Option B

GENERAL JOHN HAYTER SOUTHSHORE COMMUNITY CENTRE EXPANSION

DESIGN REPORT | 2025-08-22

Unity

The information, drawings and images contained in this package are provided for concept design purposes only.
All details, finishes, and materials are preliminary and subject to refinement and change throughout the design development and construction process.

METTKO Unity

Unity | Architecture for the human spirit

Certified B Corporation

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138 Simcoe Street
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Executive Summary

This report outlines the architectural vision and construction strategy for a new 6,000 square foot facility that will serve as the future home of the Royal Canadian Sea Cadets. The organization is relocating from their current address at 11 Simcoe Street, Barrie, Ontario, to the General John Hayter Southshore Community Centre at 205 Lakeshore Drive, Barrie, Ontario, L4N 7Y9.

The new facility is being specifically designed to support the operational needs of the Sea Cadets. It will feature secure indoor boat storage that accommodates full sailboats with masts, along with dedicated areas for administration, locker rooms, and storage of existing equipment, furniture, and supplies. Structural and ceiling height requirements are being carefully coordinated to allow for proper boat and mast storage, while secure, visually integrated outdoor storage solutions are also being explored to provide ease of access without compromising the visual quality of the waterfront site.

This project is being developed through close collaboration between all consulting teams. METTKO is serving as the Design Builder, overseeing the integration of disciplines and overall project coordination. Unity Design Studio, as the architectural consultant, is leading the design process and liaising closely with the Sea Cadet leadership and the City of Barrie to evaluate both current and future program needs. Moses Structural Engineers is responsible for structural design, ensuring the facility accommodates unique clearance and load requirements. Quasar Consulting Group is providing mechanical and electrical engineering services, supporting the building's functional, efficient, and code-compliant systems design. This collaborative approach ensures that all technical and operational requirements are addressed in a cohesive and comprehensive manner.
Site analysis and technical assessments are currently underway to determine the optimal building orientation and location within the site. The design team is committed to minimizing the building's development footprint to preserve the surrounding environment and reduce disruption to the existing landscape.

Given the location falls within the jurisdiction of the Lake Simcoe Regional Conservation Authority (LSRCA), all planning and development activities will comply with LSRCA regulations and environmental best practices to ensure a sensitive and responsible approach to waterfront development.

This facility represents a significant investment in the long-term future of the Sea Cadets and the Southshore Community Centre. It will provide a modern, highly functional, and purpose-built environment in a prominent and accessible waterfront setting.

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PROJECT BACKGROUND

Unity Design Studio was engaged to provide architectural services for a proposed new facility for the Royal Canadian Sea Cadets, specifically:

> Phase 1: Functional Program, Schematic Design, Renderings, and a Schematic Design Report.

The Royal Canadian Sea Cadets, currently operate out of 11 Simcoe Street, Barrie, Ontario. The Cadets will be relocating to support the City of Barrie's long-term vision for a Performing Arts Centre on the current site. This move presents an opportunity to re-establish the Cadets in a new location suited to their continued growth and activities.

To address this, The City of Barrie has entered into a lease agreement with the Sea Cadets for use of a portion of the General John Hayter Southshore Community Centre, located at 205 Lakeshore Drive, Barrie, Ontario. The proposed project involves the design and construction of a new 6,000 square foot building on the site that will serve as the Cadets' new home.

The proposed building is being designed to meet the unique operational needs of the Sea Cadets, with dedicated areas for storing boats and masts indoors, as well as office space, lockers, and room for their existing gear and materials. Options for secure outdoor storage that complements the site's appearance are also under consideration. Unity Design Studio has collaborated with both the Sea Cadets and the City of Barrie to evaluate equipment requirements and ensure the facility is well-suited to support their activities for years to come.

Scope of Work

Our scope through Phase 1 included the following explorations:

Concept Building Plans
- o Develop initial concept plans outlining the overall layout and spatial organization of the expanded Community Centre.
- o Include key functional areas and proposed additions to align with the stakeholder goals.

Building Design Options
- o Conduct a massing exercise to visualize and refine the building's form and scale.
- o Present multiple design iterations for review and selection.

3D Renderings
- o Provide 3D renderings of the selected design option.
- o Renderings will illustrate the proposed exterior aesthetic and functional aspects of the new space, offering a preview of the final outcome.

Concept Site Plan
- o Develop a site plan that integrates the building design with its surroundings.

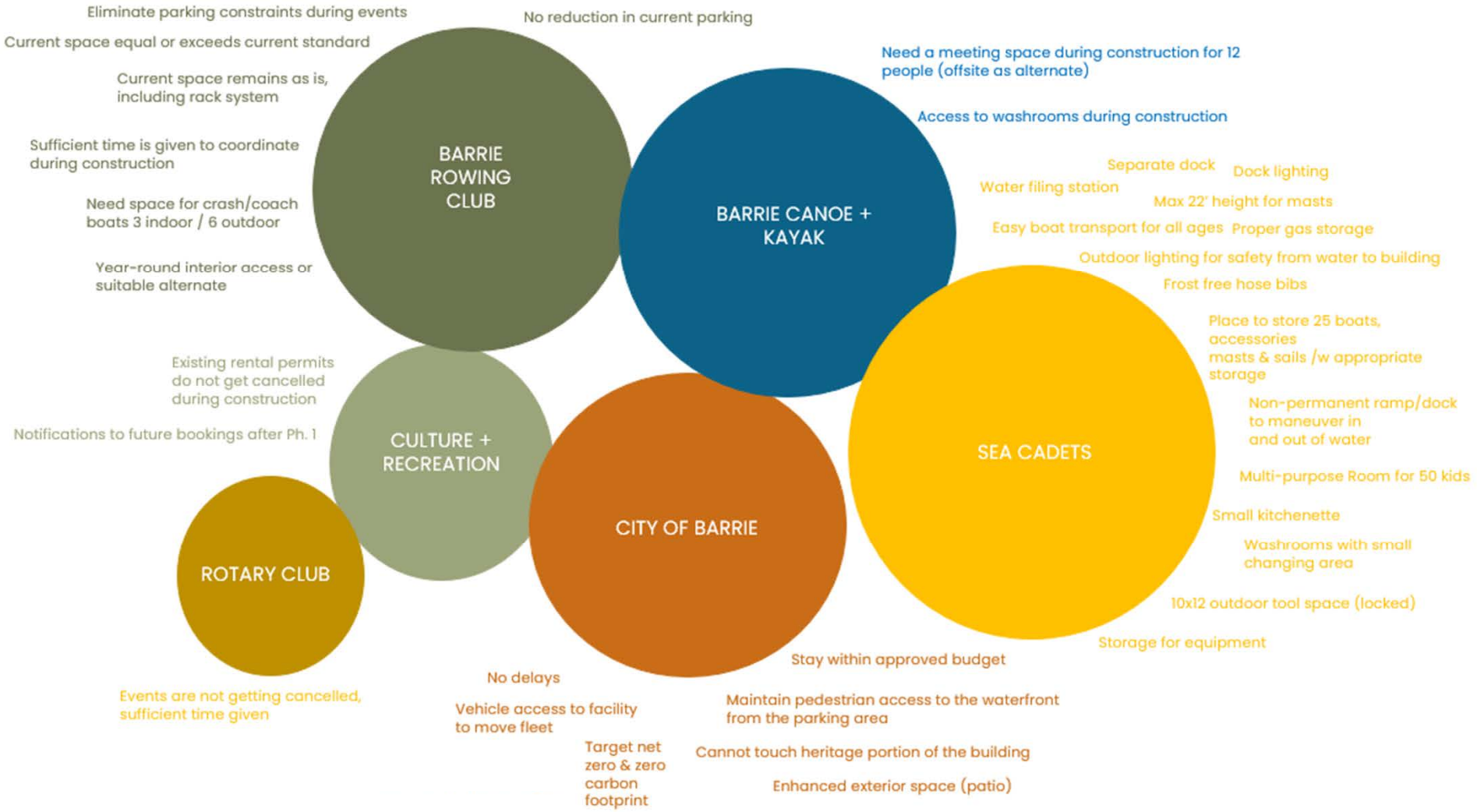
OBJECTIVES AND OUTCOMES

Conditions Of Satisfaction

The objective of the Conditions of Satisfaction (CoS) exercise was to establish a clear, comprehensive, and shared understanding of project success among all stakeholders from the very beginning of the initiative. By collaboratively defining what “success” would entail for the new Sea Cadets facility, the CoS exercise created a critical framework to guide the design process, inform decision-making, align diverse priorities, and promote effective and consistent communication throughout all stages of the project’s development.

Through structured discussions and facilitated workshops, each program group was given the opportunity to voice their operational needs, functional requirements, aspirations, and potential concerns. This inclusive and transparent approach ensured that a wide range of perspectives were captured, addressing immediate needs while keeping the long-term vision and sustainability of the facility in focus. Site-specific constraints, operational efficiency, community engagement, and future adaptability were considered holistically to create a balanced and forward-looking plan.

As a result of this comprehensive exercise, the project team achieved stronger internal alignment, built trust across disciplines, and established a transparent foundation for collaboration. The Conditions of Satisfaction process not only clarified project goals but also laid the groundwork for the creation of a design that thoughtfully integrates functionality, aesthetic quality, and lasting community value, ensuring the new facility will serve its users effectively for many years to come.

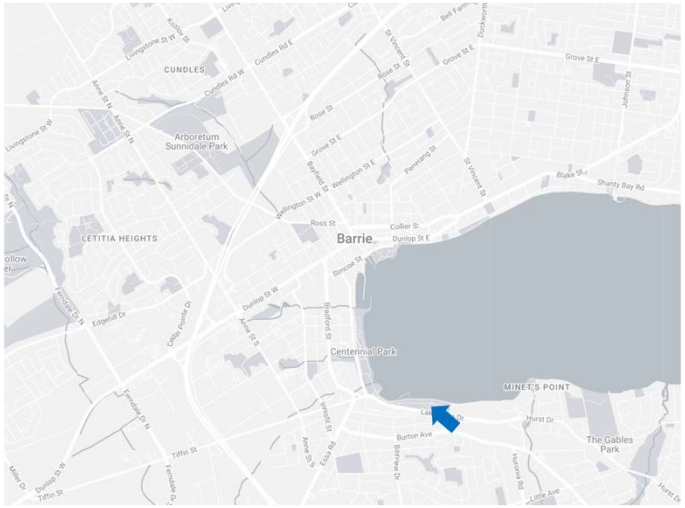

Eliminate parking constraints during events
No reduction in current parking
Current space equal or exceeds current standard
Current space remains as is, including rack system
Sufficient time is given to coordinate during construction
Need space for crash/coach boats 3 indoor / 6 outdoor
Year-round interior access or suitable alternate
BARRIE ROWING CLUB
Need a meeting space during construction for 12 people (offsite as alternate)
Access to washrooms during construction
BARRIE CANOE + KAYAK
Separate dock
Dock lighting
Water filing station
Max 22' height for masts
Easy boat transport for all ages
Proper gas storage
Outdoor lighting for safety from water to building
Frost free hose bibs
Place to store 25 boats, accessories masts & sails /w appropriate storage
Non-permanent ramp/dock to maneuver in and out of water
Multi-purpose Room for 50 kids
Small kitchenette
Washrooms with small changing area
10x12 outdoor tool space (locked)
Storage for equipment
SEA CADETS
Existing rental permits do not get cancelled during construction
Notifications to future bookings after Ph. 1
CULTURE + RECREATION
CITY OF BARRIE
ROTARY CLUB
Events are not getting cancelled, sufficient time given
No delays
Vehicle access to facility to move fleet
Target net zero & zero carbon footprint
Stay within approved budget
Maintain pedestrian access to the waterfront from the parking area
Cannot touch heritage portion of the building
Enhanced exterior space (patio)

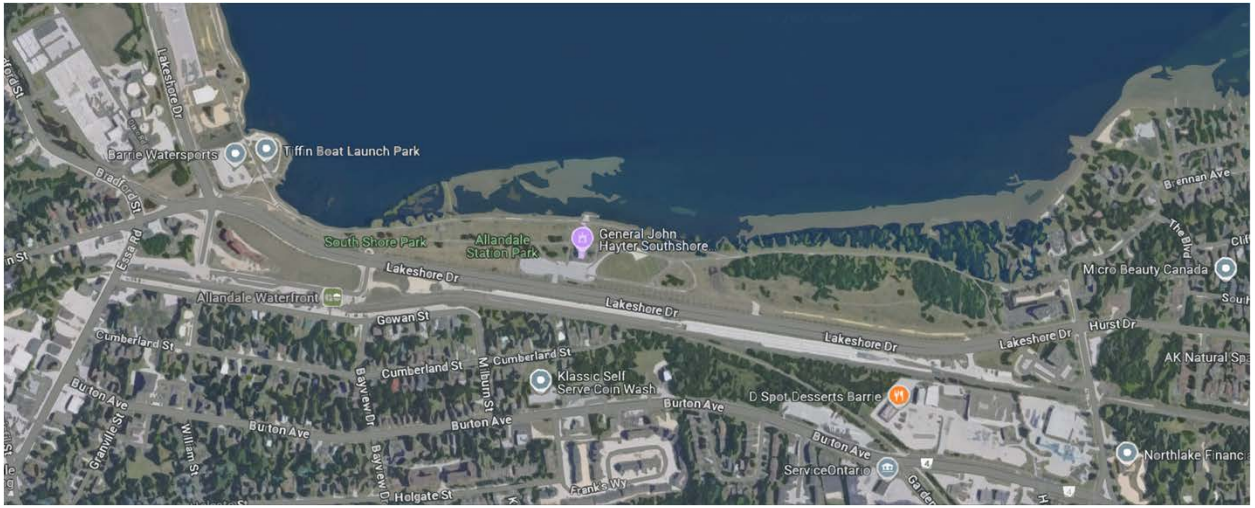
SITE OVERVIEW

Site Location

The General John Hayter Southshore Community Centre, located at 205 Lakeshore Drive in Barrie, Ontario, is a prominent waterfront facility that blends historical significance with modern amenities. Originally constructed in 1903–1904 as the Master Mechanic and Stores Department for the Grand Trunk Railway, it stands as the sole remaining rail equipment servicing building on Barrie's waterfront .

In 2024, the Centre was renamed to honor Brigadier-General John Charles Hayter, a distinguished Canadian Armed Forces veteran who served from 1951 to 2009. General Hayter is renowned for his extensive volunteer work and contributions to the community, including involvement with organizations like Saint John Ambulance and the Veterans' Club of Barrie .





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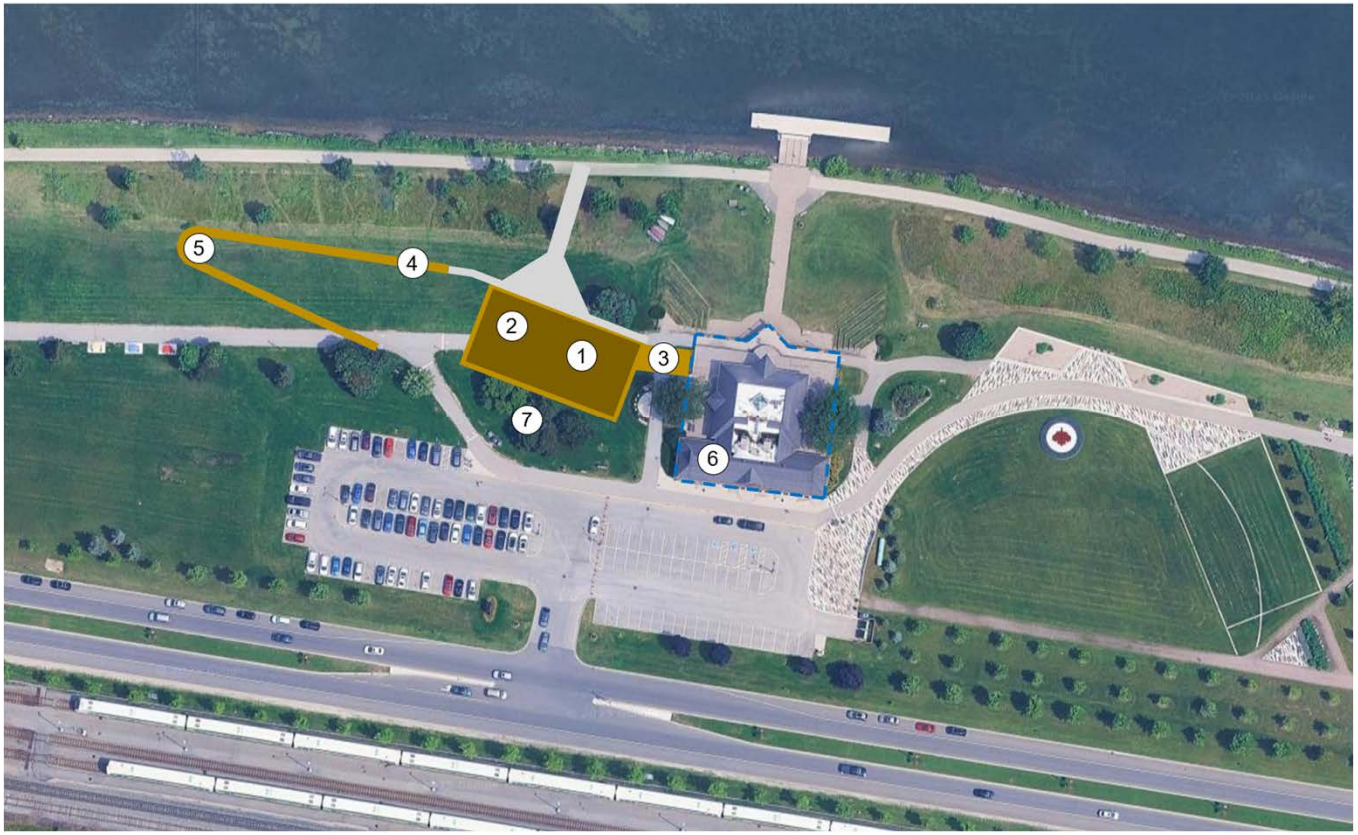
Building Footprint and Orientation



1. Sea Cadets New Building
2. New Rooftop Patio
3. Connecting Bridge
4. Accessible Path from Grade to Building Entrance
5. Rest Stop
6. Existing Building
7. Proposed New Memorial Site

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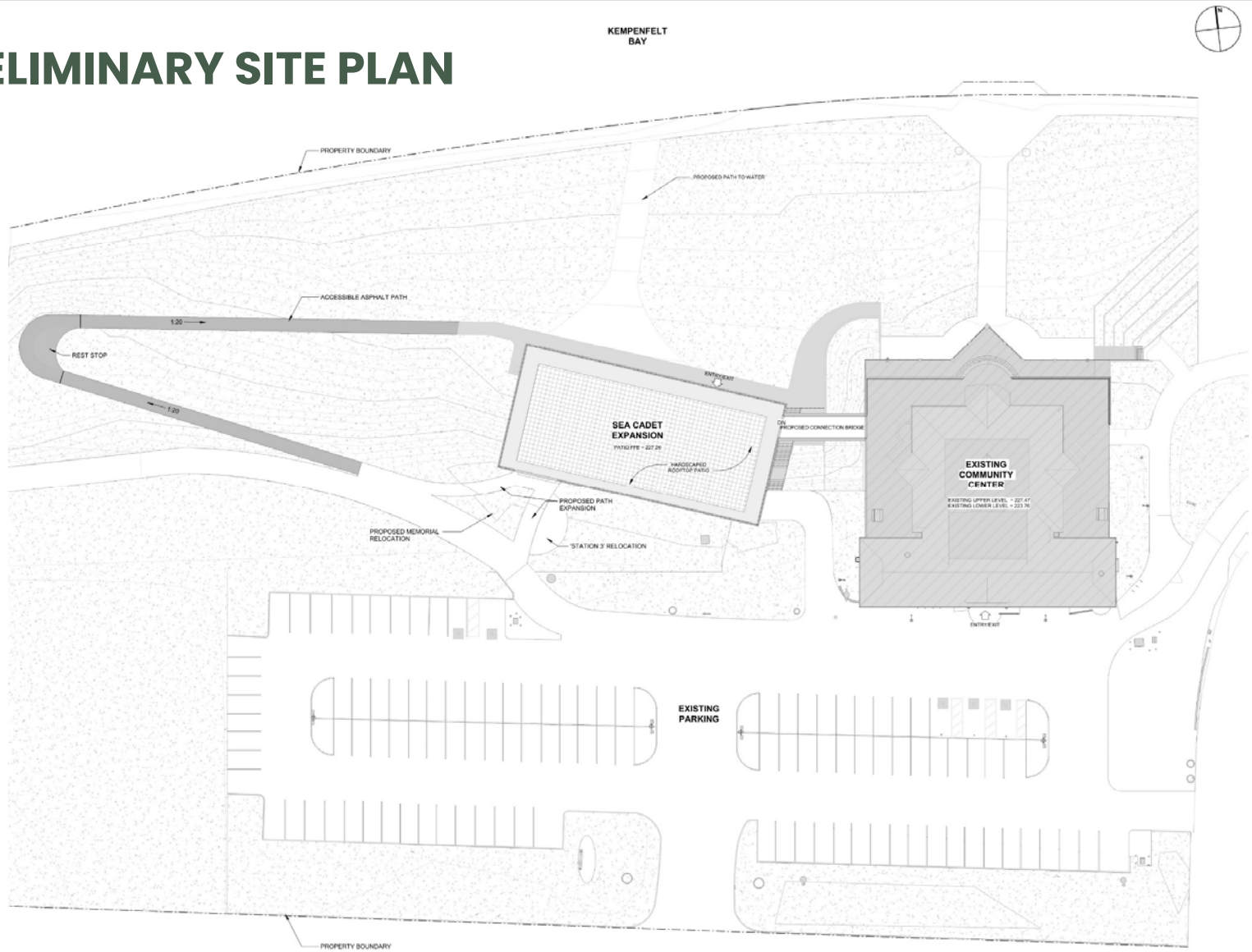
PRELIMINARY SITE PLAN



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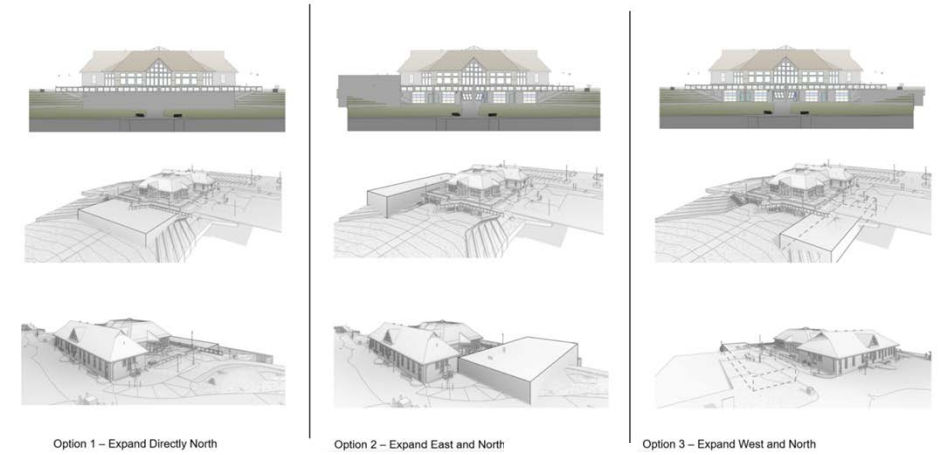

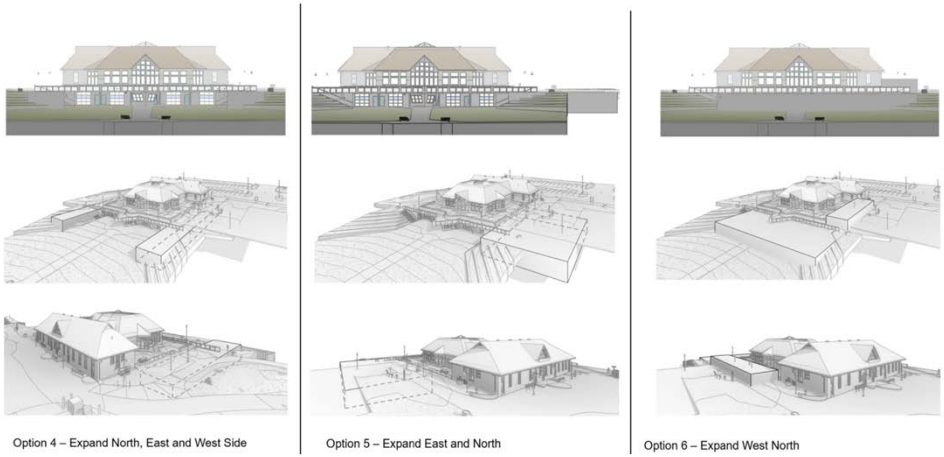

Massing

As part of the early schematic design process, the entire project team, lead by METTKO, including Unity Design Studio, the City of Barrie, the Sea Cadets, and all key consultants, collaborated in a comprehensive massing exercise to explore and evaluate potential locations and configurations for the new facility on the site. This integrated approach ensured that architectural, operational, environmental, and technical considerations were addressed from the outset.

Through a series of interactive working sessions, the team tested various massing strategies in relation to the site's constraints and opportunities, including access, views, solar orientation, service areas, and public visibility.

In this project, careful attention was given to balancing the functional needs of the Sea Cadets with the environmental sensitivity of the waterfront site, which falls under the jurisdiction of the Lake Simcoe Regional Conservation Authority (LSRCA). By involving the full team early in the massing phase, the design process benefitted from a shared understanding of constraints, a coordinated approach to site planning, and a well-supported decision on the building's preliminary form and placement.

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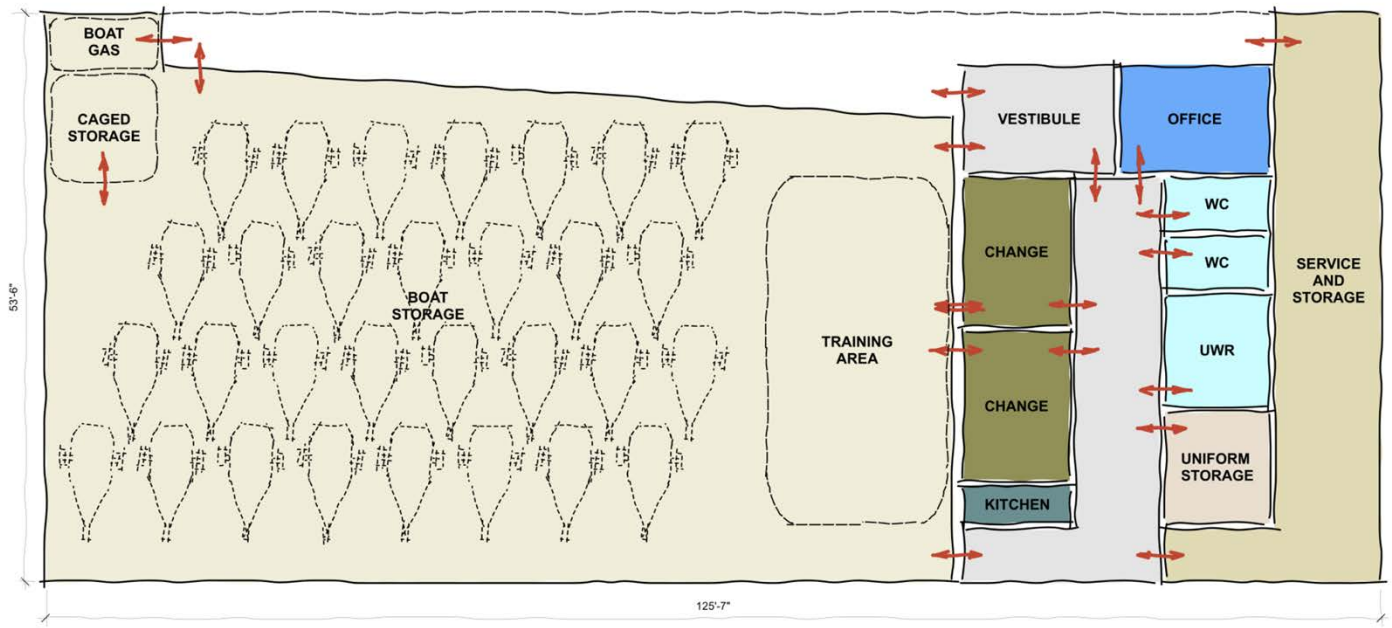
Block Planning

The space planning for the new Sea Cadets facility was developed through a collaborative and iterative process involving Unity Design Studio, the City of Barrie, Sea Cadet representatives, and all consultants. Beginning with the confirmed program requirements and insights gained during the Conditions of Satisfaction exercise, the team explored multiple spatial arrangements to determine the most efficient and functional layout.

Key considerations included adjacencies between program areas, access and circulation routes, ceiling height requirements for boat and mast storage, and opportunities for natural light and views. Input from each discipline ensured that technical requirements, such as mechanical and structural needs were integrated seamlessly with program goals. The resulting layout reflects a carefully balanced approach that prioritizes operational flow, safety, and adaptability, while also aligning with the site's constraints and long-term vision for the facility.



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Design Considerations

To ensure the most effective and functional design solution for the new Sea Cadets facility, the City of Barrie, Sea Cadet representatives, Unity Design Studio, and all project consultants participated in multiple rounds of Choosing By Advantage (CBA) exercises. This collaborative, value-based decision-making process enabled the team to thoroughly assess various layout options based on their advantages and alignment with the project's goals. As a result, a preferred single-story concept totaling approximately 6,000 sq.ft. was selected, one that best responds to the operational needs identified during stakeholder engagement and the Conditions of Satisfaction process.

Schematic Plans, Elevations, and Sections are included with this report.

OBC Classification:

3.2.2.26. Group A, Division 2, up to 2 storeys, sprinklered.

3.2.2.66. Group F, Division 1, 1 Storey

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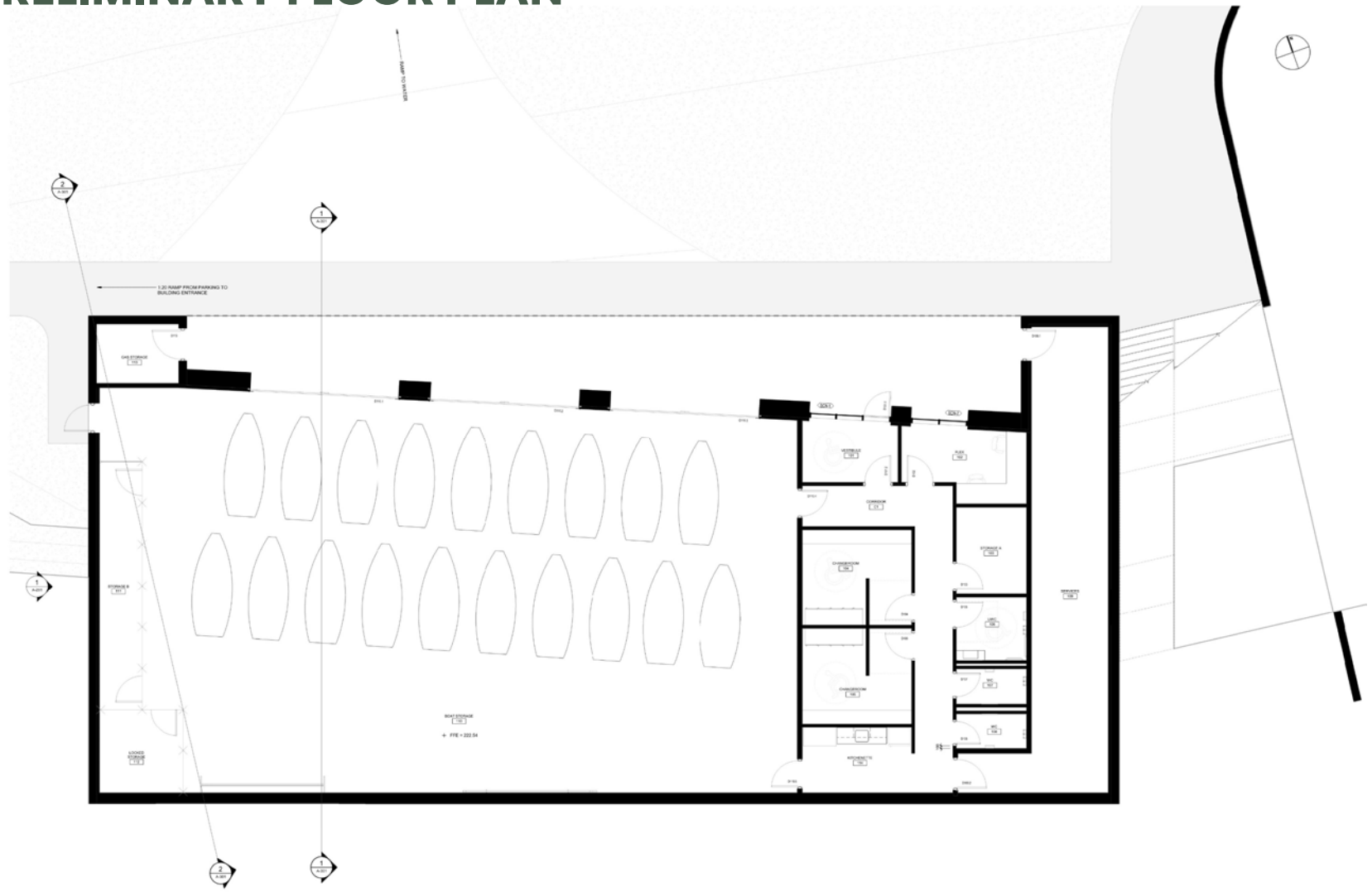
PRELIMINARY FLOOR PLAN



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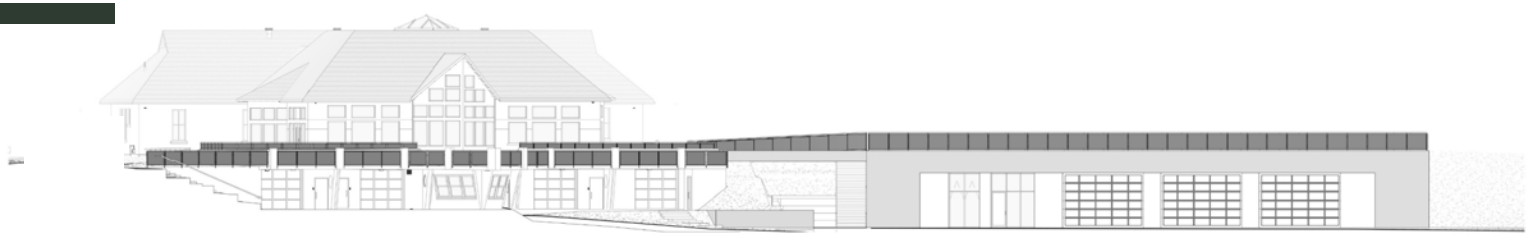
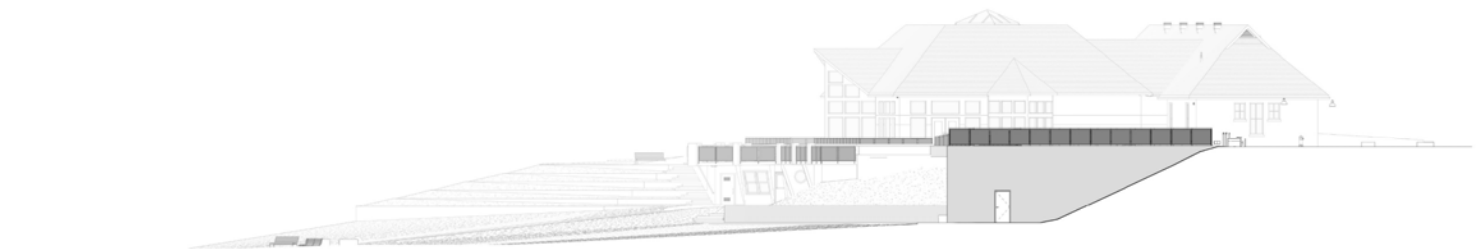
Elevations



3 | BUILDING ELEVATION - NORTH

2 | BUILDING ELEVATION - SOUTH



1 | BUILDING ELEVATION - WEST

The new facility is designed to quietly complement the existing heritage building, using understated materials and scale to blend into the site. Its form takes a respectful back seat, reinforcing rather than overwhelming the historic character and significance of the original structure.

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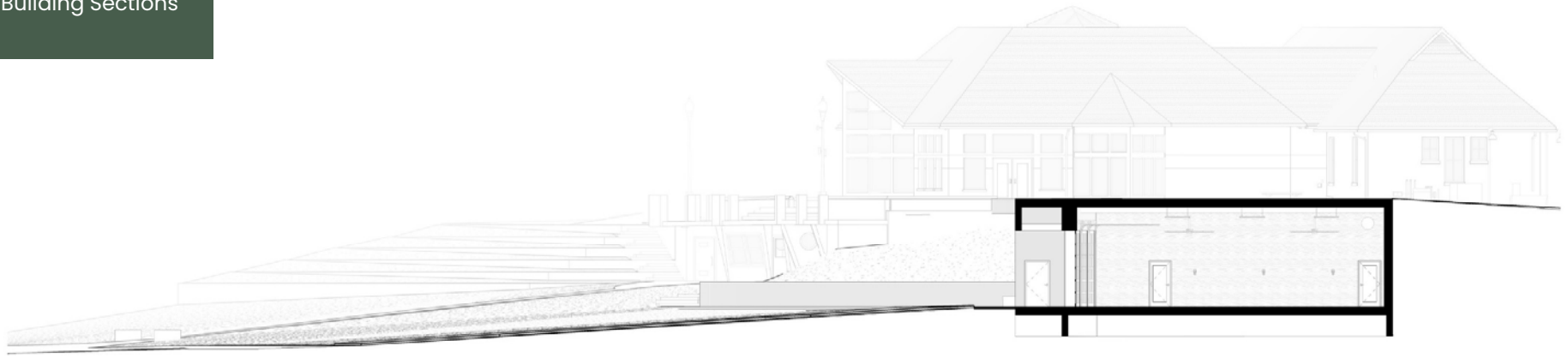
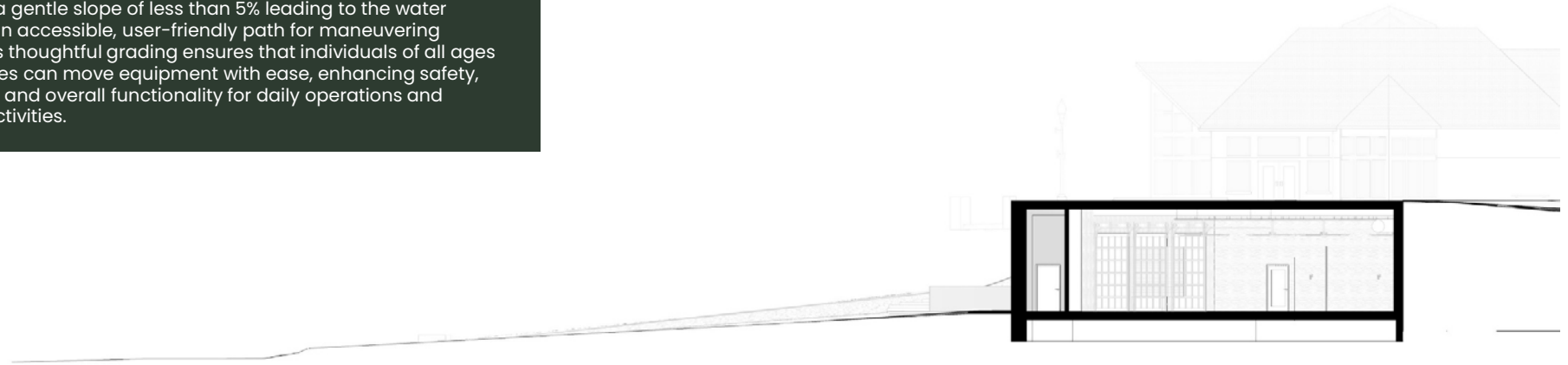
Building Sections



1 | BUILDING SECTION A
A-301 | REF: A-100 Scale: 1 : 100

With the strategic positioning of the new addition, the site achieves a gentle slope of less than 5% leading to the water creating an accessible, user-friendly path for maneuvering boats. This thoughtful grading ensures that individuals of all ages and abilities can move equipment with ease, enhancing safety, inclusivity, and overall functionality for daily operations and training activities.



2 | BUILDING SECTION B
A-301 | REF: A-100 Scale: 1 : 100

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View of Kempenfelt Bay from Rooftop Patio

The expanded patio offers sweeping, unobstructed views across Kempenfelt Bay, creating a stunning backdrop for both everyday enjoyment and special occasions. Thoughtfully designed with flexibility in mind, the space can remain open to the public or be temporarily sectioned off to host private functions taking place within the Community Centre, seamlessly blending community access with event exclusivity.

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Daytime and Dusk Elevation

The new addition has been thoughtfully designed to blend seamlessly with the original building and surrounding landscape, using complementary materials and finishes that respect the existing architectural language. From the water, the structure presents a cohesive and inviting presence, acting as a visual landmark and drawing attention to the waterfront as a vibrant, active hub. Its balanced integration enhances both the functionality and aesthetic appeal of the site, reinforcing its role as a destination within the community.

In the evening, subtle low-level lighting provides a sense of safety while creating a warm, ambient glow that highlights the architecture and maintains the natural character of the shoreline.

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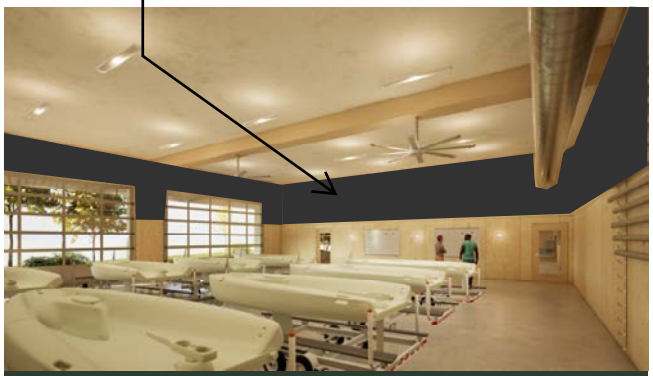
Interior Elevation

PLYWOOD ONLY UP TO 8 FEET FROM BOTTOM OF FLOOR

The expanded boat storage facility provides the Sea Cadets with significantly increased capacity, supporting current programming while opening the door to future growth. This enhanced space ensures the organization is well-equipped to expand its fleet, host training activities more efficiently, and accommodate the evolving needs of the next generation of cadets.



Three oversized garage doors flood the space with natural light and create a seamless connection between the indoors and outdoors. This design not only enhances visibility and ventilation but also allows for fluid movement of boats, equipment, and people making the space highly functional and adaptable for training, events, and day-to-day operations.

The new facility not only increases capacity for vessels but also introduces dedicated space designed to support hands-on learning for Sea Cadet members. This additional area enhances training opportunities, offering a practical environment for skill development, teamwork, and education strengthening the foundation for the program's continued growth and success.

PLYWOOD ONLY UP TO 8 FEET FROM BOTTOM OF FLOOR

PLYWOOD ONLY UP TO 8 FEET FROM BOTTOM OF FLOOR

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Designing for Flexibility

The outdoor bleacher serves as more than just seating for events, it becomes a versatile space that enhances both education and everyday experience. Designed to function as an open-air classroom, it supports outdoor learning, group discussions, and presentations in a natural setting. When not in active use, it offers a welcoming spot for visitors to relax, reflect, or simply enjoy the surrounding vistas. This dual purpose approach fosters a stronger connection to the landscape while maximizing the utility of site features.

Millwork Finishes

The use of plywood for the interior finishes offers a clean, simple aesthetic that aligns with the building's functional purpose while also contributing to its sustainability goals. Sourced as FSC Certified and fire-rated, the plywood ensures both environmental responsibility and safety. From a Life Cycle Assessment (LCA) perspective, plywood presents a lower environmental impact compared to more processed or synthetic materials requiring less energy to manufacture, generating less waste, and offering the potential for reuse or recycling at the end of its service life. This thoughtful material choice balances durability, cost-efficiency, and a reduced carbon footprint, supporting the project's broader sustainability objectives.

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MATERIALITY FINISHES

The building should embody the project's environmental goals through various design and material choices.

Exterior

The exterior design will feature board-formed concrete across all exposed wall surfaces (including along existing foundation wall), providing a textured, natural aesthetic that highlights the craftsmanship of the formwork and emphasizes the building's modern, durable character that blends effortlessly into the existing building.

The soffits are designed using high-grade extruded aluminum panelboard featuring a hollow-backed profile with a robust base metal thickness of 1.77mm. These panels are 100% recyclable and free from any plastic components, aligning with the project's sustainability goals. The extrusion orientation runs north-south, maintaining a clean, linear aesthetic. Finished in a Beechwood tone, the soffits are carefully selected to complement and blend with the surrounding concrete surfaces.

Commercial garage doors will be designed as full-view aluminum-framed overhead doors, fitted with reflective tempered glass panels to maximize natural light and provide enhanced privacy by preventing visibility from the outside while still allowing clear views from within. It also contributes to safety and security, during the off season and at night, all while offering strength and durability. These doors will complement the window system and board-formed concrete, reinforcing the cohesive aesthetic.

All windows will be high-performance, thermally broken aluminum-framed units, utilizing double-glazed glass for superior energy efficiency, thermal comfort, and acoustic control. The window frames will incorporate a Shadowline profile, ensuring clean, sharp detailing that enhances the building's contemporary architectural expression.

Exterior handrails and guards will be constructed of brushed steel with minimalist tops and a mesh guard, offering durability and a clean, modern look that reflects the overall architectural design intent. In line with the project’s commitment to sustainability, wherever possible, metals will be sourced responsibly and selected for their recyclability, durability, and low-maintenance characteristics, contributing to the building’s long-term environmental performance.

The steps leading to the water will be poured in place concrete to allow for a seamless, site-specific design that supports functional circulation and gathering. With risers on one side and bleacher-style seating on the other, this asymmetrical form enhances movement while creating opportunities for educational use and informal interaction.

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Interior

The walls and ceilings of the interior will be clad in FSC-certified, Class A fire treated birch plywood (Flame Spread <25, Smoke Developed Class of <150), providing a consistent, uniform appearance through carefully aligned seams. The natural warmth of the birch will enhance the interior environment, creating a welcoming and durable finish. The fire treated nature of the plywood eliminates the need for additional protective assemblies or coatings, contributing to both safety and project efficiency. By reducing the need for extra interior finishes, this approach not only lowers material and long-term maintenance costs but also supports the project's sustainability goals through the use of responsibly sourced materials and reduced future replacement needs.

All interior doors will be solid core stain grade FSC-certified wood veneer in factory finished wood frames with the exception where fire separations require a rated door (mechanical room) a wood fire rated door is required. Exterior doors to the gas storage and mechanical room will be hollow metal doors and frames.

The primary flooring throughout the building will consist of polished concrete finished with a Smooth Finish Coating, providing a resilient, low maintenance surface with a high gloss appearance and slip resistance. Close coordination with the mechanical team will be crucial to ensure that floor drains are seamlessly incorporated into the concrete areas, achieving both optimal functionality and a cohesive visual result.

Millwork and casework will be constructed using fire-rated ¾" (19mm) plywood for cabinet boxes, shelves, and doors to ensure strength, durability, and consistency with the wall materials. Back panels will typically use ½" (12mm) plywood for added stability. All materials will be locally sourced, supporting low maintenance, sustainability, and cost efficiency. Countertops and other horizontal solid surfaces should utilize an environmentally sustainable solid surface material such as Quartz or Durat.

The interior lighting design will complement the overall nautical theme of the facility by incorporating marine inspired fixtures that reflect the building's nautical character. Carefully selected LED lighting will be used throughout to ensure energy efficiency, long-term durability, and reduced maintenance. The fixtures will feature clean, functional designs reminiscent of those found in marine environments. Lighting levels will be carefully calibrated to provide safe, comfortable illumination for all interior, supporting both practical use and visual appeal. Outdoor lighting will follow the same approach, utilizing LED marine-grade fixtures to maintain design continuity, ensure durability against the elements, and enhance the building's nighttime presence while prioritizing safety and sustainability.

All fabricated metal elements throughout the project, including the locked storage area and the gear storage, will be designed and finished with a consistent, uniform appearance to maintain a cohesive and intentional aesthetic across all spaces. Interior metal finishes will be specified in a "Topaz" colour, providing a warm, refined tone that complements the interior nautical palette with an ode to the type of sailboats the cadets use.

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Services

All mechanical and electrical distribution and devices will be thoughtfully integrated within the building's structure to support ease of future retrofits and minimize visual clutter. Where exposed ductwork is required (boat storage area), perforated or vented ducts will be permitted and embraced as part of the architectural expression. These visible elements will be deliberately coordinated to contribute to the overall aesthetic but not impede on the function or movement of sailing components, offering a functional yet visually engaging layer that complements the building's refined industrial character.

All fixtures are to comply with the City of Barrie's established standards for public spaces, including but not limited to wall-mounted plumbing fixtures, lighting, and any other applicable specifications or requirements.

The sprinkler system will remain exposed and will require careful coordination to ensure an orderly and intentional appearance. Plumbing lines will be concealed within partitions where necessary, and all fixtures will be specified as low-flow models to optimize water conservation.

The addition of industrial ceiling fans within the boat storage area significantly improves air circulation in a space lacking natural cross breezes. These fans help regulate humidity levels, reduce moisture buildup, and promote consistent airflow, protecting stored equipment from damp conditions and enhancing overall ventilation efficiency.

Inclusive Design

The design prioritizes accessibility by providing a barrier-free route from grade to the building entrance via an asphalt ramp with a maximum slope of 1:20, ensuring a gentle and safe transition for all users. The ramp will be designed with appropriate surface treatments in accordance with the Ontario Building Code (OBC) accessibility requirements. Within the building, a universal washroom and change room will be provided, fully adhering to OBC standards, including the required minimum turning radius to accommodate mobility devices. Fixtures, clearances, and hardware will be thoughtfully selected to ensure ease of use, supporting an inclusive environment for all occupants and visitors.

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Next Steps &
Considerations

Next Steps

Conduct a thorough assessment of the existing building foundation at the north/west corner, which are currently below grade, to evaluate the structural implications of proposed earth removal. Refine the final design of the tiered seating and sloped hillside in alignment with existing site conditions and informed by geotechnical findings to ensure structural integrity and cohesive site integration. The review should ensure that excavation activities do not compromise the stability of the foundation or necessitate additional structural interventions such as extensive shoring or the construction of larger retaining walls. This analysis will help mitigate unforeseen site work and support an efficient and cost effective implementation strategy.

Considerations

The design intent aims to extend the recently installed railing system from the Sea Cadet building across the existing lower patio, ensuring both visual continuity and functional alignment. It is recommended that the City of Barrie consider improvements to the current cantilevered and upper patio areas, including the installation of a new guardrail atop the upper parapet, replacement of all existing patio slabs and paint walls and windows at the back of the Community Centre for a complete refresh. The plan also proposes new stairs connecting the upper and lower patios and enclosing the area for dedicated event use. These enhancements would improve circulation between levels, expand the usable space, and support a wider range of public and programmed activities. Incorporating an accessible ramp along the east elevation would further promote universal design and ensure barrier-free access across the site.

APPENDICES

Sources

1. www.navyleaguebarrie.com

Feature Images

1. https://www.doorsopenontario.on.ca/barrie-1/southshore-centre
2. https://ontariosailing.ca/
3. https://thincdesign.ca/portfolio/barrie-military-heritage-park/
4. https://www.google.ca/maps
5. https://opengis.simcoe.ca/


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BARRIE Progressive Design Build - Southshore Community Centre
CLASS D COST PREDICTION REPORT - OPTION B
OPTION B

Item	Task		Cost
1	Hard Cost Construction (Division 1-16)	$	6,252,577
2	Design Contingency	$	625,258
3	Design-Builder Fee for Work	$	212,306
4	**Sub Total**	**$**	**7,090,141**
5	Escalation Contingency(Excluding Tariff cost/ Force Major Event)	$	342,507
6	Construction Contingency (Post Contract Changes)	$	685,014
7	**Total Estimated Hard Construction Cost**	**$**	**8,117,662**
8	Design-Builder Fee for Services	$	933,531
9	DB Fee for Provisional Items #1 & #2	$	405,883
10	Project Soft Cost Contingency	$	243,530
11	Allowances: Specialty Consultants	$	68,247
12	**Sub Total**	**$**	**9,768,853**
13	Insurance Premium	$	195,377
14	Insurance PST (8%) on Premium	$	15,630
15	Bonding Premium	$	139,171
16	**Total Estimated Soft + Hard Construction Cost**	**$**	**10,119,031**
	OWNER DIRECT COSTS (Not included in figures above):		
17	FF&E: (Owner Supplied)	$	160,000
18	Other Costs: Municipal (Internal) Changes	$	-
19	Other Costs: Project Management (internal)	$	264,190
20	Other Costs: Operational Expenses (internal)	$	25,000
21	**Total Project Cost**	**$**	**10,568,221**
22	Less approved funds for Phase 1	$	(540,000)
23	**Total Additional Funding required**	**$**	**10,028,221**
24	HST (NON-RECOVERABLE 1.7602%)	$	176,517
25	**GRAND TOTAL**	**$**	**10,204,738**