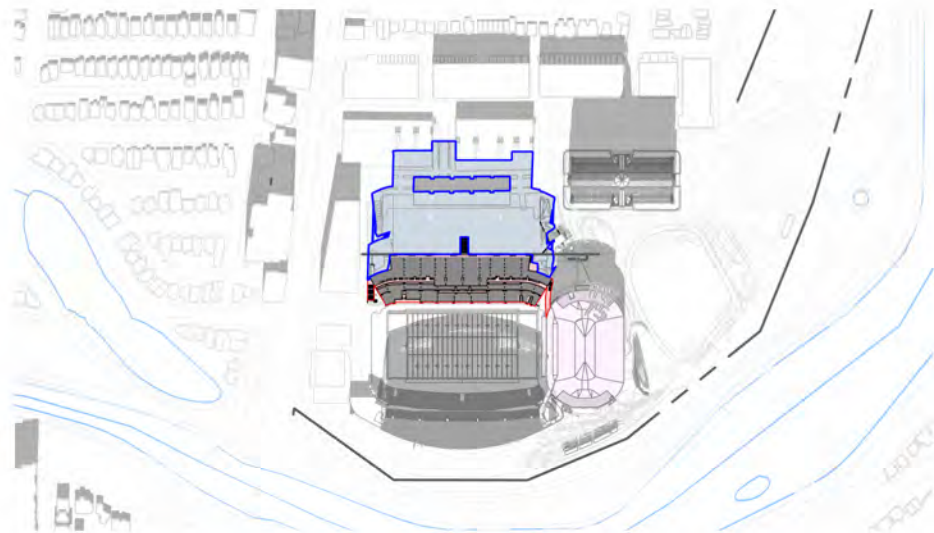
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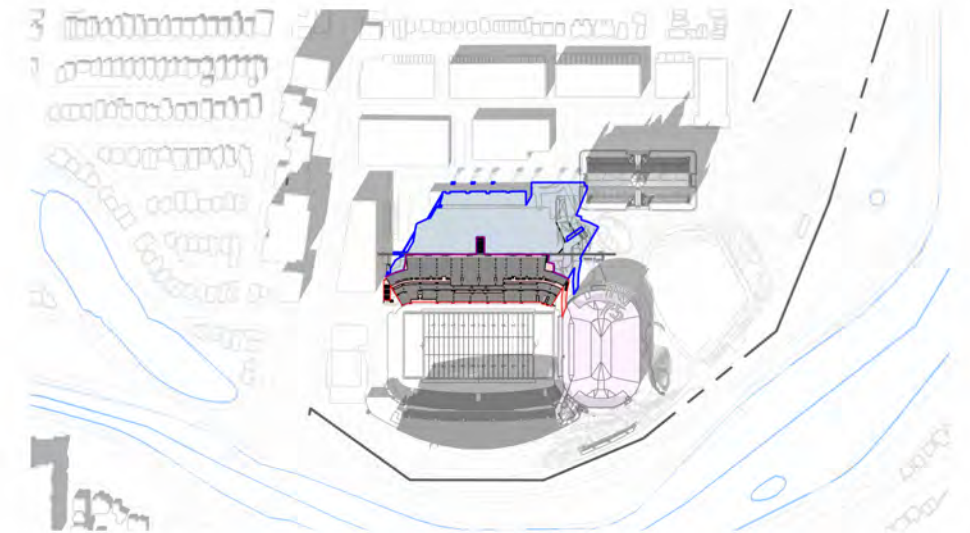
SHADOW LEGEND	
■	PROPOSED DEVELOPMENT
■	PROPOSED SHADOW LINE
■	NEW NET SHADOW
■	APPROVED DEVELOPMENT



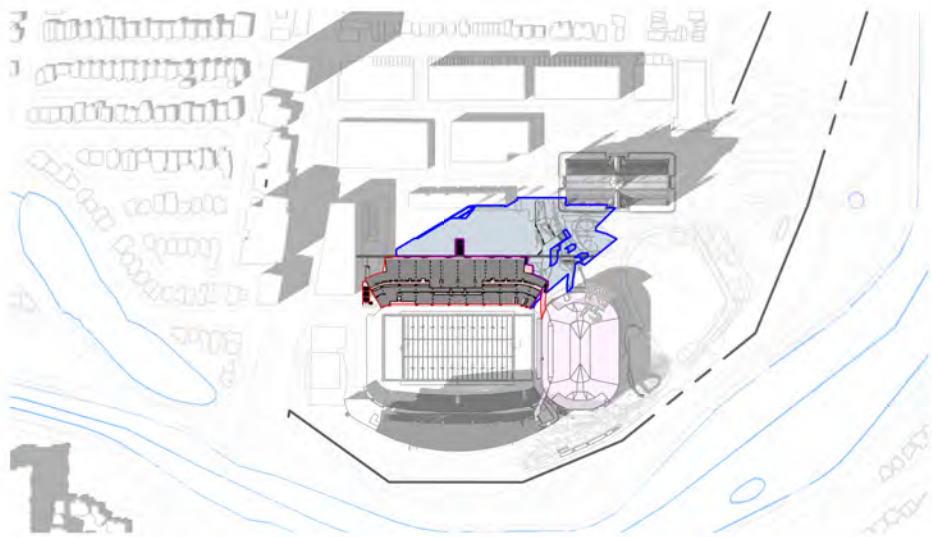
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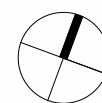
11 AM







1 PM



3 PM

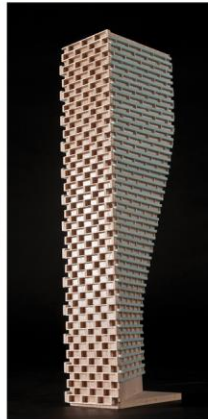


SHADOW LEGEND	
	PROPOSED DEVELOPMENT
	PROPOSED SHADOW LINE
	NEW NET SHADOW
	APPROVED DEVELOPMENT

**PEDESTRIAN LEVEL
WIND STUDY**

Lansdowne 2.0
Ottawa, Ontario

Report: 23-053-PLW-2024



November 6, 2024

PREPARED FOR
City of Ottawa
110 Laurier Avenue West
Ottawa, ON K1P 1J1

PREPARED BY
Justin Denne, M.ASc., Junior Wind Scientist
David Huitema, M.Eng., P.Eng., CFD Lead Engineer

EXECUTIVE SUMMARY

This report describes a pedestrian level wind (PLW) study undertaken to satisfy Site Plan Control application requirements for the second redevelopment phase of Lansdowne Park, known as Lansdowne 2.0, in Ottawa, Ontario (hereinafter referred to as “subject site” or “proposed development”). Our mandate within this study is to investigate pedestrian wind conditions within and surrounding the subject site, and to identify areas where conditions may interfere with certain pedestrian activities so that mitigation measures may be considered, where required.

The study involves simulation of wind speeds for selected wind directions in a three-dimensional (3D) computer model using the computational fluid dynamics (CFD) technique, combined with meteorological data integration, to assess pedestrian wind comfort and safety within and surrounding the subject site according to City of Ottawa wind comfort and safety criteria. The results and recommendations derived from these considerations are detailed in the main body of the report (Section 5), illustrated in Figures 3A-7B, and summarized as follows:

- 1) Most grade-level areas within and surrounding the subject site are predicted to experience conditions that are considered acceptable for the intended pedestrian uses throughout the year. Specifically, conditions in the vicinity of the building access points serving the proposed development and over most grade-level public sidewalks and walkways, surface parking, walkways, the East Court, the Great Lawn, Aberdeen Square, the South Court, the stadium field, the proposed patios and terraces serving the new Event Centre, and the walking and bike pathways to the east and south within Lansdowne Park are considerable acceptable.
- 2) Following the introduction of the proposed development, conditions over the existing patios along Exhibition Way are predicted to be suitable for a mix of sitting and standing during the summer and strolling during the remainder of the year, with conditions during the typical use period (May to October, inclusive) over the patios predicted to be suitable for sitting close to the building façades and standing elsewhere.



- a. Notably, landscaping elements that could not be implemented in the simulation model (such as trees, wooden barriers, or fences) are expected to improve pedestrian comfort around seating areas within the noted patios, including during the colder seasons.
- 3) During the spring and winter seasons, an isolated area over the future walkway to the east of Tower 2 that connects Exhibition Way and the Aberdeen Pavilion to the new Event Centre is predicted to receive windier conditions that may occasionally be considered uncomfortable for walking, exceeding the walking comfort criteria for approximately 1% and 2% of the time during the spring and winter seasons.
 - a. It is recommended that these conditions be confirmed and further developed at the future Site Plan Control application for the commercial/retail block, and that an appropriate mitigation strategy, if required, be developed as the design of the commercial/retail block component of the Lansdowne 2.0 development progresses and evolves.
- 4) The foregoing statements and conclusions apply to common weather systems, during which no dangerous wind conditions, as defined in Section 4.4, are expected anywhere over the subject site. During extreme weather events, (for example, thunderstorms, tornadoes, and downbursts), pedestrian safety is the main concern. However, these events are generally short-lived and infrequent and there is often sufficient warning for pedestrians to take appropriate cover.

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Appendix A – Simulation of the Atmospheric Boundary Layer



1. INTRODUCTION

Gradient Wind Engineering Inc. (Gradient Wind) was retained by the City of Ottawa to undertake a pedestrian level wind (PLW) study to satisfy Site Plan Control application requirements for the second phase of redevelopment of Lansdowne Park, known as Lansdowne 2.0, in Ottawa, Ontario (hereinafter referred to as “subject site” or “proposed development”). Previous PLW studies were performed in 2023 at the Zoning By-Law Amendment (ZBLA) application stage considering the previous designs of the Lansdowne 2.0 development^{1,2}. Our mandate within the current study is to investigate pedestrian wind conditions within and surrounding the subject site under the approved ZBLA massing scheme, and to identify areas where conditions may interfere with certain pedestrian activities so that mitigation measures may be considered, where required.

Our work is based on industry standard computer simulations using the computational fluid dynamics (CFD) technique and data analysis procedures, City of Ottawa wind comfort and safety criteria, architectural drawings prepared by BBB Architects in October 2024, surrounding street layouts and existing and approved future building massing information obtained from the City of Ottawa, as well as recent satellite imagery.

2. TERMS OF REFERENCE

The subject site is bordered by Exhibition Way to the north, the South Court and the Great Lawn to the east, the existing stadium field and the south side stands to the south, and the Rideau at Lansdowne condo development and the existing commercial building at 979 Bank Street to the west. The proposed development comprises the redevelopment of the north side stands (NSS), a new re-designed Event Centre, and two new residential towers, Towers 1 and 2, which both rise to 40-storeys at the west and east, respectively, above a shared podium along the north elevation of the site. A public promenade is situated to the south of the two towers, which provides access to the main concourse of the NSS and is accessed from the grade-level via an outdoor staircase and passageway between Towers 1 and 2. A new Event Centre is situated to the east of the stadium field, with an elevated pathway along the west elevation of the Event Centre connecting the NSS to the south side stands.

¹ Gradient Wind Engineering Inc., ‘Lansdowne 2.0 – Pedestrian Level Wind Study’, [June 15, 2023]

² Gradient Wind Engineering Inc., ‘Lansdowne 2.0 – Pedestrian Level Wind Study’, [Sept 13, 2023]



The near-field surroundings, defined as an area within 200-metres (m) of the subject site include the TD Place field to the south and southeast followed by the existing south side stands, the Rideau at Lansdowne high-rise condo development to the south-southwest and a commercial mid-rise building to the immediate west-southwest followed by a mix of mostly low- and mid-rise massing from the southwest clockwise to the west, low-rise commercial buildings from the west clockwise to the north-northeast, and the Aberdeen Pavilion and Lansdowne Park from the northeast clockwise to the south-southwest. Beyond Lansdowne Park, the Rideau Canal is situated from the south clockwise to the northeast. The far-field surroundings, defined as an area beyond the near-field but within a 2-kilometre (km) radius of the subject site, are characterized by mostly low-rise massing with clusters of taller mid- and high-rise buildings in all directions, and the southern extent of the urban massing of the downtown core from the north-northeast clockwise to the north. Notably, Carleton University is situated approximately 1.3 km to the southwest and Dow's Lake, the Dominion Arboretum, and the Fletcher Wildlife Garden are located at the west-southwest extent of the far-field.

A site plan for the proposed massing scenario is illustrated in Figure 1A, while the existing massing scenario is illustrated in Figure 1B. Figures 2A-2H illustrate the computational models used to conduct the study. The existing massing scenario includes the existing massing and any future developments approved by the City of Ottawa.

3. OBJECTIVES

The principal objectives of this study are to (i) determine pedestrian level wind conditions at key areas within and surrounding the development site; (ii) identify areas where wind conditions may interfere with the intended uses of outdoor spaces; and (iii) recommend suitable mitigation measures, where required.

4. METHODOLOGY

The approach followed to quantify pedestrian wind conditions over the site is based on CFD simulations of wind speeds across the study site within a virtual environment, meteorological analysis of the Ottawa area wind climate, and synthesis of computational data with City of Ottawa wind comfort and safety criteria³. The following sections describe the analysis procedures, including a discussion of the noted pedestrian wind criteria.

4.1 Computer-Based Context Modelling

A computer based PLW study was performed to determine the influence of the wind environment on pedestrian comfort over the proposed development site. Pedestrian comfort predictions, based on the mechanical effects of wind, were determined by combining measured wind speed data from CFD simulations with statistical weather data obtained from Ottawa Macdonald-Cartier International Airport. The general concept and approach to CFD modelling is to represent building and topographic details in the immediate vicinity of the study site on the surrounding model, and to create suitable atmospheric wind profiles at the model boundary. The wind profiles are designed to have similar mean and turbulent wind properties consistent with actual site exposures.

An industry standard practice is to omit trees, vegetation, and other existing and planned landscape elements from the model due to the difficulty of providing accurate seasonal representation of vegetation. The omission of trees and other landscaping elements produces slightly stronger wind speeds.

4.2 Wind Speed Measurements

The PLW analysis was performed by simulating wind flows and gathering velocity data over a CFD model of the site for 16 wind directions. The CFD simulation model was centered on the study building, complete with surrounding massing within a radius of 640 m. The process was performed for two context massing scenarios, as noted in Section 2.

³ City of Ottawa Terms of References: Wind Analysis
https://documents.ottawa.ca/sites/default/files/torwindanalysis_en.pdf

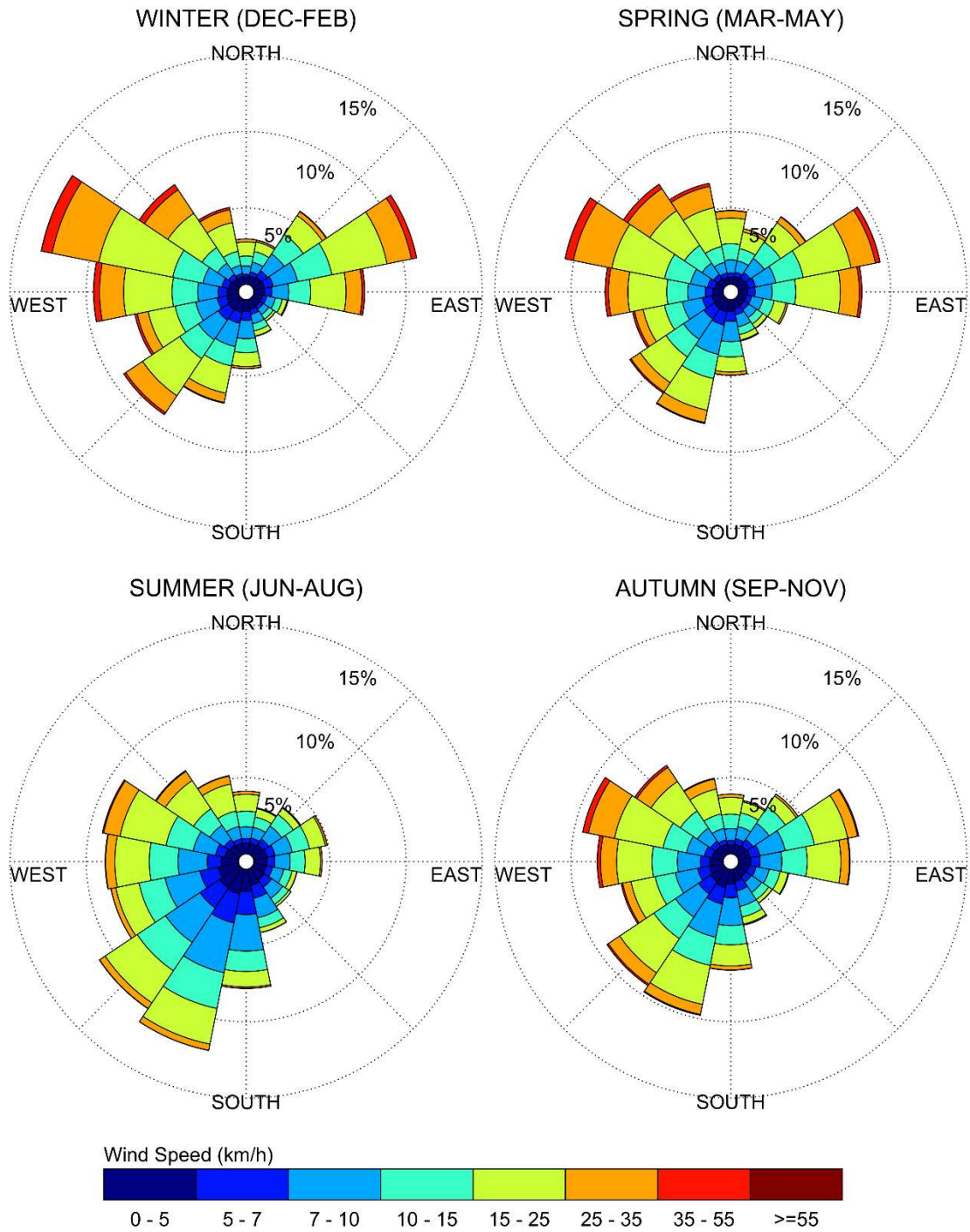
Mean and peak wind speed data obtained over the study site for each wind direction were interpolated to 36 wind directions at 10° intervals, representing the full compass azimuth. Measured wind speeds approximately 1.5 m above local grade were referenced to the wind speed at gradient height to generate mean and peak velocity ratios, which were used to calculate full-scale values. Gradient height represents the theoretical depth of the boundary layer of the earth's atmosphere, above which the mean wind speed remains constant. Further details of the wind flow simulation technique are presented in Appendix A.

4.3 Historical Wind Speed and Direction Data

A statistical model for winds in Ottawa was developed from approximately 40 years of hourly meteorological wind data recorded at Ottawa Macdonald-Cartier International Airport and obtained from Environment and Climate Change Canada. Wind speed and direction data were analyzed during the appropriate hours of pedestrian usage (that is, between 06:00 and 23:00) and divided into four distinct seasons, as stipulated in the wind criteria. Specifically, the spring season is defined as March through May, the summer season is defined as June through August, the autumn season is defined as September through November, and the winter season is defined as December through February, inclusive.

The statistical model of the Ottawa area wind climate, which indicates the directional character of local winds on a seasonal basis, is illustrated on the following page. The plots illustrate seasonal distribution of measured wind speeds and directions in kilometers per hour (km/h). Probabilities of occurrence of different wind speeds are represented as stacked polar bars in sixteen azimuth divisions. The radial direction represents the percentage of time for various wind speed ranges per wind direction during the measurement period. The prominent wind speeds and directions can be identified by the longer length of the bars. For Ottawa, the most common winds occur for westerly wind directions, followed by those from the east, while the most common wind speeds are below 36 km/h. The directional prominence and relative magnitude of wind speed changes somewhat from season to season.

SEASONAL DISTRIBUTION OF WIND OTTAWA MACDONALD-CARTIER INTERNATIONAL AIRPORT



Notes:

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

4.4 Pedestrian Wind Comfort and Safety Criteria – City of Ottawa

Pedestrian wind comfort and safety criteria are based on the mechanical effects of wind without consideration of other meteorological conditions (that is, temperature and relative humidity). The comfort criteria assume that pedestrians are appropriately dressed for a specified outdoor activity during any given season. Five pedestrian comfort classes based on 20% non-exceedance mean wind speed ranges are used to assess pedestrian comfort: (1) Sitting; (2) Standing; (3) Strolling; (4) Walking; and (5) Uncomfortable. The gust speeds, and equivalent mean speeds, are selected based on the Beaufort scale, which describes the effects of forces produced by varying wind speed levels on objects. Wind conditions suitable for sitting are represented by the colour blue, standing by green, strolling by yellow, and walking by orange; uncomfortable conditions are represented by the colour magenta. Specifically, the comfort classes, associated wind speed ranges, and limiting criteria are summarized as follows:

PEDESTRIAN WIND COMFORT CLASS DEFINITIONS

Wind Comfort Class	Mean Speed (km/h)	Description
SITTING	≤ 10	Mean wind speeds no greater than 10 km/h occurring at least 80% of the time. The equivalent gust wind speed is approximately 16 km/h.
STANDING	≤ 14	Mean wind speeds no greater than 14 km/h occurring at least 80% of the time. The equivalent gust wind speed is approximately 22 km/h.
STROLLING	≤ 17	Mean wind speeds no greater than 17 km/h occurring at least 80% of the time. The equivalent gust wind speed is approximately 27 km/h.
WALKING	≤ 20	Mean wind speeds no greater than 20 km/h occurring at least 80% of the time. The equivalent gust wind speed is approximately 32 km/h.
UNCOMFORTABLE	> 20	Uncomfortable conditions are characterized by predicted values that fall below the 80% target for walking. Brisk walking and exercise, such as jogging, would be acceptable for moderate excesses of this criterion.

Regarding wind safety, the pedestrian safety wind speed criterion is based on the approximate threshold that would cause a vulnerable member of the population to fall. A 0.1% exceedance gust wind speed of 90 km/h is classified as dangerous. From calculations of stability, it can be shown that gust wind speeds of 90 km/h would be the approximate threshold wind speed that would cause an average elderly person in good health to fall. Notably, pedestrians tend to be more sensitive to wind gusts than to steady winds for lower wind speed ranges. For strong winds approaching dangerous levels, this effect is less important because the mean wind can also create problems for pedestrians.

Experience and research on people's perception of mechanical wind effects has shown that if the wind speed levels are exceeded for more than 20% of the time, the activity level would be judged to be uncomfortable by most people. For instance, if a mean wind speed of 10 km/h (equivalent gust wind speed of approximately 16 km/h) were exceeded for more than 20% of the time most pedestrians would judge that location to be too windy for sitting. Similarly, if mean wind speed of 20 km/h (equivalent gust wind speed of approximately 32 km/h) at a location were exceeded for more than 20% of the time, walking or less vigorous activities would be considered uncomfortable. As these criteria are based on subjective reactions of a population to wind forces, their application is partly based on experience and judgment.

Once the pedestrian wind speed predictions have been established throughout the subject site, the assessment of pedestrian comfort involves determining the suitability of the predicted wind conditions for discrete regions within and surrounding the subject site. This step involves comparing the predicted comfort classes to the target comfort classes, which are dictated by the location type for each region (that is, a sidewalk, building entrance, amenity space, or other). An overview of common pedestrian location types and their typical windiest target comfort classes are summarized on the following page. Depending on the programming of a space, the desired comfort class may differ from this table.

TARGET PEDESTRIAN WIND COMFORT CLASSES FOR VARIOUS LOCATION TYPES

Location Types	Target Comfort Classes
Primary Building Entrance	Standing
Secondary Building Access Point	Walking
Public Sidewalk / Bicycle Path	Walking
Outdoor Amenity Space	Sitting / Standing
Café / Patio / Bench / Garden	Sitting / Standing
Transit Stop (Without Shelter)	Standing
Transit Stop (With Shelter)	Walking
Public Park / Plaza	Sitting / Standing
Garage / Service Entrance	Walking
Parking Lot	Walking
Vehicular Drop-Off Zone	Walking

5. RESULTS AND DISCUSSION

The following discussion of the predicted pedestrian wind conditions for the subject site is accompanied by Figures 3A-7B, illustrating wind conditions at grade level for the proposed and existing massing scenarios. Conditions are presented as continuous contours of wind comfort throughout the subject site and correspond to the comfort classes presented in Section 4.4.

The details of these conditions are summarized in the following pages for each area of interest.

5.1 Wind Comfort Conditions

Sidewalks along Frank Clair Lane: Wind comfort conditions along Frank Clair Lane under the existing massing are predicted to be suitable for mostly sitting during the summer, becoming suitable for standing, or better, throughout the remainder of the year, with strolling conditions predicted beneath the scoreboard located to the west of the stadium field.

Following the introduction of the proposed development, wind conditions along Frank Clair Lane are predicted to be suitable for standing, or better, during the summer, becoming suitable for strolling, or better, throughout the remaining three seasons. The windiest conditions are located along the parking

and pedestrian ramps at the west elevation of the NSS, and near the scoreboard during the winter. The noted conditions are considered acceptable for public sidewalks and walkways. While the introduction of the proposed development is predicted to produce slightly windier conditions along Frank Clair Lane in comparison to existing conditions, wind conditions with the proposed development are nevertheless considered acceptable for the intended pedestrian uses.

West Elevation of the Stadium Field: Following the introduction of the proposed development, wind conditions to the west of the stadium field are predicted to be suitable for a mix of sitting and standing throughout the year. Conditions over the noted area with the existing massing are predicted to be suitable for sitting during the summer, becoming suitable for a mix of sitting and standing during the three colder seasons.

Sidewalks and Existing Patios along Exhibition Way: Conditions along Exhibition Way with the existing massing are predicted to be suitable for sitting during the summer, becoming suitable for standing, or better, during the three colder seasons, while conditions over the existing restaurant patios along Exhibition Way are predicted to be suitable for mostly sitting during the summer and autumn, and standing, or better, during the spring and winter. Following the introduction of the proposed development, conditions over the public sidewalks along Exhibition Way are predicted to be suitable for a mix of sitting and standing during the summer, becoming suitable for strolling, or better, during the autumn, and suitable for a mix of mostly standing and strolling during the spring and winter. The noted conditions are considered acceptable for public sidewalks.

Following the introduction of the proposed development, during the summer season when pedestrian usage of public and private seating areas is expected to be the most frequent and when pedestrians may linger in the area, wind conditions over the existing restaurant patios along Exhibition Way are predicted to be suitable for a mix of sitting and standing. Conditions over this area are predicted to be suitable for a mix of sitting, standing, and strolling during the remainder of the year, with the strolling conditions located at the southeast corner of the patio areas along Exhibition Way and over areas adjoining the public sidewalk. Landscaping elements that could not be implemented into the wind model (such as trees and wooden barriers or fences), as described in Section 4.1, are expected to somewhat improve pedestrian comfort over the noted patios or seating areas during the typical use period (May to October, inclusive).

Sidewalks along Paul Askin Way: Conditions over the nearby public sidewalks along Paul Askin Way with the existing massing are predicted to be mostly suitable sitting during all four seasons. Following the introduction of the proposed development, conditions over the public sidewalks along Paul Askin Way are predicted to be suitable for sitting during the summer, becoming suitable for a mix of mostly sitting and standing during the remaining seasons. While the introduction of the proposed development is predicted to produce windier conditions along Paul Askin Way in comparison to existing conditions, wind conditions with the proposed development are nevertheless considered acceptable for the intended pedestrian uses.

Aberdeen Square: Wind conditions over Aberdeen Square with the existing massing are predicted to be suitable for mostly sitting throughout the year. Following the introduction of the proposed development, conditions within Aberdeen Square are predicted to be suitable for sitting during the summer, autumn, and typical use period, and suitable for mostly sitting during the spring and winter seasons with an isolated area of standing conditions. The noted conditions are considered acceptable.

South Court: Under the existing massing, wind conditions over the South Court are predicted to be suitable for sitting during the summer and autumn, and suitable for a mix of sitting and standing during the spring and winter. Following the introduction of the proposed development, wind conditions over the South Court are predicted to be suitable for mostly sitting during the summer and autumn, becoming suitable for a mix of mostly sitting and standing during the spring and winter. Notably, during the typical use period, conditions within the South Court are predicted to be suitable for mostly sitting, which may be considered acceptable for the designated seating areas within the space.

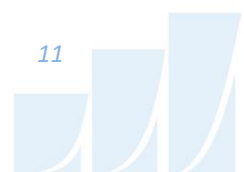
East Court: Prior to the introduction of the proposed development, wind conditions over the East Court are predicted to be calm and suitable for mostly sitting during the summer, autumn, and winter seasons, becoming suitable for mostly sitting with standing conditions to the south during the spring. These conditions remain mostly unchanged following the introduction of the proposed development and are considered acceptable.

Walkway North of the New Event Centre: Wind conditions over the future walkway to the east of Tower 2 that connects the Aberdeen Pavilion to the proposed Event Centre are predicted to be mixed between standing and strolling during the summer months, and mixed between mostly walking, strolling, and standing during the spring, autumn, and winter. The windiest conditions are located to the immediate east of Tower 2, where conditions are predicted to occasionally be considered uncomfortable for walking during the spring and winter months over an isolated portion of the pedestrian walkway. Conditions over this area are predicted to be suitable for walking for approximately 79% of the time during the spring season and 78% of the time during the winter season, representing marginal exceedances of 1% and 2% of the walking comfort threshold, respectively.

It is recommended that these conditions be confirmed and further developed at the future Site Plan Control application for the commercial/retail block, and that an appropriate mitigation strategy, if required, be developed as the design of the commercial/retail block component of Lansdowne 2.0 develops.

New Event Centre Public Areas: Wind conditions over the new pedestrian areas to the north, east, and south of the proposed Event Centre are predicted to be suitable for mostly standing, or better, throughout the year, with conditions predicted to be suitable for sitting during the typical use period over the east and south terraces serving the proposed Event Centre, which is considered acceptable. Conditions over the patio along the west elevation of the proposed Event Centre that overlooks the stadium field are predicted to be mostly suitable for sitting throughout the year, which is considered acceptable.

Great Lawn: Prior to and following the introduction of the proposed development, conditions during the summer over the Great Lawn are predicted to be suitable for sitting, becoming suitable for a mix of sitting and standing during the autumn and suitable for mostly standing during the spring and winter. Wind conditions with the proposed development remain mostly similar to those under the existing massing throughout the year, including during the primary-use seasons of spring, summer, and autumn. Given these comparable conditions and that the Great Lawn has limited seating areas, conditions over the Great Lawn with the proposed development are considered acceptable.



Nearby Lansdowne Park Pathways to the South and East of the New Event Centre: Prior to the introduction of the proposed development, wind conditions over the nearby existing pathways within Lansdowne Park to the south and east of the new Event Centre and Great Lawn are predicted to be suitable for a mix of sitting and standing during the summer, becoming suitable for mostly standing, or better, throughout the remainder of the year. Conditions following the introduction of the proposed development over these areas are predicted to remain similar to existing wind conditions, and the noted conditions are considered acceptable for public pathways and bicycle paths.

Stadium Field: Prior to and following the introduction of the proposed development, wind conditions over the stadium field are predicted to be suitable for sitting during the summer, becoming suitable for a mix of sitting and standing during the spring, autumn, and winter. During the typical use period, conditions over the field are predicted to be suitable for mostly sitting.

Building Access Points: Owing to the protection of the building façades, conditions in the vicinity of the primary building access points serving the new Event Centre and the new NSS are predicted to be suitable for standing, or better, throughout the year, while conditions in the vicinity of the secondary building access points serving these buildings are predicted to be suitable for strolling, or better, throughout the year. The noted conditions are considered acceptable.

5.2 Wind Safety

Within the context of typical weather patterns, which exclude anomalous localized storm events such as tornadoes and downbursts, no pedestrian areas within or surrounding the subject site are expected to experience conditions that could be considered dangerous, as defined in Section 4.4.

5.3 Applicability of Results

Pedestrian wind comfort and safety have been quantified for the specific configuration of existing and foreseeable construction around the subject site. Future changes (that is, construction or demolition) of these surroundings may cause changes to the wind effects in two ways, namely: (i) changes beyond the immediate vicinity of the subject site would alter the wind profile approaching the subject site; and (ii) development in proximity to the subject site would cause changes to local flow patterns.



6. CONCLUSIONS AND RECOMMENDATIONS

A complete summary of the predicted wind conditions is provided in Section 5 and illustrated in Figures 3A-7B. Based on computer simulations using the CFD technique, meteorological data analysis of the Ottawa wind climate, City of Ottawa wind comfort and safety criteria, and experience with numerous similar developments, the study concludes the following:

- 1) Most grade-level areas within and surrounding the subject site are predicted to experience conditions that are considered acceptable for the intended pedestrian uses throughout the year. Specifically, conditions in the vicinity of the building access points serving the proposed development and over most grade-level public sidewalks and walkways, surface parking, walkways, the East Court, the Great Lawn, Aberdeen Square, the South Court, the stadium field, the proposed patios and terraces serving the new Event Centre, and the walking and bike pathways to the east and south within Lansdowne Park are considerable acceptable.
- 2) Following the introduction of the proposed development, conditions over the existing patios along Exhibition Way are predicted to be suitable for a mix of sitting and standing during the summer and strolling during the remainder of the year, with conditions during the typical use period (May to October, inclusive) over the patios predicted to be suitable for sitting close to the building façades and standing elsewhere.
 - a. Notably, landscaping elements that could not be implemented in the simulation model (such as trees, wooden barriers, or fences) are expected to improve pedestrian comfort around seating areas within the noted patios, including during the colder seasons.
- 3) During the spring and winter seasons, an isolated area over the future walkway to the east of Tower 2 that connects Exhibition Way and the Aberdeen Pavilion to the new Event Centre is predicted to receive windier conditions that may occasionally be considered uncomfortable for walking, exceeding the walking comfort criteria for approximately 1% and 2% of the time during the spring and winter seasons.

- a. It is recommended that these conditions be confirmed and further developed at the future Site Plan Control application for the commercial/retail block, and that an appropriate mitigation strategy, if required, be developed as the design of the commercial/retail block component of the Lansdowne 2.0 development progresses and evolves.

- 4) The foregoing statements and conclusions apply to common weather systems, during which no dangerous wind conditions, as defined in Section 4.4, are expected anywhere over the subject site. During extreme weather events, (for example, thunderstorms, tornadoes, and downbursts), pedestrian safety is the main concern. However, these events are generally short-lived and infrequent and there is often sufficient warning for pedestrians to take appropriate cover.

Sincerely,

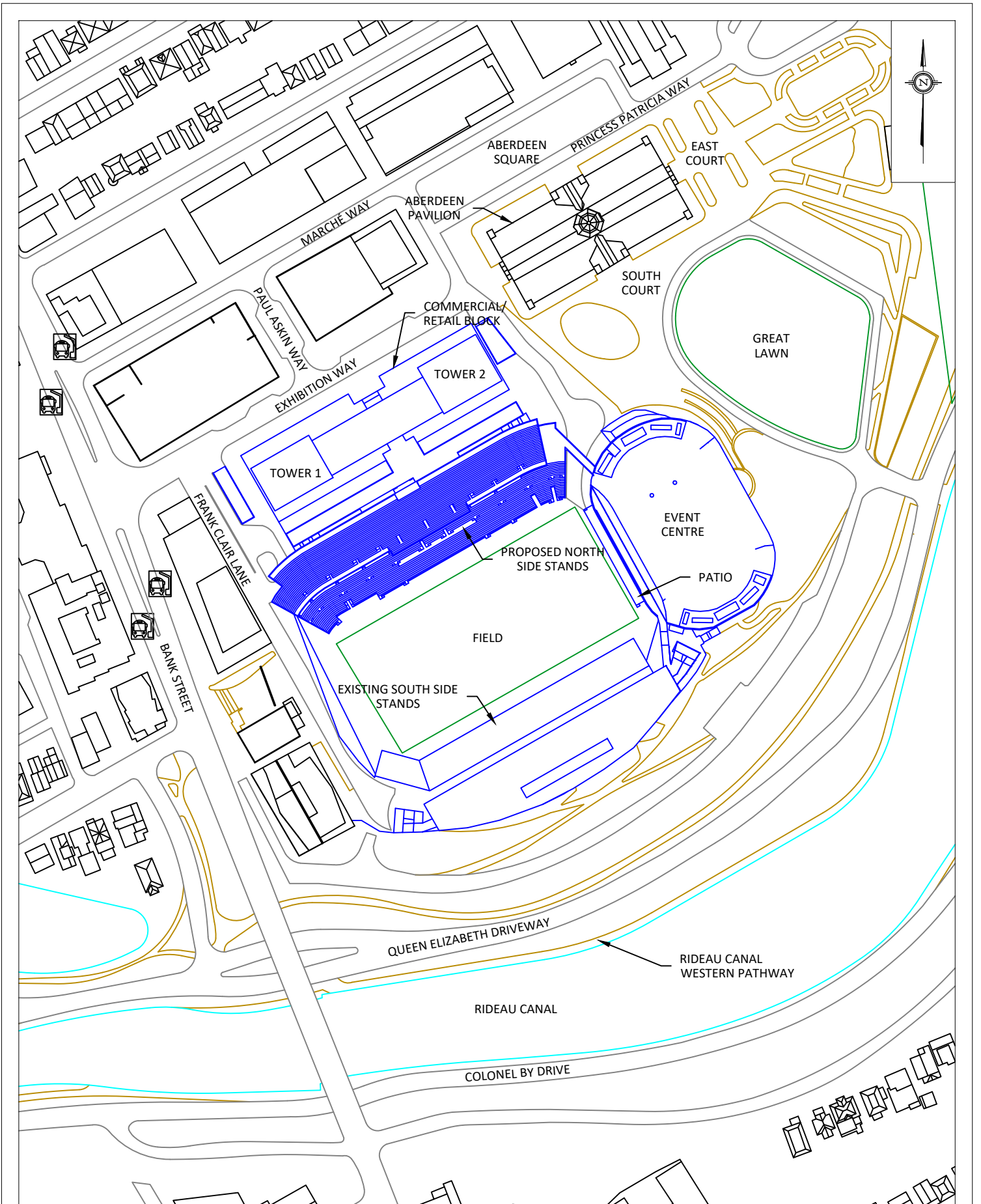
Gradient Wind Engineering Inc.



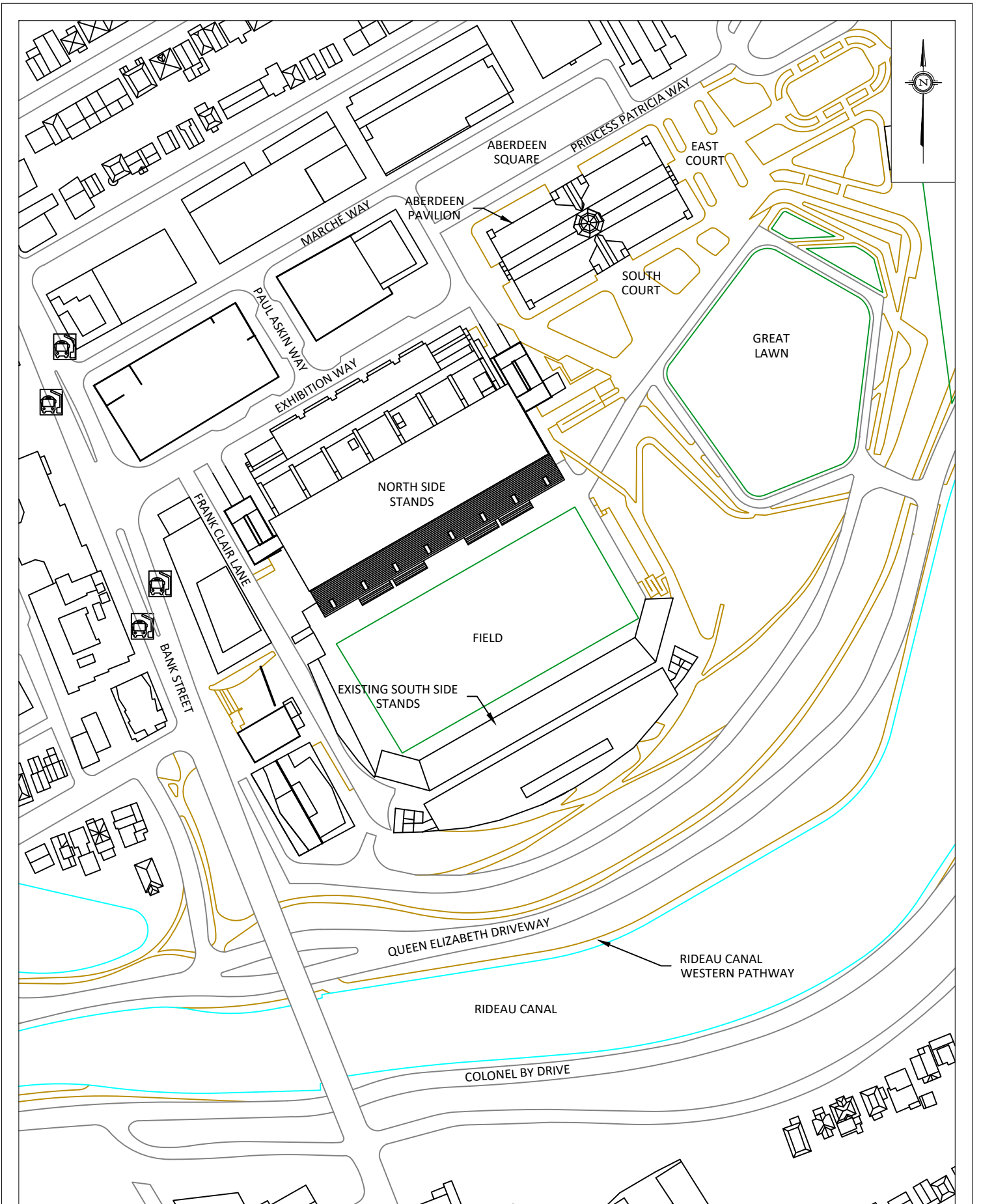
Justin Denne, M.ASc.
Junior Wind Scientist



David Huitema, M.Eng., P.Eng.
CFD Lead Engineer



GRADIENTWIND ENGINEERS & SCIENTISTS 127 WALGREEN ROAD, OTTAWA, ON 613 836 0934 • GRADIENTWIND.COM	PROJECT	LANSDOWNE 2.0, OTTAWA PEDESTRIAN LEVEL WIND STUDY		DESCRIPTION	FIGURE 1A: PROPOSED SITE PLAN AND SURROUNDING CONTEXT
	SCALE	1:2500	DRAWING NO.	23-053-PLW-1A	
	DATE	NOVEMBER 6, 2024	DRAWN BY	NMP	



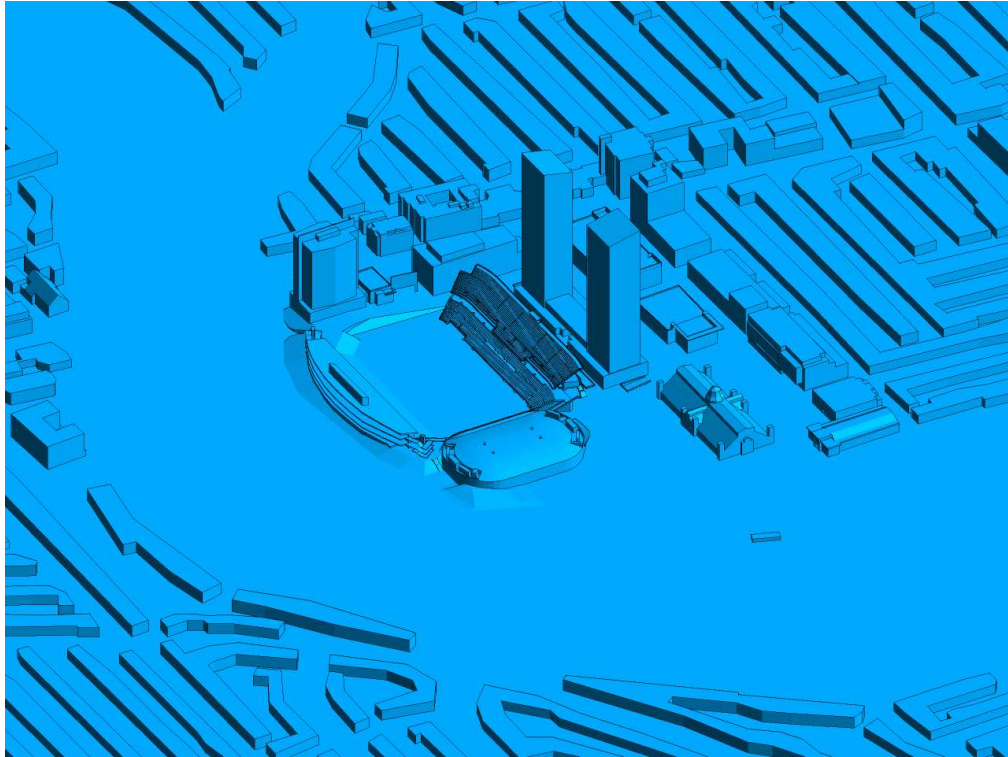


FIGURE 2A: COMPUTATIONAL MODEL, PROPOSED MASSING, EAST VIEW

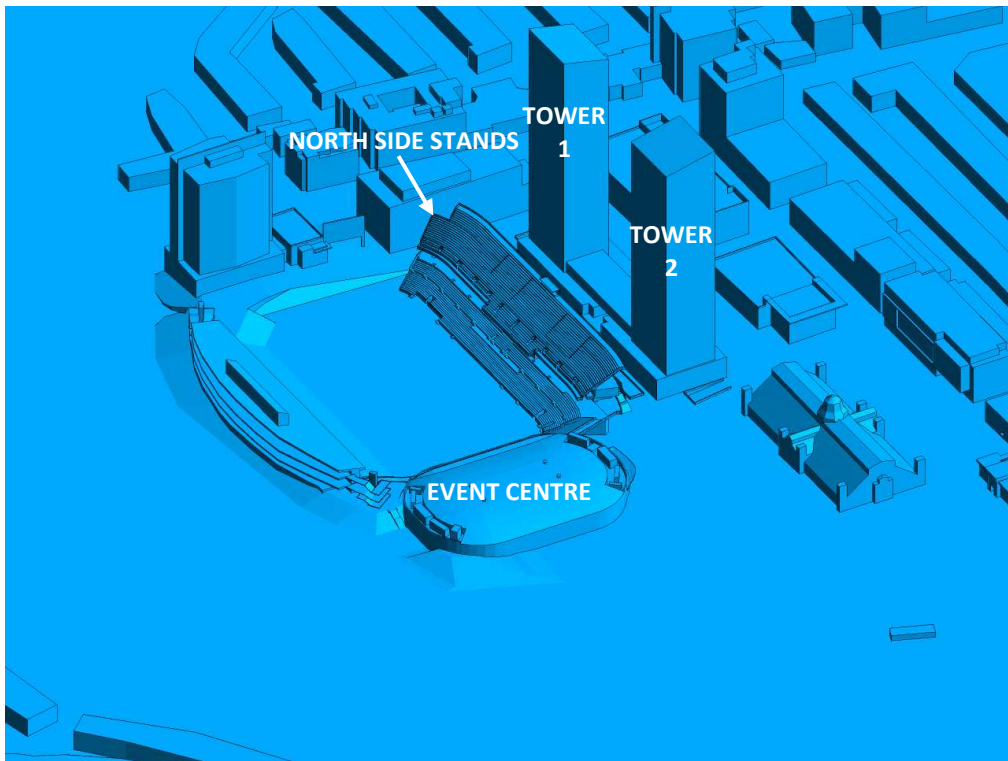


FIGURE 2B: CLOSE UP OF FIGURE 2A



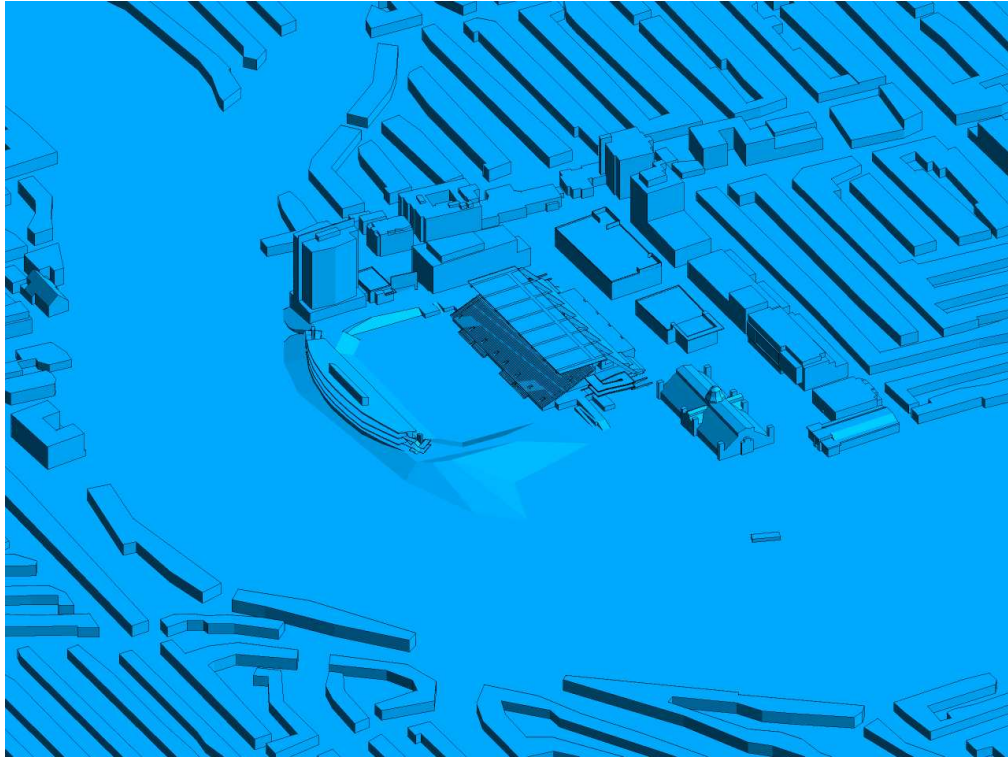


FIGURE 2C: COMPUTATIONAL MODEL, EXISTING MASSING, EAST VIEW

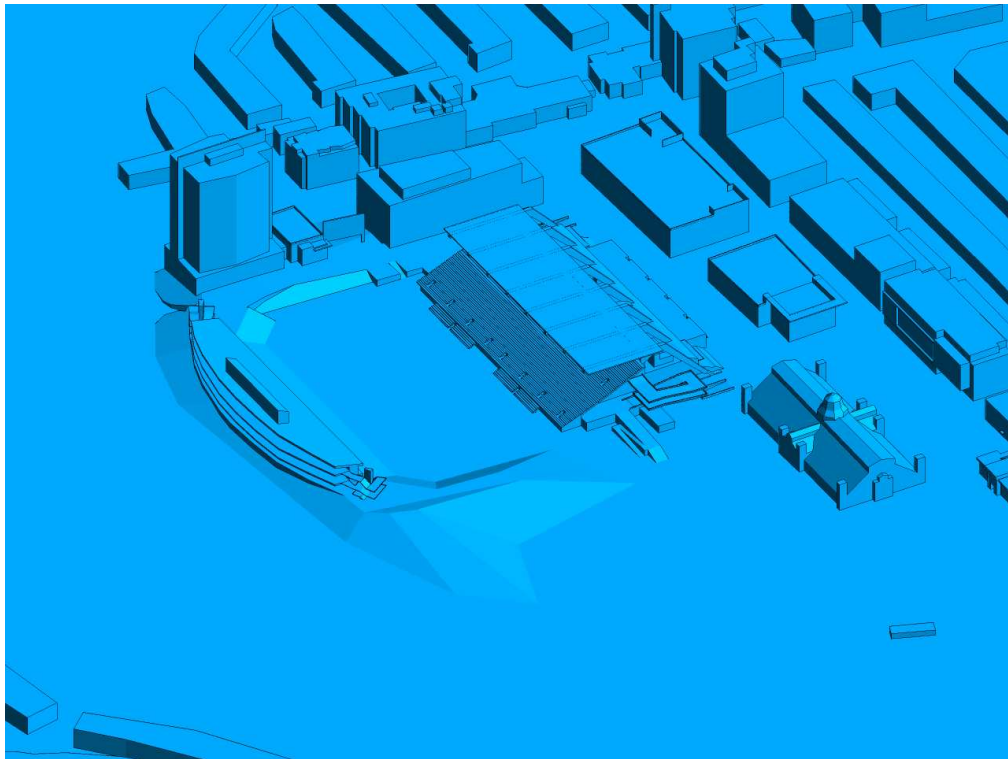


FIGURE 2D: CLOSE UP OF FIGURE 2C



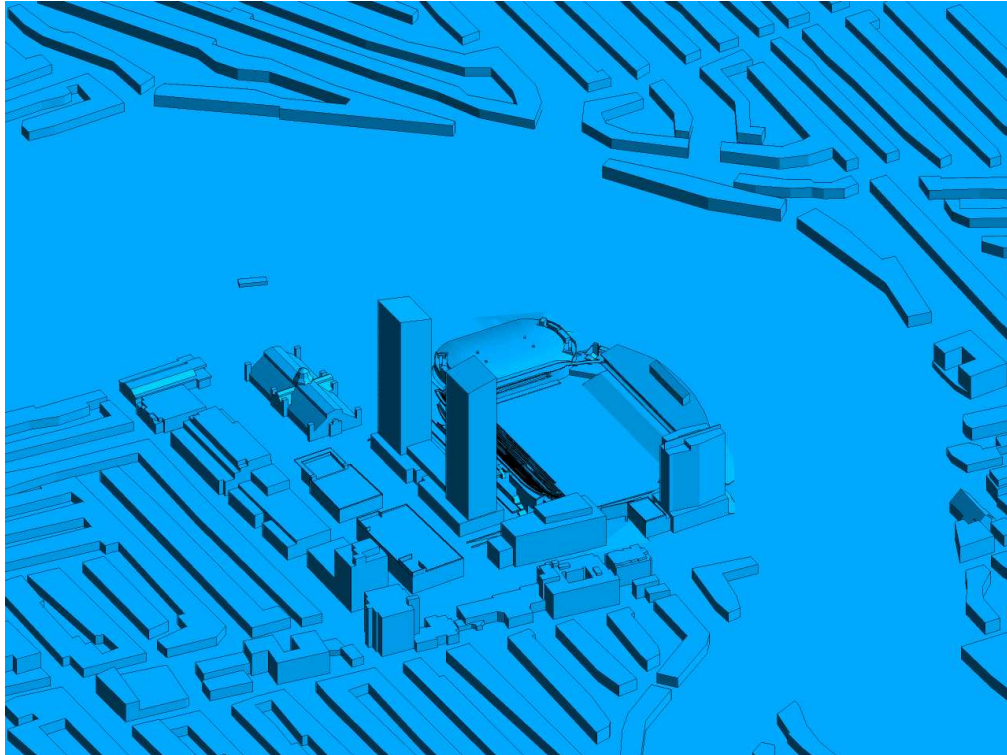


FIGURE 2E: COMPUTATIONAL MODEL, PROPOSED MASSING, WEST VIEW

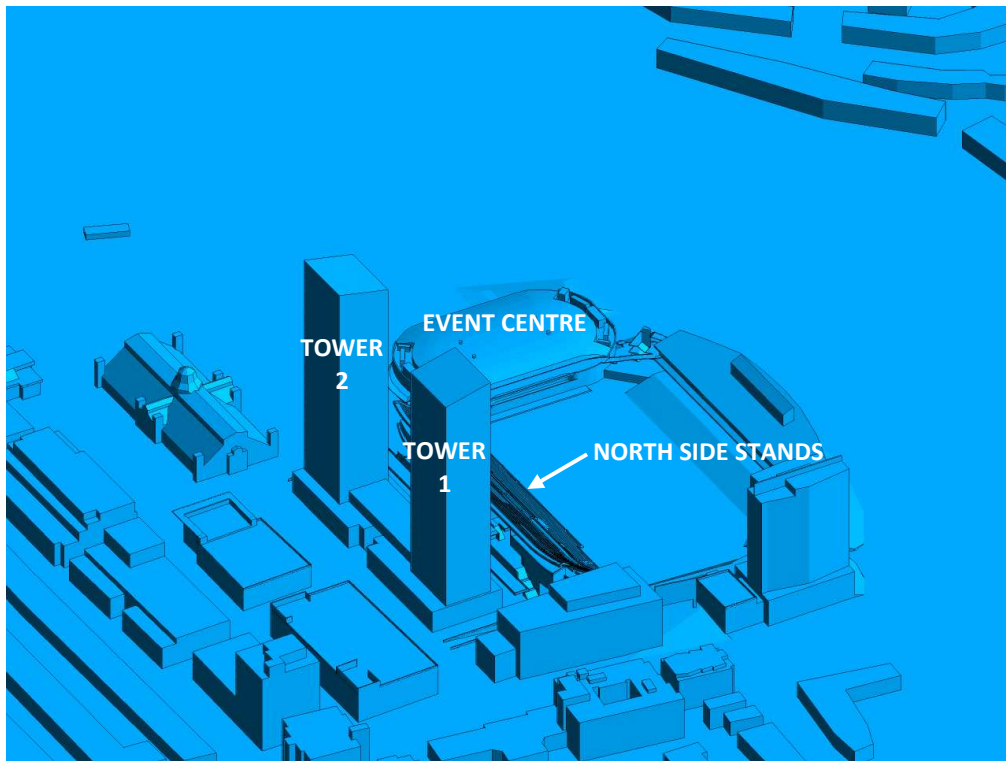


FIGURE 2F: CLOSE UP OF FIGURE 2E



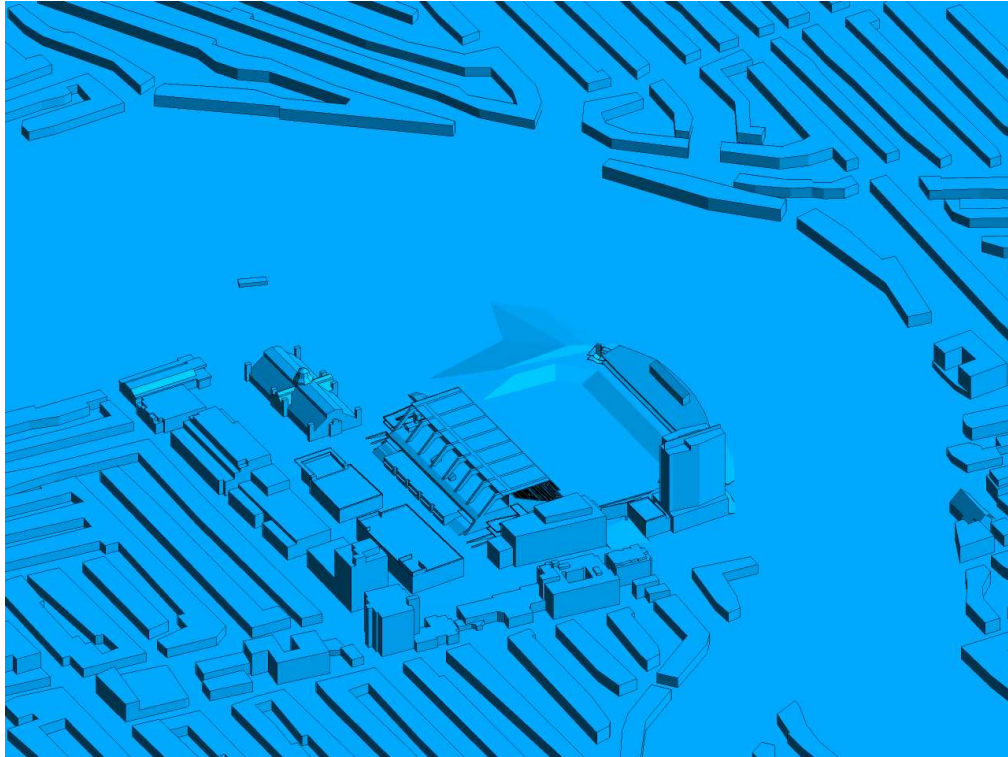


FIGURE 2G: COMPUTATIONAL MODEL, EXISTING MASSING, WEST PERSPECTIVE

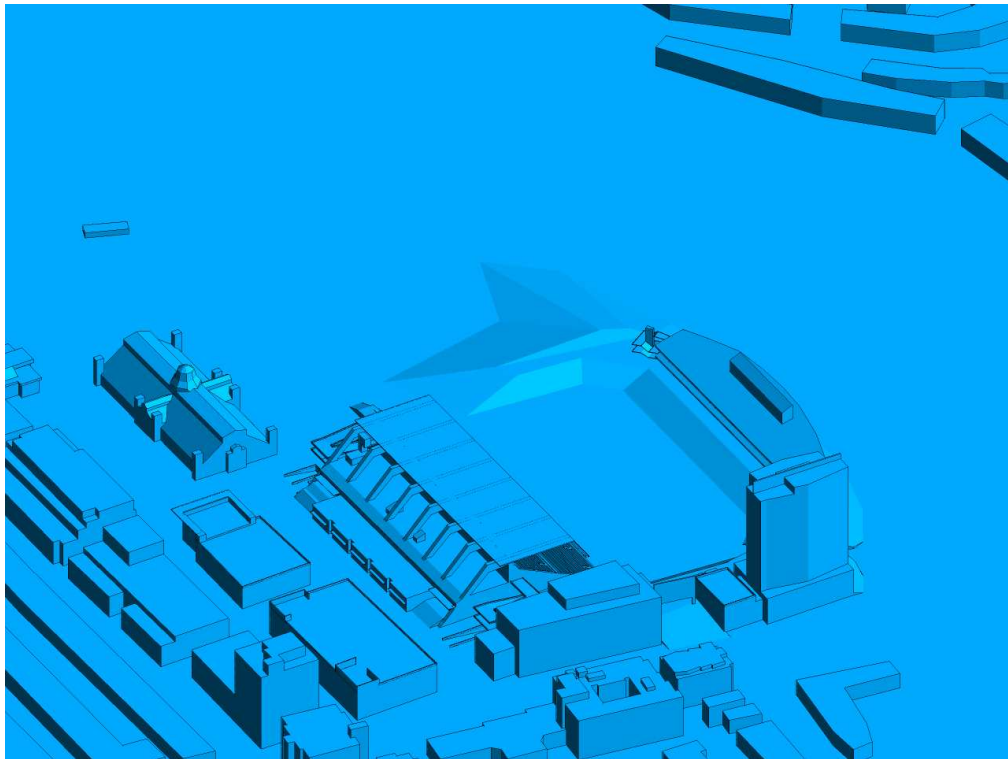


FIGURE 2H: CLOSE UP OF FIGURE 2G



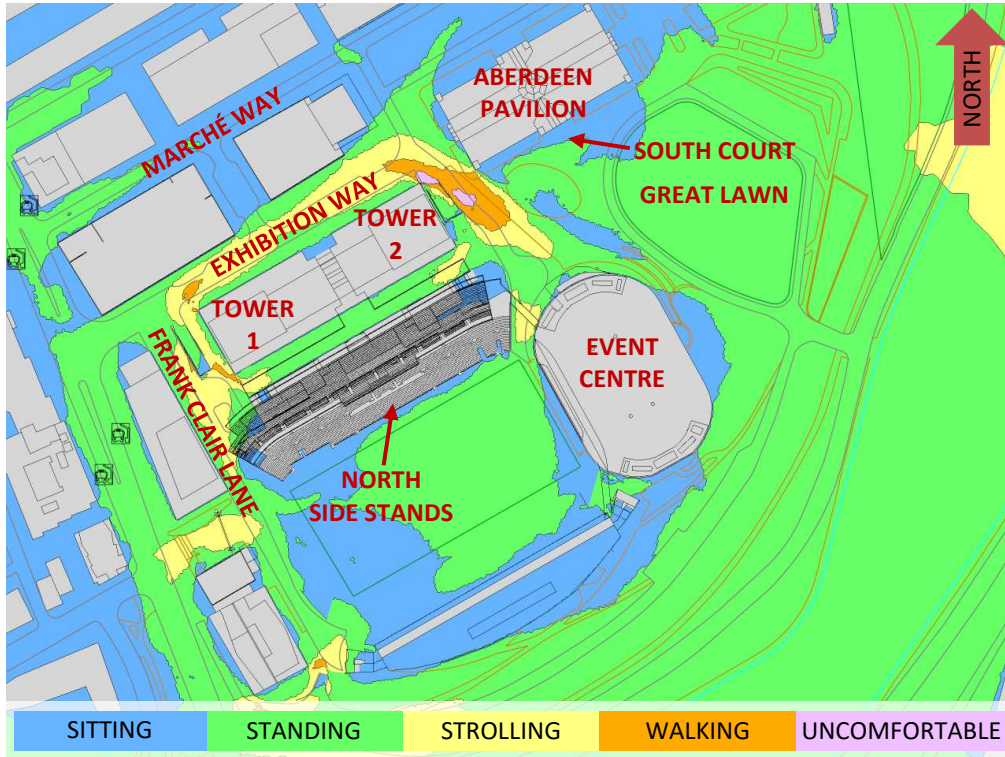


FIGURE 3A: SPRING – WIND COMFORT, PROPOSED

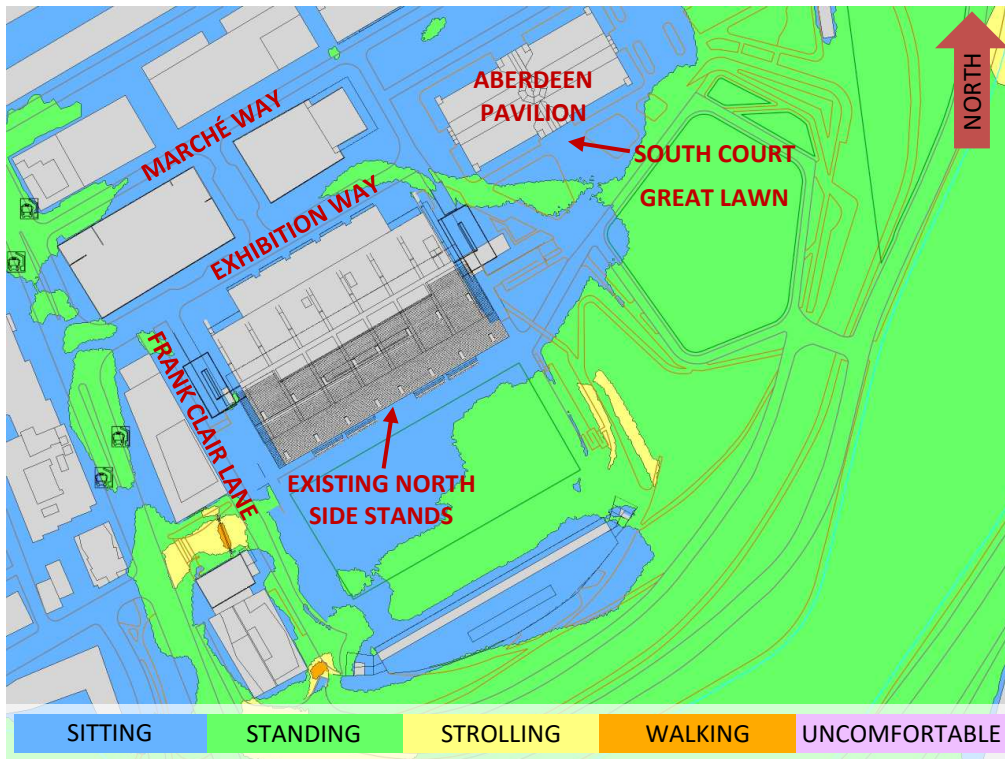


FIGURE 3B: SPRING – WIND COMFORT, EXISTING



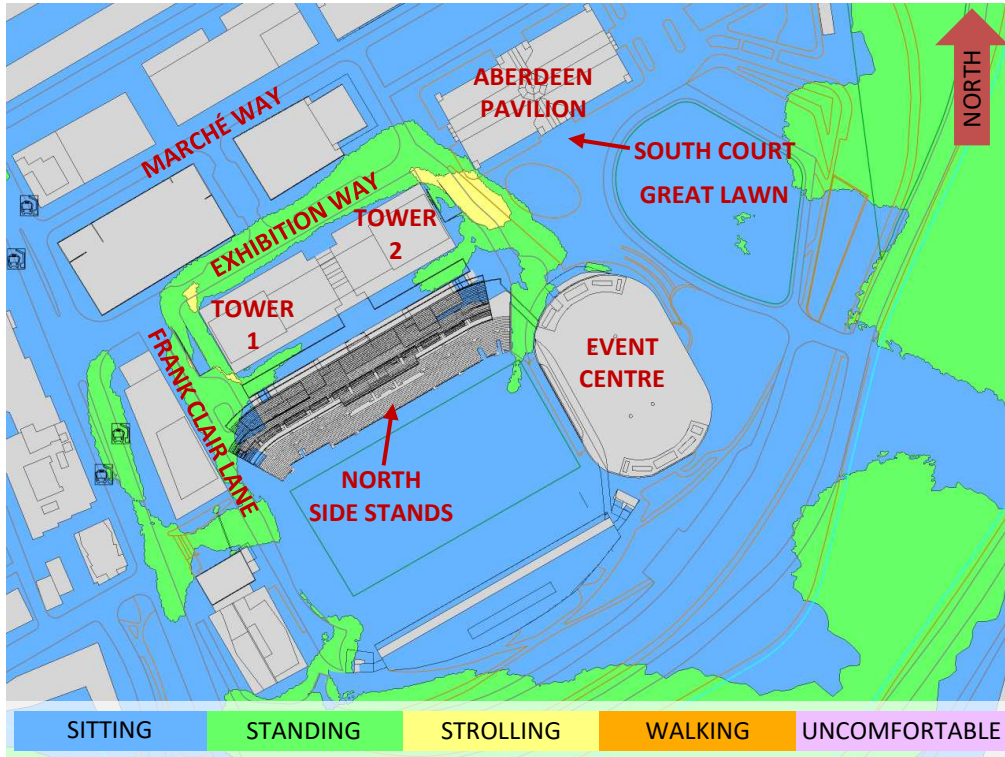


FIGURE 4A: SUMMER – WIND COMFORT, PROPOSED

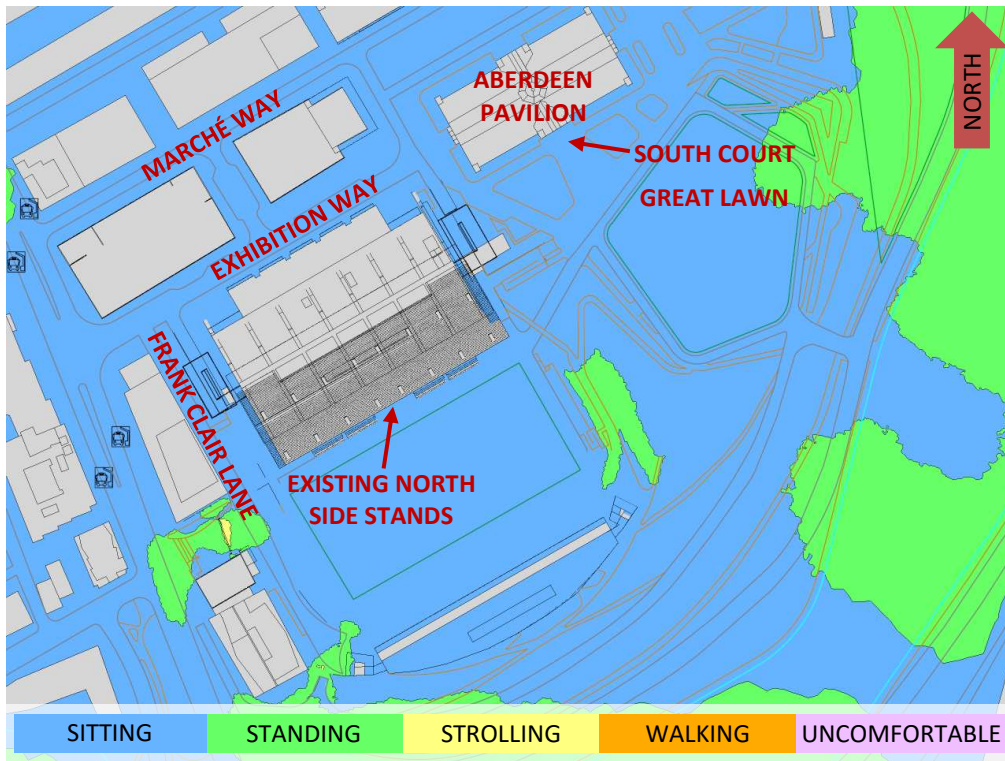


FIGURE 4B: SUMMER – WIND COMFORT, EXISTING



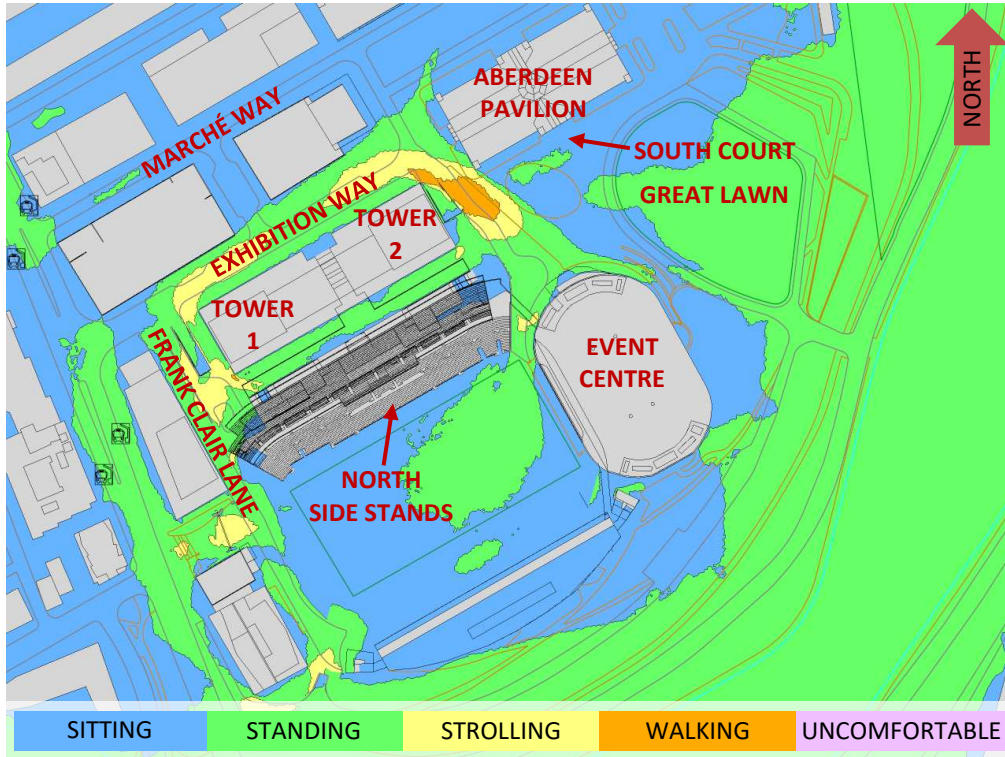


FIGURE 5A: AUTUMN – WIND COMFORT, PROPOSED

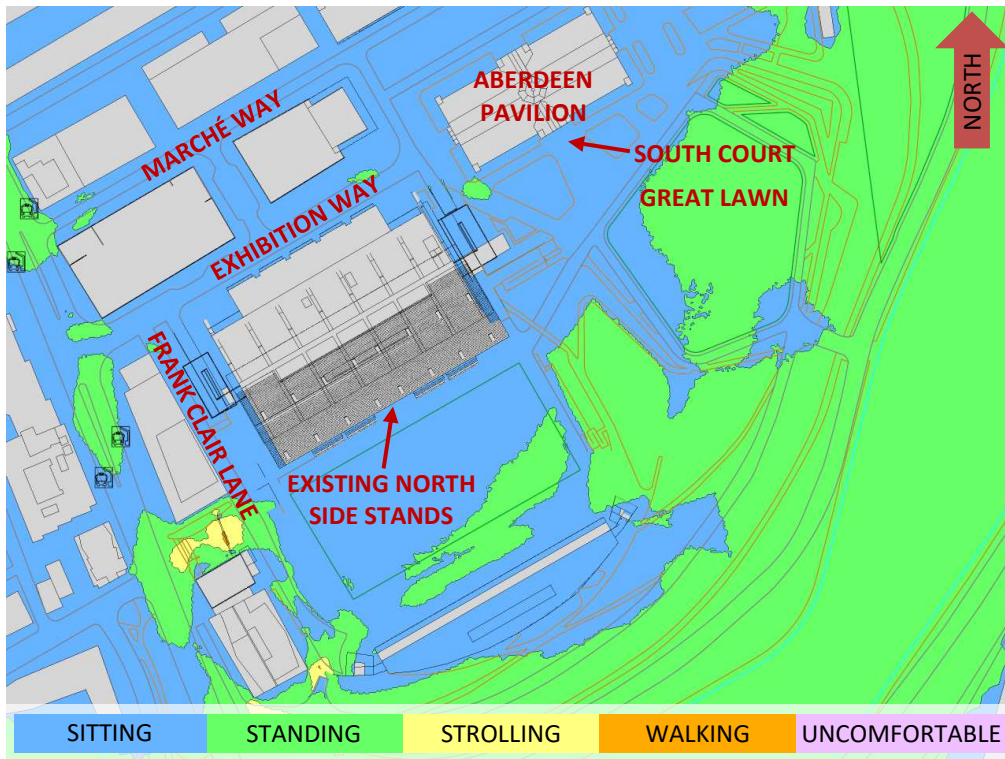


FIGURE 5B: AUTUMN – WIND COMFORT, EXISTING



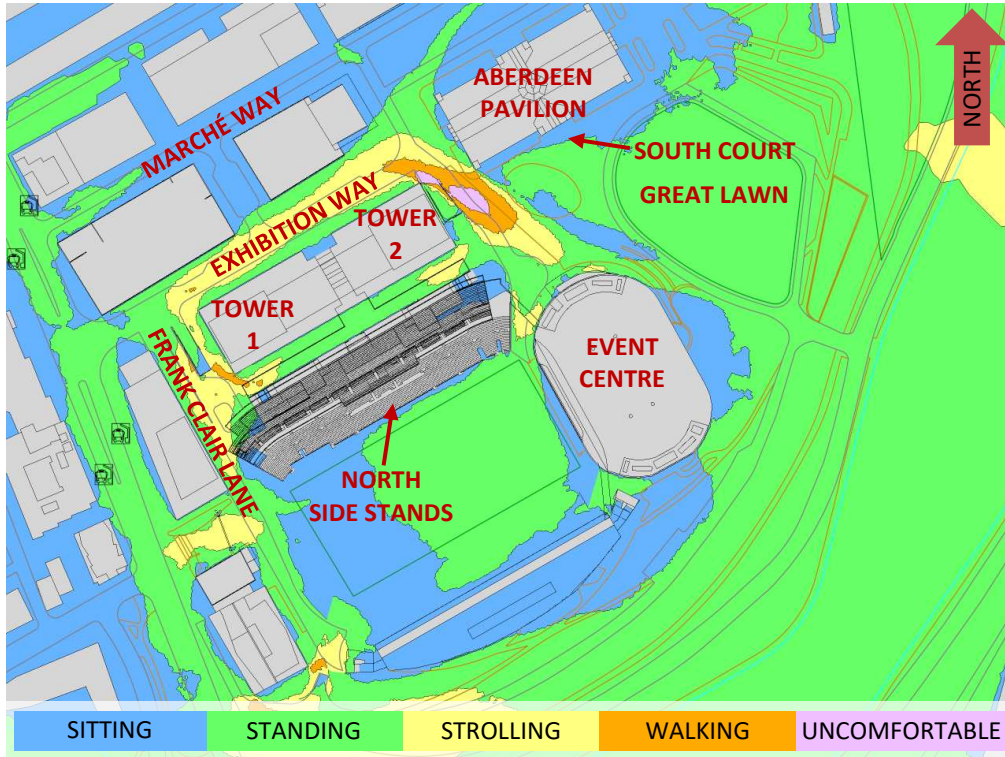


FIGURE 6A: WINTER – WIND COMFORT, PROPOSED

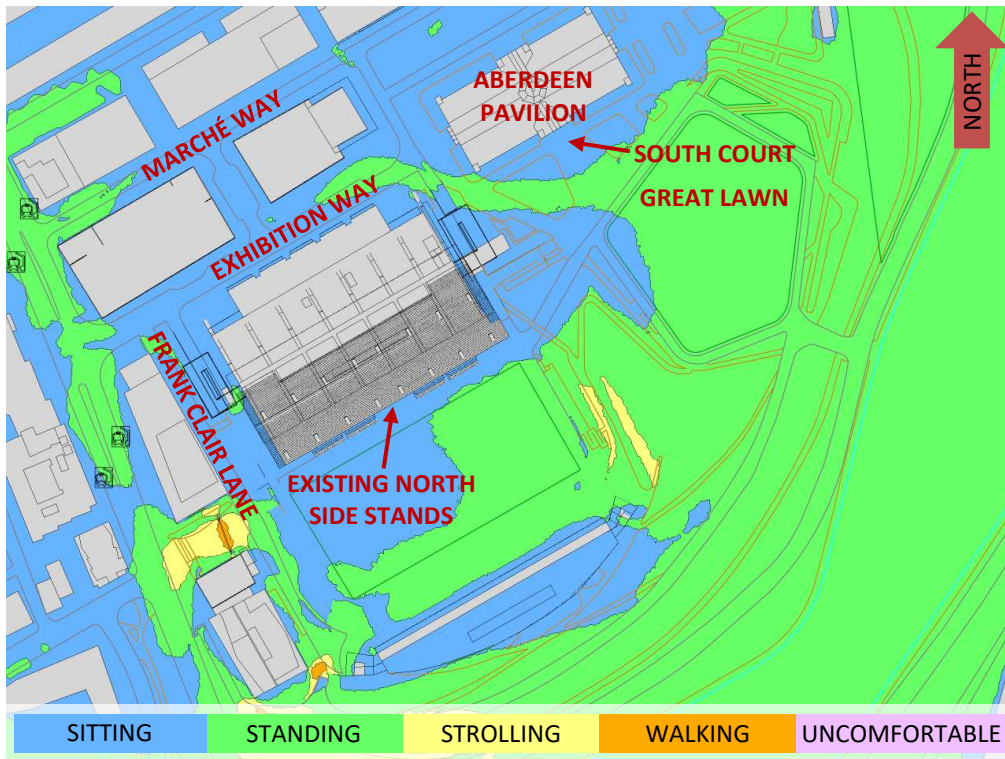


FIGURE 6B: WINTER – WIND COMFORT, EXISTING



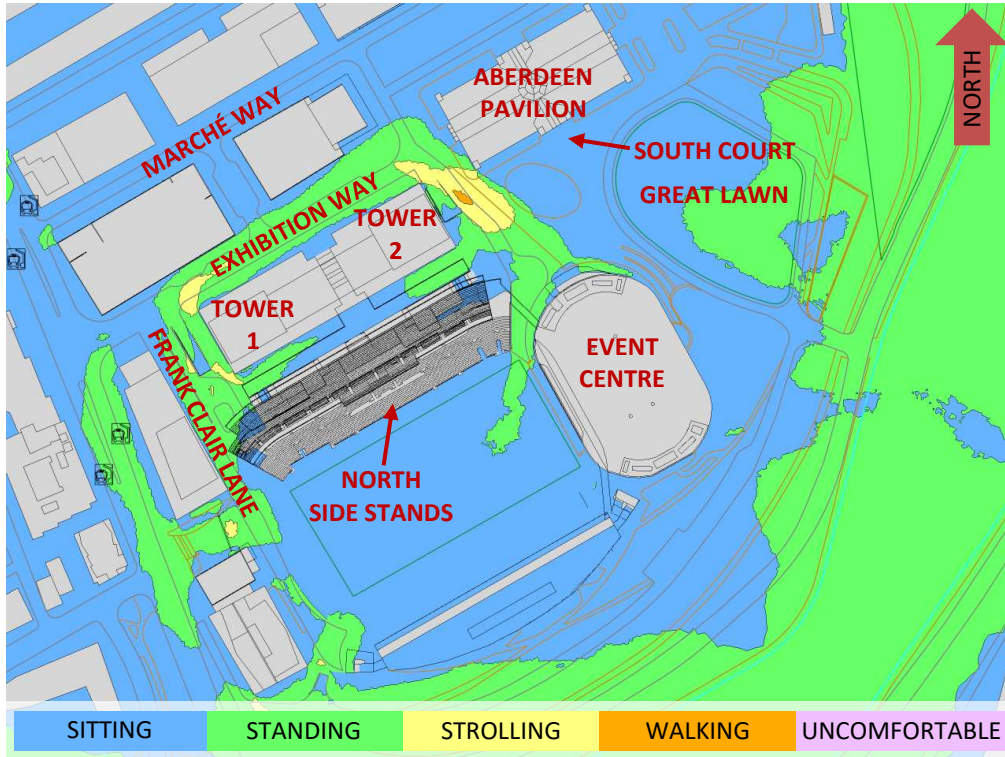


FIGURE 7A: TYPICAL USE PERIOD – WIND COMFORT, PROPOSED

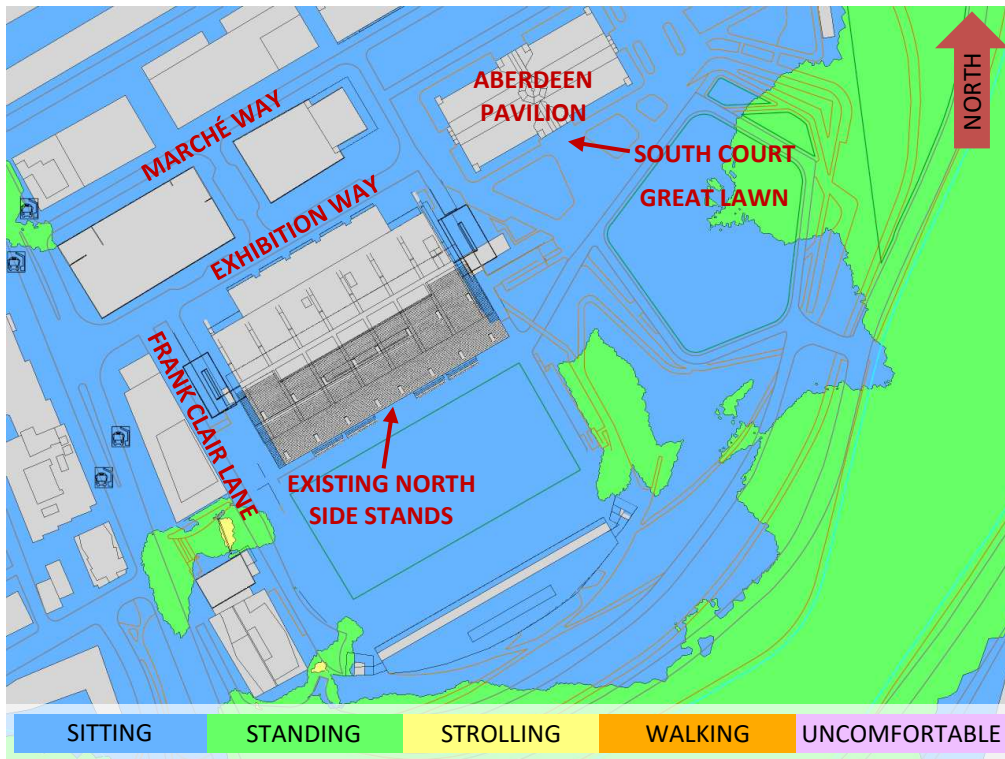


FIGURE 7B: TYPICAL USE PERIOD – WIND COMFORT, EXISTING



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APPENDIX A

SIMULATION OF THE ATMOSPHERIC BOUNDARY LAYER

SIMULATION OF THE ATMOSPHERIC BOUNDARY LAYER

The atmospheric boundary layer (ABL) is defined by the velocity and turbulence profiles according to industry standard practices. The mean wind profile can be represented, to a good approximation, by a power law relation, Equation (1), giving height above ground versus wind speed (1), (2).

$$U = U_g \left(\frac{Z}{Z_g} \right)^\alpha \quad \text{Equation (1)}$$

where, U = mean wind speed, U_g = gradient wind speed, Z = height above ground, Z_g = depth of the boundary layer (gradient height), and α is the power law exponent.

For the model, U_g is set to 6.5 metres per second, which approximately corresponds to the 60% mean wind speed for Ottawa based on historical climate data and statistical analyses. When the results are normalized by this velocity, they are relatively insensitive to the selection of gradient wind speed.

Z_g is set to 540 m. The selection of gradient height is relatively unimportant, so long as it exceeds the building heights surrounding the subject site. The value has been selected to correspond to our physical wind tunnel reference value.

α is determined based on the upstream exposure of the far-field surroundings (that is, the area that it not captured within the simulation model).

Table 1 presents the values of α used in this study, while Table 2 presents several reference values of α . When the upstream exposure of the far-field surroundings is a mixture of multiple types of terrain, the α values are a weighted average with terrain that is closer to the subject site given greater weight.

TABLE 1: UPSTREAM EXPOSURE (ALPHA VALUE) VS TRUE WIND DIRECTION

Wind Direction (Degrees True)	Alpha Value (α)
0	0.27
22.5	0.25
45	0.24
67.5	0.24
90	0.24
112.5	0.24
135	0.24
157.5	0.24
180	0.24
202.5	0.24
225	0.23
247.5	0.23
270	0.25
292.5	0.25
315	0.27
337.5	0.28

TABLE 2: DEFINITION OF UPSTREAM EXPOSURE (ALPHA VALUE)

Upstream Exposure Type	Alpha Value (α)
Open Water	0.14-0.15
Open Field	0.16-0.19
Light Suburban	0.21-0.24
Heavy Suburban	0.24-0.27
Light Urban	0.28-0.30
Heavy Urban	0.31-0.33

The turbulence model in the computational fluid dynamics (CFD) simulations is a two-equation shear-stress transport (SST) model, and thus the ABL turbulence profile requires that two parameters be defined at the inlet of the domain. The turbulence profile is defined following the recommendations of the Architectural Institute of Japan for flat terrain (3).

$$I(Z) = \begin{cases} 0.1 \left(\frac{Z}{Z_g} \right)^{-\alpha-0.05}, & Z > 10 \text{ m} \\ 0.1 \left(\frac{10}{Z_g} \right)^{-\alpha-0.05}, & Z \leq 10 \text{ m} \end{cases} \quad \text{Equation (2)}$$

$$L_t(Z) = \begin{cases} 100 \text{ m} \sqrt{\frac{Z}{30}}, & Z > 30 \text{ m} \\ 100 \text{ m}, & Z \leq 30 \text{ m} \end{cases} \quad \text{Equation (3)}$$

where, I = turbulence intensity, L_t = turbulence length scale, Z = height above ground, and α is the power law exponent used for the velocity profile in Equation (1).

Boundary conditions on all other domain boundaries are defined as follows: the ground is a no-slip surface; the side walls of the domain have a symmetry boundary condition; the top of the domain has a specified shear, which maintains a constant wind speed at gradient height; and the outlet has a static pressure boundary condition.

REFERENCES

- [1] P. Arya, "Chapter 10: Near-neutral Boundary Layers," in *Introduction to Micrometeorology*, San Diego, California, Academic Press, 2001.
- [2] S. A. Hsu, E. A. Meindl and D. B. Gilhousen, "Determining the Power-Law Wind Profile Exponent under Near-neutral Stability Conditions at Sea," vol. 33, no. 6, 1994.
- [3] Y. Tamura, H. Kawai, Y. Uematsu, K. Kondo and T. Okhuma, "Revision of AIJ Recommendations for Wind Loads on Buildings," in *The International Wind Engineering Symposium, IWES 2003*, Taiwan, 2003.

Appendix 2

UDRP Recommendations

945 Bank Street (Lansdowne 2.0 – North Side Stands) | Informal Pre-Consultation Review | Site Plan Control Application | City of Ottawa, Ottawa Sports and Entertainment Group, Brisbin Brook Beynon Architects, Fotenn Planning + Design, CSW, ERA Architects

Panel Members in Attendance: David Leinster | James Parakh | Nigel Tai | Heather Rolleston | Alex Taranu



Key Recommendations

- The Panel appreciates the importance of this project for the City. The Panel also appreciated the comprehensive presentation and the consideration for integration of the North Stand into the overall Lansdowne redevelopment.
- The Panel encourages the applicant to think about the “family of components” in the design. A potential screen and other façade elements should establish a dialogue between the North, the South Stand and the new Event Centre.
- The Panel highlights the importance of the relationship with the future residential development including the views from the residential units and encourages the applicant to plan ahead to ensure a cohesive integration.
- The Panel emphasizes the need to strengthen the public realm, improve sustainability measures, and refine architectural elements to create a vibrant, cohesive, and engaging experience for all users.
- The Panel suggests that the North Stand is a pavilion in the round, and its design should limit the back of house elements fronting the public realm.
- The Panel appreciates the initial consideration of security for the stair access and encourages further refinement in these areas.

- The Panel emphasizes the critical importance of views of the stadium and how the architecture can contribute to the urban realm. Functional aspects, material choices, and the animation of public spaces should all relate cohesively to one another.

Site Design & Public Realm

- The Panel recommends that public spaces and back-of-house areas should be designed to avoid creating inactive zones by exploring opportunities for animation through thoughtful integration of exterior and interior program functions.
- The Panel recognizes opportunities to animate the North promenade, especially on game days, with retail integration, pop-ups, and public art installations to energize this space.
 - The 18m-wide back-of-house area could become more than a service zone by incorporating public-facing features.
- The Panel suggests preparing flow diagrams to better illustrate pedestrian and vehicular circulation, ensuring seamless movement throughout the site.
- The Panel highlights the significance of the Lansdowne redevelopment project as a critical area for public use, consideration should be given to a cohesive approach to both pedestrian and vehicular experiences.
- The Panel suggests that enhancing pedestrian lighting and incorporating design elements like illuminated planters and streetscape features which will contribute to safety and vibrancy during both day and night. The panel also recommending the up lighting of the structural elements to highlight them.

Sustainability

- The Panel recommends a more thorough wind study, including the microclimate conditions on various locations in the stands. The recommendations outlined in the wind study report and mitigative measures should be implemented in the second iteration of the plan.
- The Panel encourages the exploration of more effective sustainability options. It is essential to incorporate greenery and shaded areas. The Panel acknowledges that concrete and metal are not very eco-friendly materials however options should be explored to offset those material choices. Furthermore, bird-safe design options should be considered in the early design phase.

Built Form & Architecture

- The Panel recommends the harmonious integration of the North Stand with mixed-use development and a strong connection to the cultural heritage of Lansdowne.
- The Panel recommends exploring textured materials, public art, vibrant colors, and a design inspired by Lansdowne's history and vitality, as the North façade has significant potential to express elegance and energy. Specifically thinking differently of the lower part of the building and making it distinct from the upper part.
- The Panel suggests incorporating a thinner edge for the parapet to achieve the aesthetic of a floating tray, as the current cladding design appears similar to the seating.
- The Panel recommends enhancing the architectural dialogue between the North and South Stands and the Event Centre, ensuring a unified design language that reflects the dynamic energy of game-day experiences.
 - The design should consider interim conditions for the North Stands, with strategies for temporary uses and activation, even for short-term periods.
 - Explore the potential for a retail / activated use at the north-west corner of the stands to animate the adjacent public space.